

# Bosch Ducted Type (Medium & High Static) Air Conditioner / Heat Pump

Climate 5000 Series



**BOSCH**

User Manual





## Table of Contents

|          |   |           |
|----------|---|-----------|
| <b>1</b> | <b>Key to Symbols and Safety Instructions</b>       | <b>4</b>  |
| 1.1      | Key to Symbols                                      | 4         |
| 1.2      | Safety  | 4         |
| <b>2</b> | <b>Unit Specifications and Features</b>             | <b>6</b>  |
| 2.1      | Unit Parts - 9k ~ 48k Models                        | 6         |
| 2.2      | Unit Parts - 60k Model                              | 6         |
| 2.3      | Achieving Optimal Performance                       | 7         |
| 2.4      | Other Features                                      | 7         |
| <b>3</b> | <b>Manual Operation (Without Remote)</b>            | <b>9</b>  |
| 3.1      | How to Operate Your Unit Without the Remote Control | 9         |
| <b>4</b> | <b>Care and Maintenance</b>                         | <b>9</b>  |
| 4.1      | Cleaning Precautions                                | 9         |
| 4.2      | Cleaning Your Air Filter                            | 9         |
| 4.3      | Repairing Refrigerant Leaks                         | 11        |
| <b>5</b> | <b>Troubleshooting</b>                              | <b>12</b> |
| 5.1      | Common Issues                                       | 12        |
| 5.2      | Error Codes   | 13        |
| <b>6</b> | <b>Disposal Guidelines</b>                          | <b>14</b> |

## 1 Key to Symbols and Safety Instructions

### 1.1 Key to Symbols

#### Warnings



Warnings in this document are identified by a warning triangle printed against a grey background. Keywords at the start of a warning indicate the type and seriousness of the ensuing risk if measures to prevent the risk are not taken.

The following keywords are defined and can be used in this document:

- ▶ **DANGER** indicates a hazardous situation which, if not avoided, will result in death or serious injury.
- ▶ **WARNING** indicates a hazardous situation which, if not avoided, could result in death or serious injury.
- ▶ **CAUTION** indicates a hazardous situation which, if not avoided, could result in minor to moderate injury.
- ▶ **NOTICE** is used to address practices not related to personal injury.

#### Important information



This symbol indicates important information where there is no risk to people or property.

## 1.2 Safety

### Please read safety precautions before installation



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



#### WARNING: ELECTRICAL HAZARD

- ▶ Installation must be performed by qualified personnel only otherwise, the warranty will be voided. Inappropriate installation may cause water leakage, electric shock, or fire.
- ▶ All repairs, maintenance and relocation of this unit must be performed by a qualified service technician. Inappropriate repairs can lead to serious injury or product failure.



#### WARNING:

- ▶ 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 fire or an 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.



#### WARNING:

- ▶ This product can expose you to chemicals including Lead and Lead components, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**WARNING: ELECTRICAL HAZARD**

- ▶ Only use the specified power cord. If the power cord is damaged, it must be replaced by an equivalent power cord type.
- ▶ 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 the 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 or electric shock.



Illustrations in this manual are for explanatory purposes. The actual shape of your indoor unit may be slightly different. The actual shape shall prevail.

**WARNING: ELECTRICAL HAZARD**

- ▶ 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 to the equipment.

**WARNING: ELECTRICAL HAZARD**

- ▶ Turn off the air conditioner and unplug the unit if you are not going to use it for a long time.
- ▶ Turn off and unplug the unit during storms.
- ▶ 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 Unit Specifications and Features

