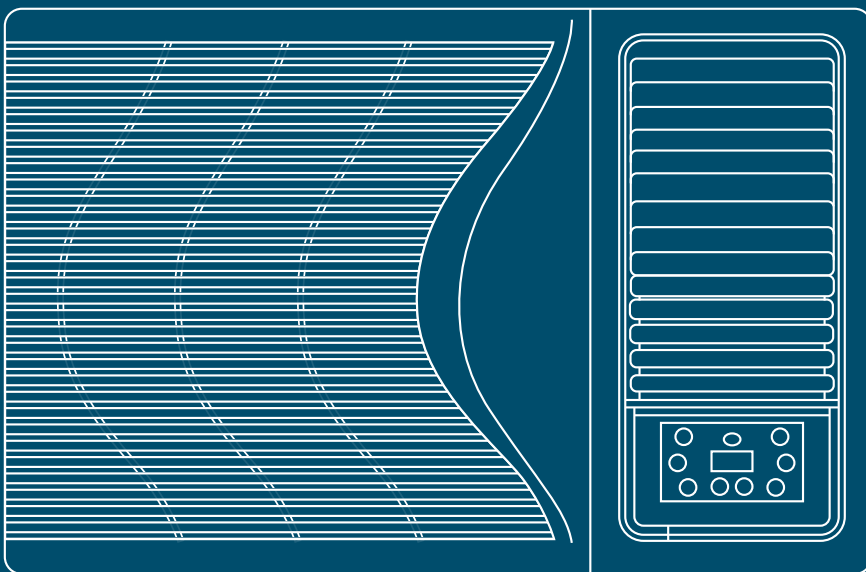


R32 WINDOW AIR CONDITIONER

Owner's Manual

KW Series

KW09 | KW12 | KW18 | KW21



kaden°
your perfect climate



Table of contents

1. Safety precautions	4
2. Function	6
3. Unit specifications and remote control functions	7
4. Manual operation (without remote)	10
5. Wi-Fi	11
6. Operation tips and safety	12
7. Care and maintenance	13
8. Warranty information	14
9. Troubleshooting guide	15
10. Installation	16
11. Installation notes	19
12. Installation record form	22

Important note

This appliance must be installed in accordance with:

Manufacturer's Installation Instructions

Current AS/NZS 3000, AS/NZS 5141

Local Regulations and Municipal Building Codes including local OH&S requirements

This appliance must be installed, maintained, and removed only by an Authorised Person.

For continued safety of this appliance, it must be installed and maintained in accordance with the manufacturer's Instructions.



Important note

Read this manual carefully before installing or operating your new air conditioning unit. Make sure to save this manual for future reference.

1. Safety precautions

Read safety precautions before installation

Incorrect installation due to ignoring instructions can cause serious damage or injury.

The seriousness of potential damage or injuries is classified as either a WARNING or CAUTION.



This symbol indicates that ignoring instructions may cause death or serious injury.



This symbol indicates that ignoring instructions may cause moderate injury to your person, or damage to your unit or other property.



WARNING

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 without supervision.

INSTALLATION WARNINGS

- Ask an authorised professional to install this air conditioner. Inappropriate installation may cause water leakage, electric shock, or fire.
- All repairs, maintenance and relocation of this unit must be performed by a licensed service technician. Inappropriate repairs can lead to serious injury or product failure.

WARNINGS FOR PRODUCT USE

- If an abnormal situation arises (like a burning smell), immediately turn off the unit and pull the power plug. Call your dealer for instructions to avoid electric shock, fire or injury.
- **Do not** insert fingers, rods or other objects into the air inlet or outlet. This may cause injury, since the fan may be rotating at high speeds.
- **Do not** use flammable sprays such as hair spray, lacquer or paint near the unit. This may cause fire or combustion.
- **Do not** operate the air conditioner in places near or around combustible gases. Emitted gas may collect around the unit and cause explosion.
- **Do not** operate the air conditioner in a wet room (e.g., bathroom or laundry room). This can cause electrical shock and cause the product to deteriorate.
- **Do not** expose your body directly to cool air for a prolonged period of time.



REFRIGERANT

This appliance uses R32 (difluoromethane) refrigerant, which is a flammable gas class 2.2 according to AS 1677 and must be handled by a refrigeration technician with an appropriate Australian Refrigerant Handling License.



WARNING

Risk of fire / flammable material. If the refrigerant is leaked, together with an external ignition source, there is a possibility of ignition.

ELECTRICAL WARNINGS

- Only use the specified power cord. If the power cord is damaged, it must be replaced by the manufacturer, certified service agent or licensed electrical contractor.
- Keep power plug clean. Remove any dust or grime that accumulates on or around the plug. Dirty plugs can cause fire or electric shock.
- **Do not** pull power cord to unplug unit. Hold the plug firmly and pull it from the outlet. Pulling directly on the cord can damage it, which can lead to fire or electric shock.
- **Do not** use an extension cord, manually extend the power cord, or connect other appliances to the same outlet as the air conditioner. Poor electrical connections, poor insulation, and insufficient voltage can cause fire.

CLEANING AND MAINTENANCE WARNINGS

- Turn off the device and pull the plug before cleaning. Failure to do so can cause electrical shock.
- **Do not** clean the air conditioner with excessive amounts of water.
- **Do not** clean the air conditioner with combustible cleaning agents. Combustible cleaning agents can cause fire or deformation.

CAUTION

- If the air conditioner is used together with burners or other heating devices, thoroughly ventilate the room to avoid oxygen deficiency.
- If you are not going to use the air-conditioner for a long time, disconnect the power from the main isolator.
- During storms or bad weather turn off the unit and disconnect the power from the main isolator.
- Make sure that water condensation can drain unhindered from the unit.
- **Do not** operate the air conditioner with wet hands. This may cause electric shock.
- **Do not** use device for any other purpose than its intended use.
- **Do not** climb onto or place objects on top of the outdoor unit.
- **Do not** allow the air conditioner to operate for long periods of time with doors or windows open, or if the humidity is very high.

2. Function

Introduction

Window air conditioners are designed to regulate a room's temperature and dry the room.

Cooling in Summer

In the hot summer, the air conditioner can cool down the room's air by transferring heat out.

Dehumidifying in rainy or humid season

Without reducing the room temperature, the air conditioner can dehumidify and make the room air dry and comfortable.

Heating in Winter

In the cold winter, the air conditioner can heat up the room's air.

Exchange fresh air

Open the storm door to keep the fresh air in the room.

Working temperature range

The operating temperature range (outdoor temperature):

- -7°C – 43°C.

Power requirements

CAUTION

Rated voltage: 220 – 240V ~ 50Hz

The electric components will be damaged when the voltage is too high. If the voltage is too low, the compressor will vibrate violently to damage the refrigerant system and easily cause the compressor and electric components to not work.

CAUTION

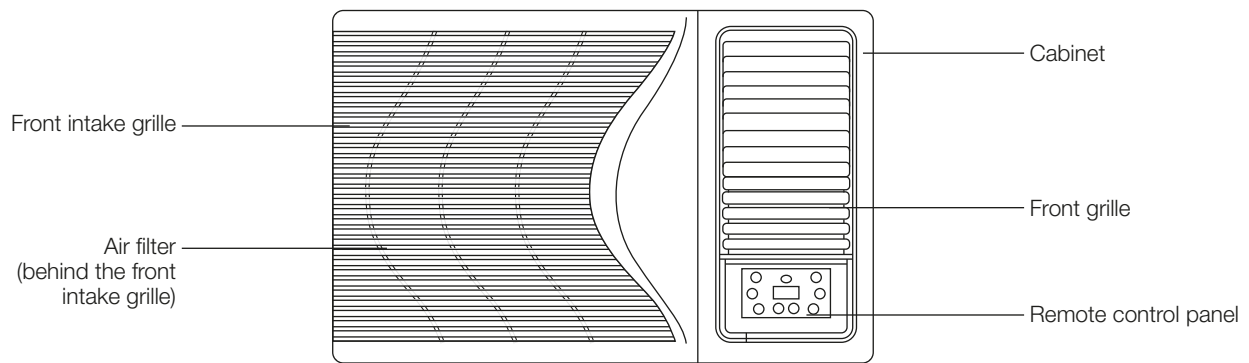
The ground must be connected.

Special sockets must be used. Furthermore, the socket and wiring must conform to National and State Wiring Regulations and Standards, and the earthing method must be reliable.

In a fixed circuit, there must be an RCD or RCBO with a maximum rated residual current of 30mA installed as per AS/NZS 3000:2018 (Clause 2.6.3.2.2).

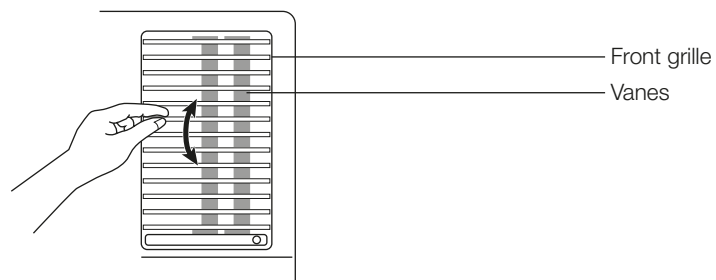
3. Unit specifications and remote control functions

Unit parts

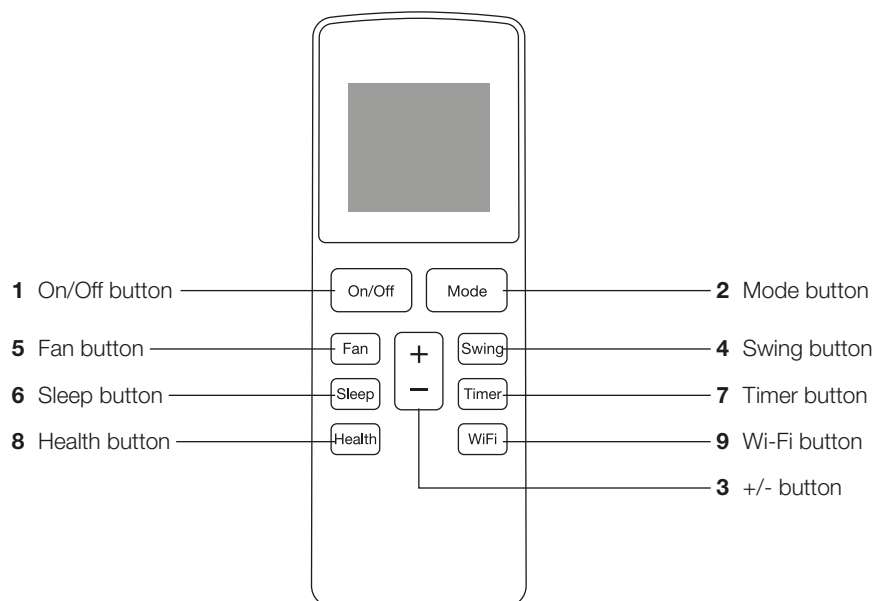


Air direction adjustment

Airflow direction adjustment up and down is controlled by positioning the vanes to discharge the air upwards, downwards or straight out.