### 2.1 Unit Parts - 9k - 48k Models

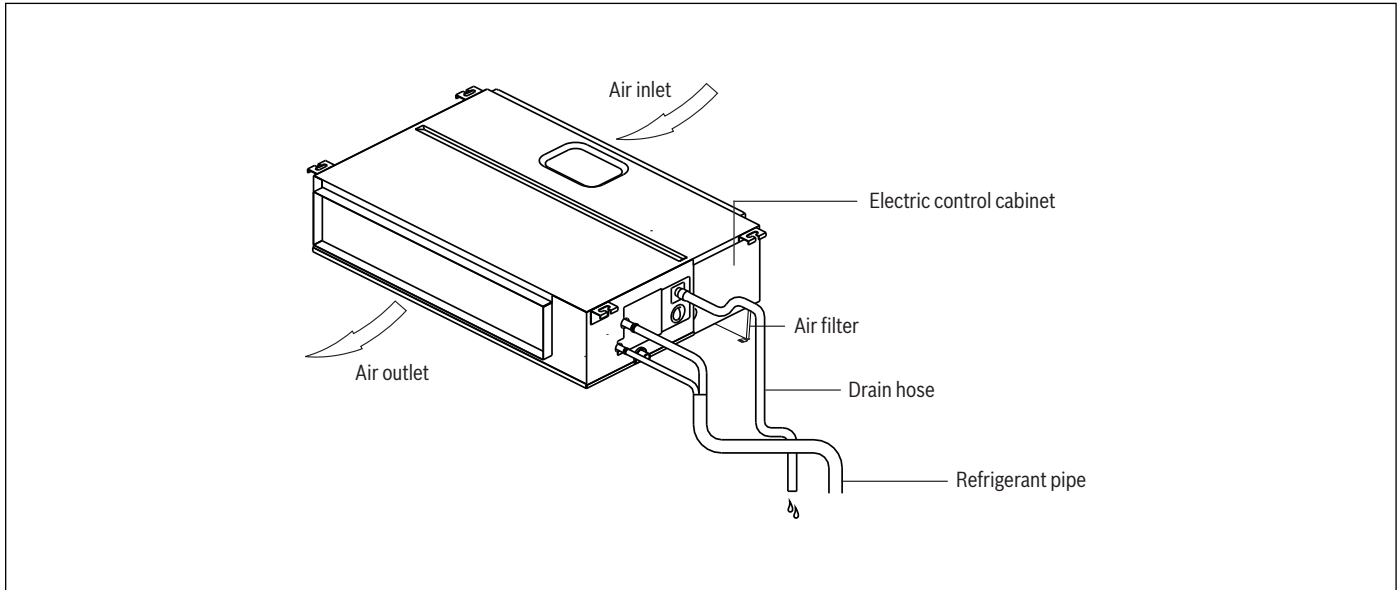


Figure 1

### 2.2 Unit Parts - 60k Model

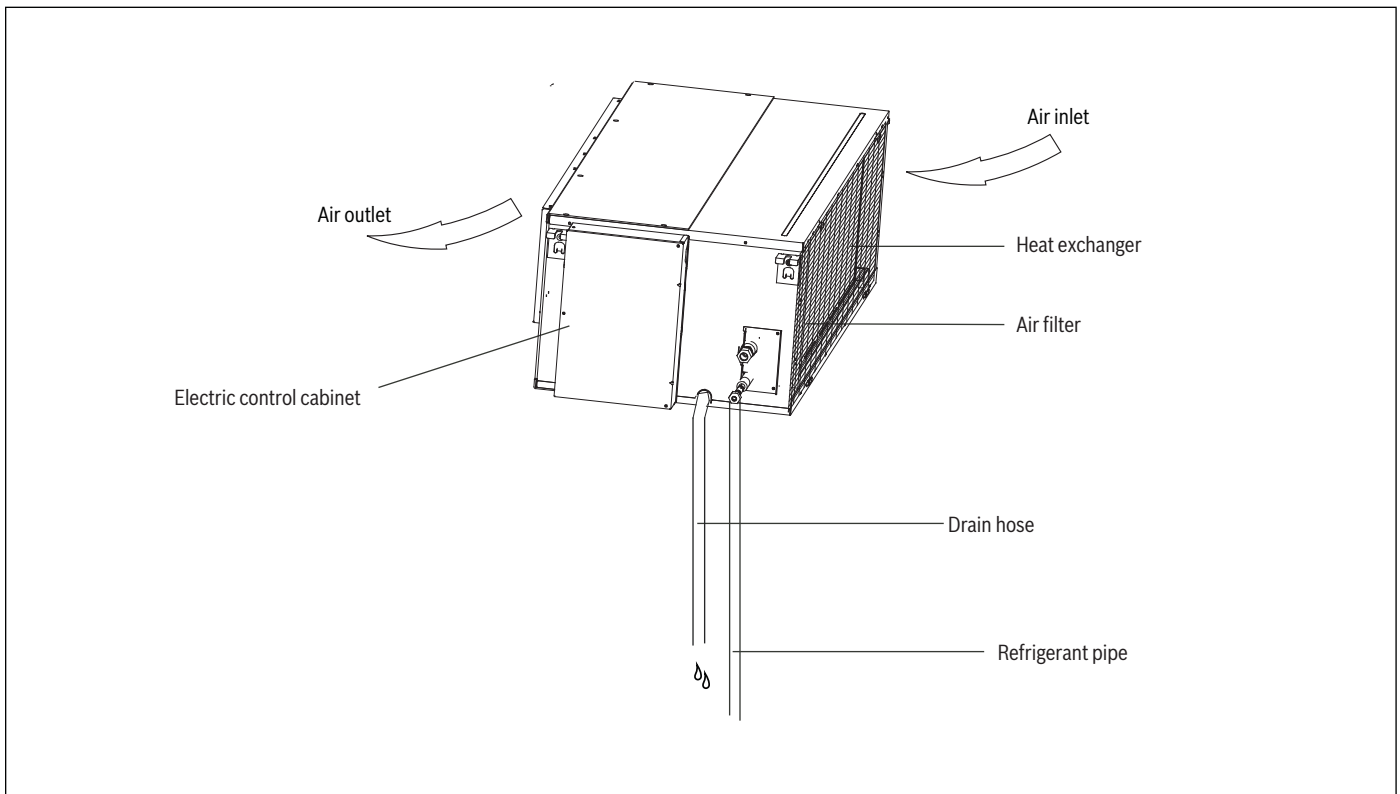


Figure 2


## 2.3 Achieving Optimal Performance

Optimal performance for the COOL, HEAT, and DRY modes can be achieved in the following temperature ranges. When your air conditioner is used outside of these ranges, certain safety protection features will activate and cause the unit to perform less than optimally.

### Optimal performance temperature ranges

|                     |                       | COOL mode     | HEAT mode    | DRY mode     |
|---------------------|-----------------------|---------------|--------------|--------------|
| Room Temperature    |                       | 17°C - 32°C   | 0°C - 30°C   | 10°C - 32°C  |
|                     |                       | 63°F - 90°F   | 32°F - 86°F  | 50°F - 90°F  |
| Outdoor Temperature | E-Star (9K - 24K)     | -25°C - 50°C  | -25°C - 30°C | 0°C - 50°C   |
|                     |                       | -13°F - 122°F | -13°F - 86°F | 32°F - 122°F |
|                     | Hyper Heat (9K - 24K) | -30°C - 50°C  | -30°C - 30°C | 0°C - 50°C   |
|                     |                       | -22°F - 122°F | -22°F - 86°F | 32°F - 122°F |
|                     | LCAC (30K - 60K)      | -15°C - 50°C  | -15°C - 30°C | 0°C - 50°C   |
|                     |                       | 5°F - 122°F   | 5°F - 86°F   | 32°F - 122°F |

Table 1

 When the outside temperature is below 0°C (32°F), we strongly recommend keeping the unit plugged in at all times to ensure smooth ongoing performance. A base pan heater is used in the outdoor unit to prevent ice build-up. Ice may build up if the unit is unplugged.

## 2.4 Other Features

- ▶ **Auto-Restart**  
If the unit loses power, it will automatically restart with the prior settings once power has been restored.
- ▶ **Anti-Mildew**  
When turning off the unit from COOL, AUTO (COOL), or DRY modes, the air conditioner will continue operating at very low power to dry up condensed water and prevent mildew growth.
- ▶ **Louver Angle Memory (some models)**  
When turning on your unit, the louver will automatically resume its former angle.
- ▶ **Refrigerant Leakage Detection**  
The indoor unit will automatically display “EC” when it detects refrigerant leakage or another internal error which requires professional service.



For a detailed explanation of your unit's advanced functionality (such as TURBO mode and its self-cleaning functions), refer to the Remote Control Manual.

### Energy Saving Tips

- ▶ DO NOT expose the unit to excessive temperature levels.
- ▶ Keep curtains closed during heating and cooling operation.
- ▶ Doors and windows should be kept closed to keep cool or warm air in the room.
- ▶ DO NOT place objects near the air inlet and outlet of the unit. This will reduce the efficiency of the unit.
- ▶ Set a timer and use the built-in SLEEP/ECONOMY mode if applicable.
- ▶ If you don't plan to use the unit for a long time, remove the batteries from the remote control.
- ▶ Clean the air filter every two weeks. A dirty filter can reduce cooling or heating efficiency.
- ▶ Adjust louvers properly and avoid direct airflow.

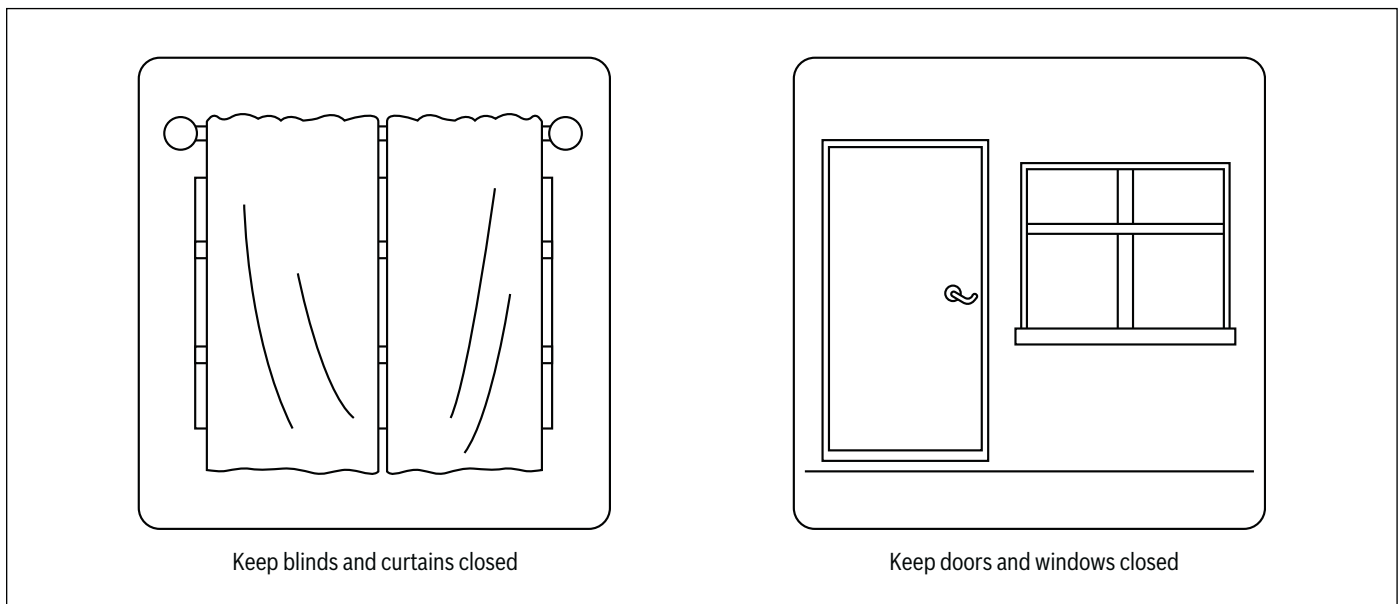


Figure 3



### 3 Manual Operation (Without Remote)

#### 3.1 How to Operate Your Unit Without the Remote Control

In the event that your remote control fails to work, your unit can be operated manually with the MANUAL CONTROL button located on the indoor unit. Note that manual operation is not a long-term solution, and that operating the unit with your remote control is strongly recommended.