Remote control function buttons



Remote control operation procedure

1. On/Off button

Press this button to turn on the unit. Press this button again to turn off the unit.

2. Mode button

Press this button to switch between the different operating modes. The corresponding indicator will appear on.

Auto: Under this mode, the unit will operate automatically according to ex-factory setting. In this case, set temperature cannot be adjusted.

Cool: Under this mode, the unit will operate under cooling mode. Cooling indicator will be on. Press **Fan Speed** button to adjust the fan speed.

Dry: Under this mode, the unit runs in low fan speed for dehumidification and the corresponding indicator will be on; under dry mode, the fan speed cannot be adjusted.

Fan only: Under this mode, the unit will not cool or heat, only blow air. Fan indicator will be on. Press **Fan Speed** button to adjust the fan speed.

Heat: Under this mode, the unit operates under heating mode. Press **Fan Speed** button to adjust the fan speed.

3. +/- button

Pressing **+** or **-** button once will increase or decrease set temperature by 1°C (or °F).

Hold **+** or **-** button for two seconds, set temperature on remote controller will change more quickly.

Release the button after your required set temperature is reached.

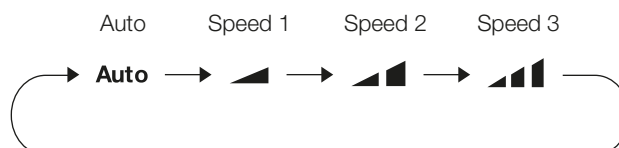
Under timer setting status, after each pressing of **+** or **-** button, time will increase or decrease 0.5 hours. Hold **+** or **-** button, after two seconds the time shown on the display will quickly change. Loosen the button until the time is reached to your set time.

4. Swing button

Press this button to turn swing on or off.

5. Fan button

This button is used for setting **Fan Speed** in the sequence that goes from **Auto**, through the speed settings then back to **Auto**.



NOTE: There are three speeds for the fan speed of this model.

6. Sleep button

Press this button to go into the **Sleep** operation mode. Press it again to cancel this function.

7. Timer button

Under **On** status, press this button to set timer **Off**. Under **Off** status, press this button to set timer **On**.

Press this button once and the characters of **Hour On (Off)** will flash to be displayed. Meanwhile, press **+** button or **-** button to adjust timer setting (time will change more quickly if holding **+** or **-** button). Time setting range is 0.5 to 24 hours. Press this button again to confirm timer setting and the characters of **Hour On (Off)** will stop flashing.

If the characters are flashing but you haven't pressed the **Timer** button, timer setting status will quit after five seconds. If timer is confirmed, press this button again to cancel timer.

8. Health button

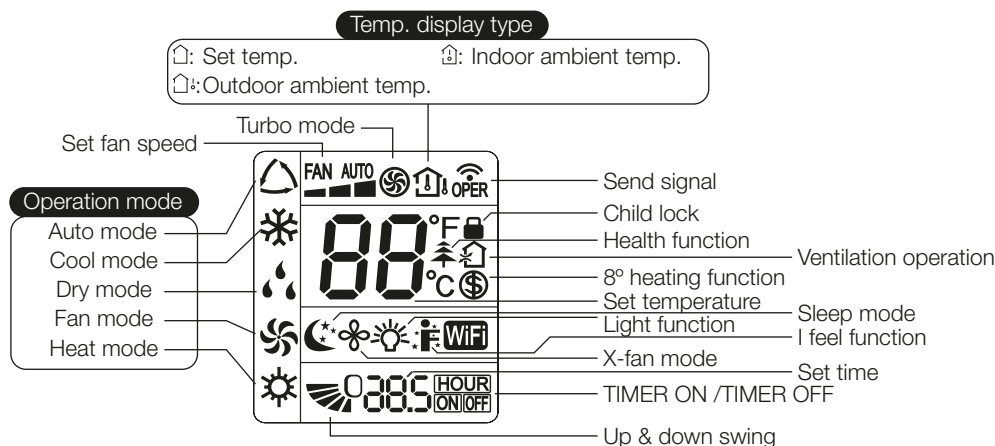
The KW range does not come with the additional health feature. The standard remote included with the KW range includes the health button, however this button will not activate a health feature mode.

9. Wi-Fi button

Press **Wi-Fi** button to turn on Wi-Fi function, **Wi-Fi** icon will be displayed on the remote controller.

Hold **Wi-Fi** button for five seconds to turn off Wi-Fi function and **Wi-Fi** icon will disappear. Under off status, press **Mode** and **Wi-Fi** buttons simultaneously for one second and the Wi-Fi module will restore factory settings.

Remote control display icons



NOTE: This is a standard remote and may not feature every function above, if a button is pressed for an unavailable function, repress the button to resume the system operating as normal.

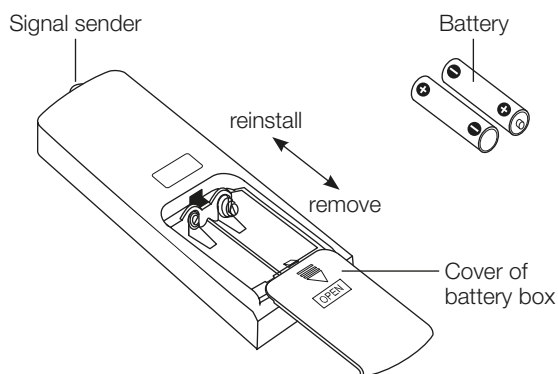
Function introduction for combination buttons

Temperature display switch over function


Under **Off** status, press **-** and **Mode** buttons simultaneously to switch temperature display between °C and °F.

Light function

Under **Switch-on** or **Switch-off** state, you may hold **+** and **Fan** buttons simultaneously to set the lamp on or off. After being energized the lamp is defaulted on.



Replacement of batteries in remote controller

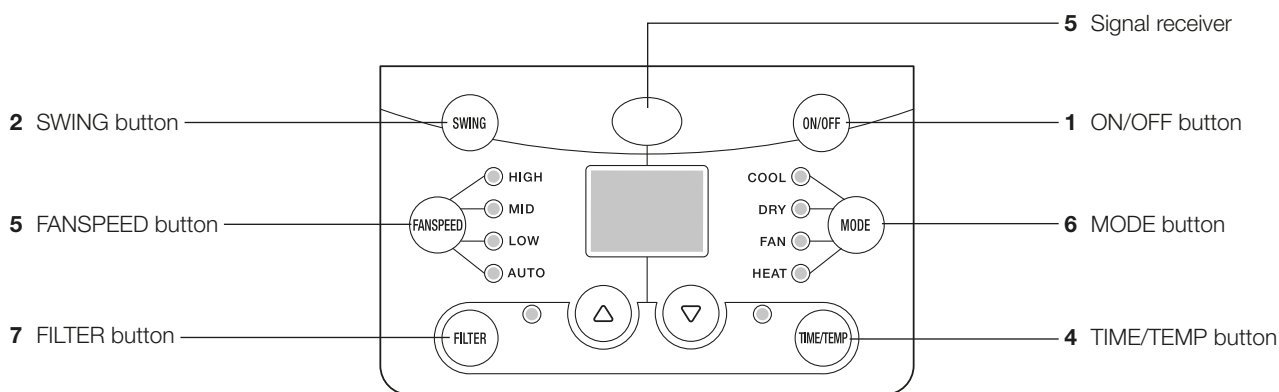
1. Press the back side of remote controller marked with  as shown in the figure, and then push out the cover of the battery box along the arrow direction.
2. Replace two 7# (AAA 1.5V) dry batteries, and make sure the position of + polar and - polar are correct.
3. Reinstall the cover of battery box.

Note

- The distance between signal sender and signal receiver should be no more than eight metres, and there should be no obstacles between them.
- As there may be signal interference in the room with objects such as; electronic fluorescent lamps, conversion florescent lamps and/or wireless phones, you may need to get closer to the air conditioner when using the remote controller.
- Remove batteries from remote controller when not in use for a long time.

4. Manual operation (without remote)

NOTE: If wireless remote controller is lost, you can use the remote control panel and operate manually.



1. ON/OFF button

Operation starts when pressing this button, and stops when pressing this button again.

2. SWING button

Activates the automatic louvre swing function.

3. FAN SPEED button

Select the fan speed **LOW**, **MID**, **HIGH** and **AUTO** in sequence.

4. TIME/TEMP button

Press the Δ keypad to increase the set (operating) temperature of the unit. Press the ∇ keypad to decrease the set (operating) temperature of the unit. The temperature setting range is from 16 to 30°C. Press the Δ keypad also to increase the selected time in 0.5 hour increments, and Press the ∇ keypad to decrease the selected time in 0.5 hour decrements. The time setting range is from 0 to 10 hours. Press the Δ keypad also to increase the selected time in 1 hour increments, and press the Δ keypad to decrease the selected time in 1 hour decrements. The time setting range is from 10 to 24 hours.

5. Signal receiver

Ensure the signal receiver is not blocked to optimally control your unit from the remote control.

6. MODE button

Select the operation mode, **AUTO**, **COOL**, **DRY**, **FAN**, **HEAT** (for reverse cycle model).

7. FILTER button

This feature is a reminder to clean the air filter (see Care and Maintenance) for a more efficient operation and cooling. The LED light will illuminate after 250 hours of operation. To reset after cleaning the filter, press the **Filter** button and the light will go off. Before the LED light illuminates, press the **Filter** button for three seconds, the accumulated time of operation will be cancelled.

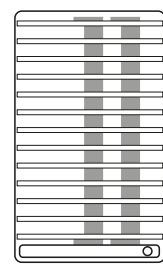
Ventilation lever



When the slider is at the **OPEN** position, the ventilation door opens to allow air, smoke or odours to be expelled from the room.

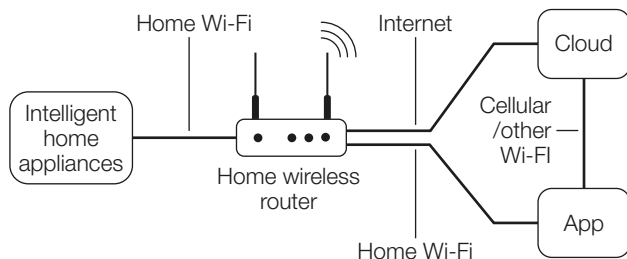


When the slider is at the **CLOSE** position, the ventilation door is closed and the air will be circulated inside the room and conditioned.



5. Wi-Fi

Wi-Fi app and set up



Operating systems

Requirement for user's smart phone:

iOS system

Support iOS7.0 and above version



Android system

Support Android 4.4 and above version



Download and installation



Scan the QR code or search **Ewpe Smart** in the application market to download and install it. When the application is installed, register the account and add the device to achieve long-distance control and LAN control of smart home appliances.

For more information, please refer to **Help** in app.

Set up process

1. Scan the QR code above with your smart phone to download and install the Wi-Fi application directly.
2. Open the Wi-Fi app and click **Sign up** for registration.
3. Sign in through the prompt interface, you can also enter the homepage and click the profile picture at the left upper corner to sign in.
4. Click **+** at the right upper corner of homepage to add device and select **AC**.