- ▶ **MANUAL control button:** This button selects the mode in the following order: AUTO, FORCED COOL, OFF.
- ▶ **FORCED COOL mode:** In FORCED COOL mode, the Operation light flashes. The system will then turn to AUTO after it has cooled with a high wind speed for 30 minutes. The remote control will be disabled during this operation.
- ▶ **OFF mode:** When the panel is turned OFF, the unit turns off and the remote control is re-enabled.

#### NOTICE:

- ▶ The manual button is intended for testing purposes and emergency operation only. Please do not use this function unless the remote is lost and it is absolutely necessary. To restore regular operation, use the remote control to activate the unit.

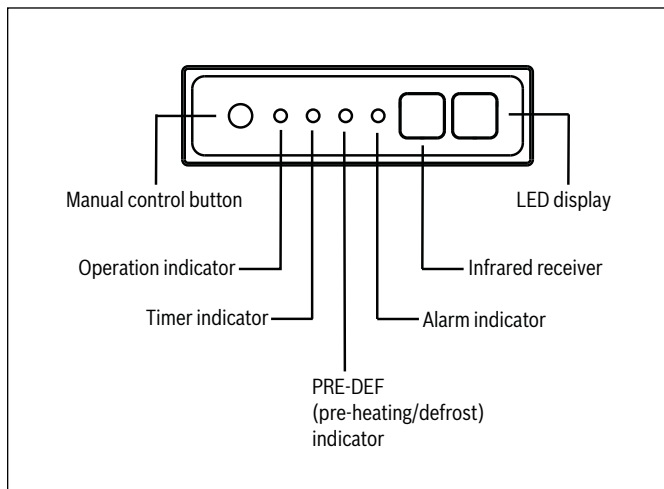


Figure 4

### 4 Care and Maintenance

#### 4.1 Cleaning Precautions



#### CAUTION:

- ▶ Any maintenance and cleaning of indoor and outdoor units must be performed by qualified service personnel only.
- ▶ Any unit repairs must be performed by qualified service personnel only.



#### WARNING: ELECTRICAL HAZARD

Always turn off your air conditioner system and disconnect its power supply before cleaning or maintenance.

- ▶ Do not use chemicals or chemically treated cloths to clean the unit
- ▶ Do not use benzene, paint thinner, polishing powder or other solvents to clean the unit. They can cause the plastic surface to crack or deform.

#### 4.2 Cleaning Your Air Filter

#### NOTICE:

- ▶ Do not touch air freshening filter for at least 10 minutes after turning off the unit.



#### WARNING: ELECTRICAL HAZARD

- ▶ Before changing the filter or cleaning, turn off the unit and disconnect its power supply.
- ▶ When removing the filter, do not touch metal parts in the unit. The sharp metal edges can cut you.
- ▶ Do not use water to clean the inside of the indoor or outdoor unit. This can destroy insulation and cause electrical shock.
- ▶ Do not expose filter to direct sunlight when drying. This can shrink the filter.

A clogged air conditioner can reduce the cooling efficiency of your unit, and can also be bad for your health. Make sure to clean the filter once every three months.