5. After selecting **AC**, you can select different reset tools according to actual situation. The app interface will provide relevant operation instructions for different tools.
6. Reset the air conditioner (refer to the operation instructions in app interface) and click **Next** to add home appliance automatically (Wi-Fi password shall need to be inputted).
7. Or after setting and activating the air conditioner, click **Add appliance manually** at the right upper corner to select the wireless network for controlling the device. Then confirm family Wi-Fi and arrange configuration.
8. After finalising device reset and filling in the correct information, search device and arrange configuration.

Main function settings

In the homepage, click the device in device list and enter device operation interface.

Set mode, temperature and fan speed to your desired choice.

Advanced settings

Click **FUNC** in the lower left corner in device operation interface to enter advanced settings

Swing Settings

Click **Up down swing** or **Left right swing** to turn on or turn off swing function. Click the arrow at the right lower corner of icon to enter the set swing range.

Preset Setting

Select **Timer** to set preset times of your choice

Other function settings

Homepage menu

Click the profile picture at the left upper corner of homepage and set each function in the following menu.

Scene

Click **Scene** and then you can operate the devices in the preset scene.

Home management

Click **Home management** to create or manage family. You can also add family members according to the registered account.

Help

Click **Help** and view the operation instructions of the app.

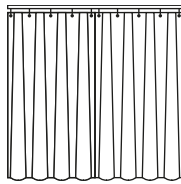
6. Operation tips and safety

Operation tips

- **Do not** over-cool the room temperature. This is not good for health and wastes electricity.



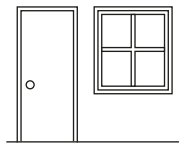
- Keep curtains closed. **Do not** let sunshine enter the room directly when the air conditioner is in operation.



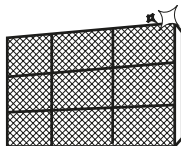
- Keep the room temperature uniform. Adjust the vertical and horizontal airflow direction to ensure a uniform temperature in the room. Air can't be discharged to the direction of air in.



- Make sure that the doors and windows are tightly closed. Avoid opening doors and windows as much as possible to keep air conditioning in the room.



- Clean the air filter regularly. Blockages in the air filter reduce dehumidifying effects. Clean the air filter at least once every two weeks.

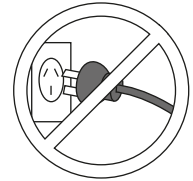


- Ventilate the room occasionally. Since windows are kept closed, it is a good idea to open them and ventilate the room now and then. When starting the unit, curtains or windows should be closed to prevent the heat/cool leakage.



Safety tips

- **Do not** pull out the power cord.
- Damage to the cord may result in serious electric shocks



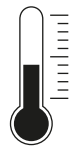
- **Do not** use the air conditioner for other purposes except for cooling the room.
- **Do not** use the air conditioner for other purposes such as drying clothes, preserving foods, or cultivating vegetables.



- **Do not** block the air intake and outlet vents. This causes lowered performance and irregular operation.
- **Do not** insert sticks or other objects into these vents as it is dangerous to touch the electric components and the fan.



- Select the most appropriate temperature. Pay attention to adjust the temperature to suit the conditions. Rooms occupied by infants, the elderly, or the sick should be kept at an appropriate temperature.



- **Do not** use heating apparatuses in the vicinity. The air conditioner's plastic parts will melt if exposed to excessive heat.



- **Avoid** exposing the body directly to a continuous unidirectional air flow for long periods. This is not recommended for health reasons.



CAUTION

Operations for safety and health

1. The plug must be accessible after the appliance is positioned.
2. **Do not** use this appliance in the laundry.
3. If the power cord is damaged, it must be replaced by the manufacturers or its service agent in void of hazard.

Note

Always wait at least three minutes before switching the air conditioner on again after you have switched it off during cooling or heating.



Please note that the unit is filled with flammable gas R32. Inappropriate treatment of the unit involves the risk of severe damages of people and material.

The appliance must be installed, operated and stored in a room with a floor area larger than 4m².

7. Care and maintenance

⚠ CAUTION

Always turn off the air conditioner and main power supply before cleaning to ensure safety.

Cleaning the unit

1. Turn off the system before cleaning. Take the plug out only after air conditioner stops completely.



2. Use a soft cloth when cleaning cabinet. If the cabinet is very dirty, dip cloth into warm water below 40°C, dry the cloth and then rub off the dirt.



3. **Do not** use gas, benzene, solvent, wash, chemical solvent, etc. for cleaning.



4. **Do not** splash water directly into the unit, in which there are micro-computer and circuit plate, they must not be drenched with water.

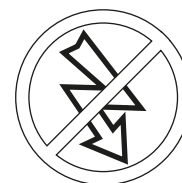


Air filter

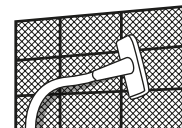
The air filter behind the intake grille should be washed at least once every two weeks or as often as it needs cleaning.

To clean the air filter:

1. Turn off the system before cleaning. Take the plug out only after air conditioner stops completely.



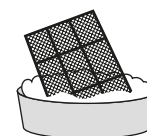
2. Vacuum the filter on the dusty side to remove light dust.



3. The clean side faces upwards; use water to gently flush the filter to wash away the accumulated dust and fluff.



4. If the filter is very dirty, use a mild household detergent in the wash water. Let the air filter dry thoroughly before reinstalling it.



8. Warranty information

Reece Limited Product Quality Guarantee

You have purchased a quality product from Reece Australia Pty Ltd ABN 84 004 097 090 ("Reece Limited").



Warranty Terms & Conditions

These Warranty Terms and Conditions ("Warranty") constitute your agreement with Reece Limited and will apply to your service order. The benefits given by this Warranty are in addition to all consumer guarantees and other rights and remedies prescribed by the Australian Consumer Law and any other applicable laws.

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and compensation for any 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.

In addition to your rights and remedies under the Australian Consumer Law, Reece Limited provides consumers with a Warranty which covers faults in product construction, materials and assembly in the following applicable warranty periods:

KW Series Window Air Conditioners

Use	Warranty
Residential applications (human comfort use)	5 years
Commercial applications (human comfort use)	5 years
Non-human comfort applications and portables	1 year

Claim Procedure

In order to claim the Warranty, you must cease using the product when a fault arises, contact the Reece Limited branch where the product was purchased to report the issue and follow Reece Limited's directions regarding what to do next. The relevant Reece Limited branch details can be found on your purchase invoice. Reece Limited's general contact details are as follows:

For more information on warranty please visit:
<https://www.kadenair.com.au/faqs/>

If applicable, all replacement products will be available for collection at no cost to the customer at the nearest Reece Limited branch to the customer's location, or elsewhere as agreed between the customer and Reece Limited.

9. Troubleshooting guide

Issue	Possible causes
Air conditioner does not operate at all.	<p>Is there a power failure?</p> <p>Is the plug out?</p> <p>Is power fuse or switch off ?</p> <p>Is the voltage too high or too low?</p>
Cooling or heat efficiency is not good.	<p>Is air inlet or outlet locking?</p> <p>Is there any other heat /cool source in the room?</p> <p>Are the air filters very dirty?</p> <p>Is indoor fan speed set at LOW?</p> <p>Maybe the room is too hot/cold when the unit is started.</p>
Foggy air flows out.	<p>In COOL mode operation, sometimes there is foggy air flowing out of the unit. This is because the humid air from the room has been cooling rapidly.</p> <p>The unit is normal while the indoor outlet is sending out some odour, because the inlet air may be mixed with the smell of furniture and smoke.</p>
The air conditioner operation is noisy.	<p>For a noise that sounds like water flowing: This is the sound of refrigerant flowing inside the air conditioner unit.</p> <p>For a noise that sounds like a shower: this is the sound of the dehumidifying water being processed inside the air conditioner unit.</p>
Condensation appears to be leaking from the air conditioner.	Condensation occurs when the airflow from the air conditioner cools the warm room air.
Air conditioner does not operate for about three minutes when restarted.	This is to protect the mechanism. Wait about three minutes and operation will begin.

CAUTION

In the following situations immediately stop all operations and pull the plug out, please contact your supplier.

- Operation starts or stops abnormally.
- Power fuse or switch often breaks.
- Accidentally splashed water or something into air conditioner.
- Electrical lines are very hot or lines cover breaks.
- Other strange situations.

Others

- The connection between AC and power cord or among other elements independently shall be subject to wiring diagram on the unit.
- Model and rated value of fuse shall be subject to screen print on corresponding controller or protective bushing.

After service

- If your air conditioner has the questions of quality or anything else, please contact your supplier.

10. Installation

Installation precaution

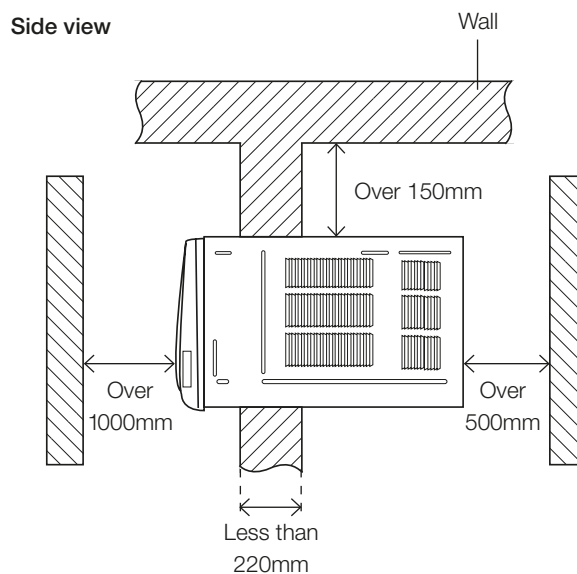
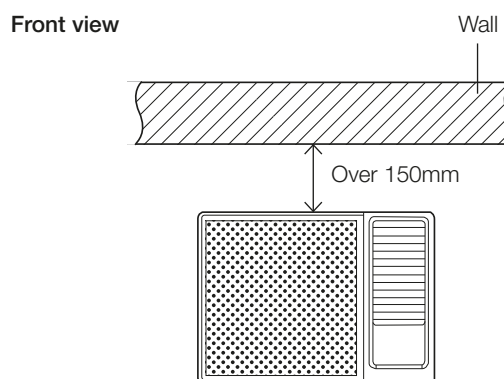
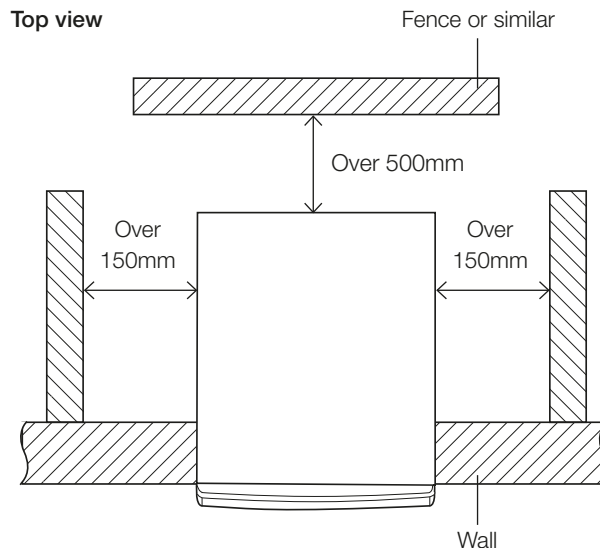
Improper installation of the window air conditioner could result in a damaged unit. Please allow a professional technician to install the unit and don't install it by yourself. Kaden is not responsible for the damage if done by an unlicensed professional.