**9k ~ 48k models**

1. With the rear ventilated model, remove the filter as shown below.

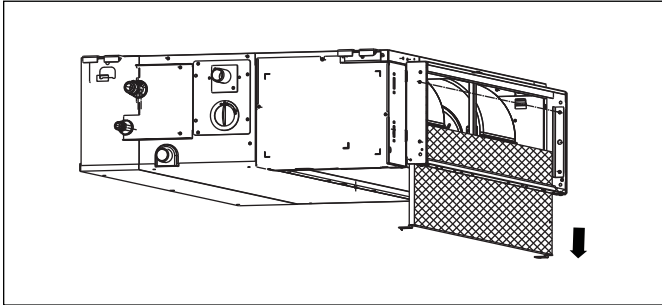


Figure 5

2. With the bottom ventilated model, remove the filter as shown below.

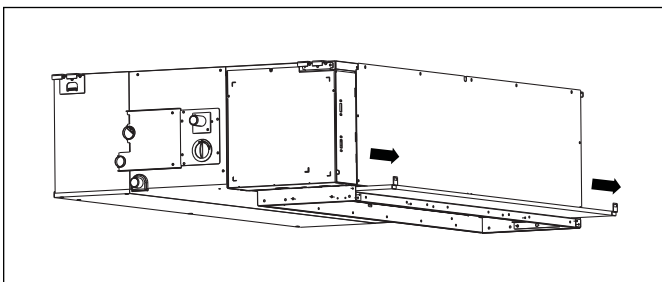


Figure 6

**60k model**

1. Remove the left or right side plate of the air filter by removing the screws.

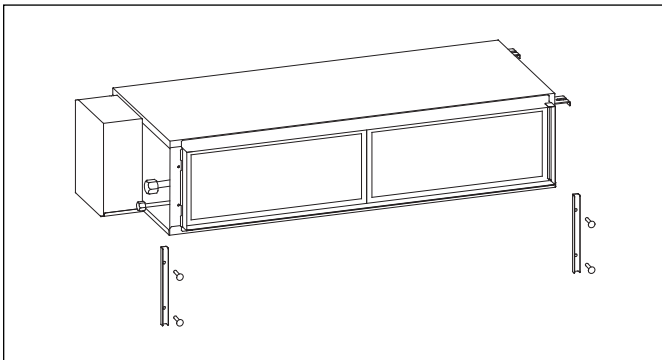


Figure 7

2. Slide out the filter to the right or left according to the arrow shown in Figure 8.

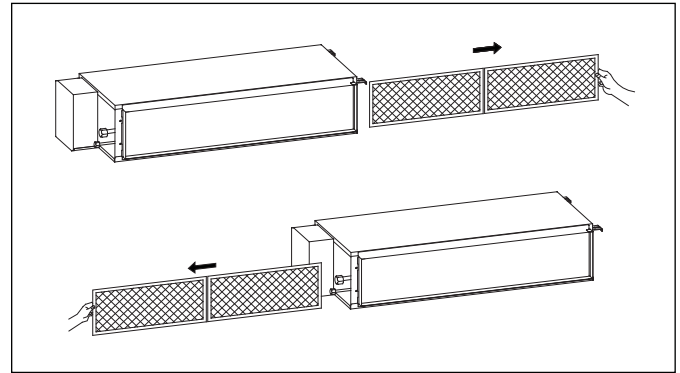


Figure 8

3. Clean dirt from the air filter using a vacuum cleaner or washing with water.
  - If dirt is conspicuous, wash with a neutral detergent in lukewarm water.
  - If hot water (40°C/104°F or more) is used, it may deform the filter.

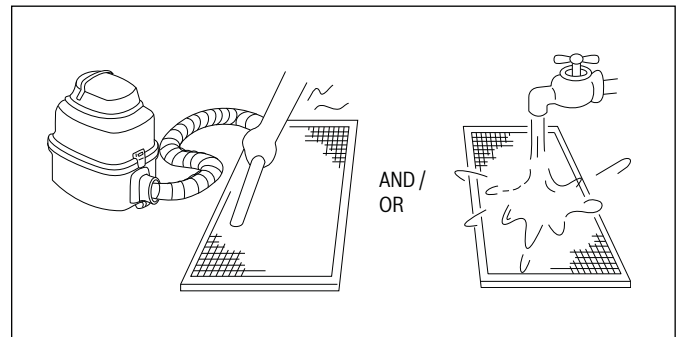


Figure 9

4. Rinse the filter with clean water and allow it to air-dry. DO NOT let the filter dry in direct sunlight.
5. Reinstall the filter.

### 4.3 Repairing Refrigerant Leaks

#### Refrigerant Leak Detection System (some models)

- ▶ In the event of a refrigerant leak, the LCD screen will display "EC" and the LED indicator light will flash.

**WARNING: CONTAINS REFRIGERANT**

- ▶ If the refrigerant leaks, turn off the system and any other combustible heating devices, ventilate the room and call a certified technician immediately. Refrigerant is both toxic and flammable. DO NOT use the system until the leak is repaired.