Location

- Ensure unit is installed in a location where the condensate water is drained appropriately.
- Install air conditioner unit far away from TV set or radio etc. to avoid disturbing video or voice.
- In coastal, thermal or other special areas, where pollution, gases and/or salt are in high concentration, consider using coil protection products and contact seller before installation.
- **Avoid** a place where it is possible for inflammable gas to leak out.
- **Avoid** other heat sources or direct sun light.
- **Avoid** a place where it is easy for children to touch.
- **Do not** use the unit in the immediate surroundings of a laundry, bath, shower or swimming pool.
- It's not allowed to be installed on an unstable or motive base structure (such as truck) or in a corrosive environment (such as chemical factory).

How to install

1. Choose a location where there are no obstacles surrounding the unit, and the plug is accessible.
2. Prepare the installation hole slightly bigger than unit size.
3. Choose the installation space according to the following diagram (pictured right). The distance between the air conditioner and the surrounding obstacles should meet the requirement as below: over 150mm (upper side), over 150mm (left side), over 150mm (right side), over 1000mm (front side) and over 500mm (rear side).



Installation notes

- The air conditioner should not be used in a room that has running fire (such as fire source, working coal gas ware, operating heater).
- The air conditioner must be installed in a room that is larger than the minimum room area.
- The minimum room area is shown on the nameplate or following table.
- A leak test must be conducted after installation.
- Minimum install height is 1 metre.
- **Do not** fill unit above max refrigerant charge.

Minimum room area (m2)

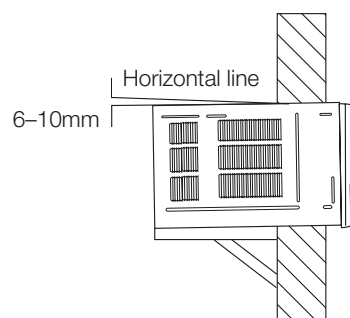
Charge amount (kg)	≤1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2	2.1	2.2	2.3	2.4	2.5
Window mounted	4.0	5.2	6.1	7.0	7.9	8.9	10.0	11.2	12.4	13.6	15	16.3	17.8	19.3

Note: the unit must not be installed in a space less than 4m2.

Model	Pre-Charged Refrigerant	Max Refrigerant Charge
KW09	0.60kg	0.60kg
KW12	0.86kg	0.86kg
KW18	1.08kg	1.08kg
KW21	1.05kg	1.05kg

Installation procedure

1. Remove the sticker from the front panel.
2. Put the unit into the installation hole.
When installing the unit, it should be slanted down to the back to avoid the enlargement of noise or vibration. (Slant between 6–10mm.) (Shown at right figure.)
The installation place should be strong enough to avoid the enlargement of noise or vibration.
3. Fill up gaps in the cabinet with sponge or foam.



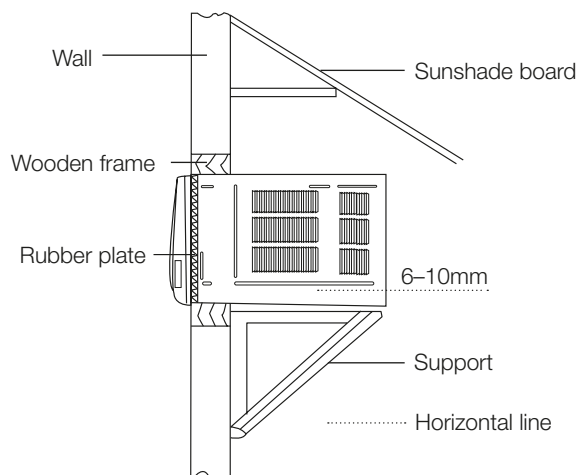
Installation assistance

Use iron support

The installation hole should be strong enough to support the air conditioner. If it cannot, a suitable bracket with an appropriate weight rating has to be used to assist in supporting the outdoor portion of the unit. The suitable supporting bracket should be fixed to the building (shown at right figure.)

Use sunshade board

A sunshade board should be installed above the outer portion of the unit to avoid anything falling onto the unit and reduce the amount of direct sunlight. When installing the sunshade board, ensure it does not block the air inlet on the side of the unit.



Drain water

Drain pan and drain hose need to be installed before using. Drain hose is not included in the products, you need to purchase it locally to satisfy your particular needs. Use the following procedure to install drain pan and drain hose.

1. Slide out the chassis from the cabinet.
2. Install the drain pan to the corner of the cabinet with two screws.
3. Connect the drain hose to the outlet on the drain pan bottom.
4. Slide the chassis into its original place in the cabinet.

To get the maximum cooling efficiency, the air conditioner is designed to splash the condensation water on the condenser coil. If the splashing sound is excessive, you can remove the rubber plug from the chassis to lower the noise, this may cause a slight reduction in performance on hot days.

Notes for installation

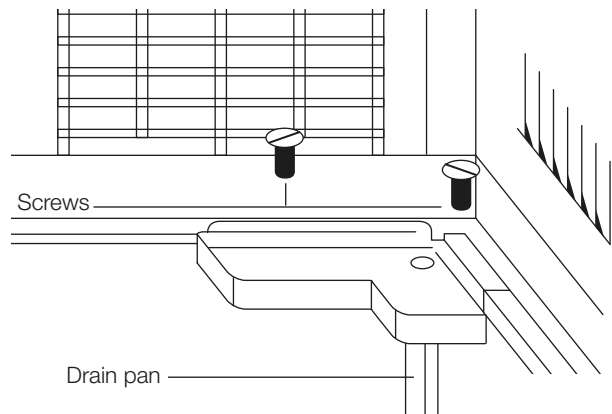
Electric wiring

- The unit must be connected to ground.
- The unit requires an exclusive fixed power circuit as per AS/NZS 3000:2018.
- **Do not** pull on the power cord strongly.
- The fixed circuit must be installed with an RCD or RCBO with a maximum rated residual current of 30mA as per AS/NZS 3000:2018 (Clause 2.6.3.2.2).
- Connecting method between air conditioners and power cord and interconnecting method of each individual element with one another should accord with wiring diagram on the unit.
- The air conditioner should be installed in accordance with National and State Wiring regulations and standards.
- An all-pole circuit breaker having a contact separation of at least 3mm in all poles should be connected in fixed wiring.
- 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.
- All the electrical work must be done in accordance with National and State Wiring regulations and standards.

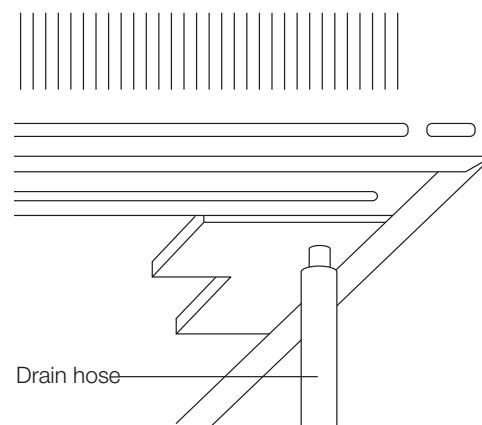
Removal

In the event of removing the air conditioner to another location, you should contact the seller first. This must be done under the direction of a professional technician.

Internal view



External view



Noise

- Install the unit in a location that is stable enough to avoid possible vibration and noise.
- Don't put anything in front of the outlet of the unit to avoid increasing noise.
- Be sure that hot air or noise will not inconvenience neighbours.
- Please contact the seller as soon as there is strange noise during operation.
- Please use the safety support.

11. Installation notes

- **Initial safety checks shall include:**
 - that capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;
 - that no live electrical components and wiring are exposed while charging, recovering or purging the system;
 - that there is continuity of earth bonding.
- **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, DD.4.3 to DD.4.7 within AS/NZS 60335.2.40-2019 shall be completed 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.
- **Checking for presence of refrigerant**

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

If any hot work is to be conducted on the 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.
- **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 rectified. 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:

 - that capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;
 - that no live electrical components and wiring are exposed while charging, recovering or purging the system.
- **No ignition sources**

No person carrying out work in relation to a refrigerating system which involves exposing any pipe work shall use any sources of ignition in such a manner that it 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 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.
- **Repairs to sealed components**

During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation. Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.

 - Ensure that the apparatus is mounted securely.
 - Ensure that seals or sealing materials have not degraded to the point that they no longer serve the purpose of preventing the ingress of flammable atmospheres.

Replacement parts shall be in accordance with the manufacturer's specifications.

NOTE: The use of silicon sealant can 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.

- **Leak detection methods**

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.

- **Detection of flammable refrigerants**

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

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

Electronic leak detectors may be used to detect refrigerant leaks but, in the case of flammable refrigerants, the sensitivity may not be adequate, or may need re-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25% maximum) is confirmed.

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

NOTE: Examples of leak detection fluids are

- bubble method,
- fluorescent method agents.

If a leak is suspected, all naked flames shall be removed/ extinguished. If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak. Removal of refrigerant shall be according to clause DD.9.

- **Removal and evacuation**

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

- 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. 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 that ventilation is 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 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 the appropriate purging gas. The system shall be leak-tested on completion of charging but prior to commissioning. A follow up leak test shall be carried out prior to leaving the site.

- **Decommissioning**

Before carrying out this procedure, it is essential that the technician is completely Specialist's Manual 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 reuse 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. For appliances containing flammable refrigerants, 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 are available. All cylinders to be used are designated for the recovered refrigerant and labelled for that refrigerant (i.e. special cylinders for the recovery of refrigerant). Cylinders shall be complete with pressure-relief valve and associated shut-off valves in good working order.

Empty recovery cylinders are evacuated and, if possible, cooled before recovery occurs. The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of all appropriate refrigerants including, when applicable, 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.

12. Installation record form

Installation record – installer details

Company name _____

Company address _____

Telephone _____

Mobile _____

Email _____

Certificate of compliance/certification number _____

Authorised contractors license number _____

Refrigerant handling license number _____

Installers name _____

Installers signature _____

Installation date _____

Installation record – system details

Model number _____

Serial number _____

Installation address _____

Service maintenance

Service and maintenance is essential in ensuring the prolonged useful life of your system, and help ensure it operates at maximum efficiency. More frequent routine maintenance may be necessary where the air conditioning system is installed in harsh environments, or in non-residential applications.

CAUTION

Service maintenance is not covered under warranty and is a chargeable service. All units must have safe and reasonable access and be installed in compliance with the installation instructions supplied with the unit. Some installations may require two service personnel to attend, in accordance with health and safety requirements.

Also note that all refrigerated air conditioning systems have air filters that require regular inspection and cleaning. Please refer to "Air filter" on page 13.

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