### 4.4 Maintenance – Long Periods of Non-Use

**When the system is to be used again:**

1. Remove any obstacles blocking the vents of both the indoor and outdoor units.
2. Clean the air filter of the indoor unit. Reinstall the clean, dry air filter in its original position.
3. Turn on the main power switch at least 12 hours prior to operating the unit.

**Storing the unit while not in use:**

1. Run the system on FAN mode for 12 hours in a warm room to dry it and prevent mold.
2. Turn off the system and unplug it.
3. Clean the air filter according to the instructions. Reinstall the clean, dry filter before storing.
4. Remove the batteries from the remote control.

## 5 Troubleshooting



### CAUTION: SYSTEM MALFUNCTION

If ANY of the following conditions occurs, turn off the unit immediately!

- ▶ The operation light continues to flash rapidly after the unit has been restarted.
- ▶ The remote control buttons do not work.
- ▶ The unit continually trips fuses or circuit breakers.
- ▶ A foreign object or water enters the air conditioner.
- ▶ Other abnormal situations.

DO NOT ATTEMPT TO FIX THESE YOURSELF! CONTACT A QUALIFIED SERVICE PERSON IMMEDIATELY.

### 5.1 Common Issues



### CAUTION: SYSTEM FAILURE

- ▶ Most of following problems are not a malfunction, but please contact an Authorized Service Provider if the problem is uncertain.

| Issue  | Possible Causes   |
|--|---|
| Unit does not turn on when pressing the ON/OFF button  | The Unit has a 3-minute protection feature that prevents the unit from overloading. The unit cannot be restarted within three minutes of being turned off.<br>If the Operation light and PRE-DEF (Pre-heating/ Defrost) indicators are lit up, the outdoor temperature is too cold and the unit's anti-cold wind is activated in order to defrost the unit. |
| The indoor unit emits white mist                       | In humid regions, a large temperature difference between the room's air and the conditioned air can cause white mist.   |
| The unit changes from COOL/HEAT mode to FAN mode       | The unit may change its setting to prevent frost from forming on the unit. Once the temperature increases, the unit will start operating in the previously selected mode again.<br>The set temperature has been reached, at which point the unit turns off the compressor. The unit will continue operating when the temperature fluctuates again.          |
| The indoor unit makes noises                           | The drain pump can generate a squeaking sound.<br>A squeaking sound may occur after running the unit in HEAT mode due to expansion & contraction of the unit's plastic parts.   |
| Both the indoor and outdoor units emit white mist      | When the unit restarts in HEAT mode after defrosting, white mist may be emitted due to moisture generated from the defrosting process.  |
| Both the indoor unit and outdoor unit make noises      | Low hissing sound during operation: This is normal and is caused by refrigerant gas flowing through both indoor and outdoor units.<br>Low hissing sound when the system starts, has just stopped running, or is defrosting: This noise is normal and is caused by the refrigerant gas stopping or changing direction.                                       |
| The outdoor unit makes noises                          | The unit will make different sounds based on operating mode.  |
| Dust is emitted from either the indoor or outdoor unit | The unit may accumulate dust during extended periods of non-use, which will be emitted when the unit is turned on. This can be mitigated by covering the unit during long periods of inactivity.  |
| The fan of the outdoor unit does not operate           | During operation, the fan speed is controlled to optimize product operation.  |
| The unit emits a bad odor                              | The unit's filters have become moldy and should be cleaned.   |

Table 2



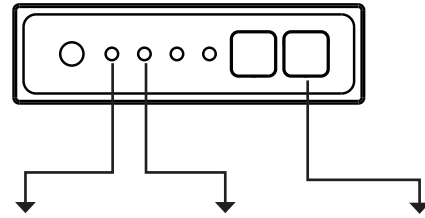
If a problem persists, contact a local dealer or a qualified service provider. Provide them with a detailed description of the unit malfunction as well as your model number and unit serial number.

## 5.2 Error Codes



### CAUTION: SYSTEM FAILURE

- ▶ If below error codes appear, please turn off the system and contact an Authorized Service Provider.



| Number | Cause  | Operation indicator flashes | Timer indicator | Error Code |
|--------|--|-----------------------------|-----------------|------------|
| 1      | Indoor EEPROM (Electrically Erasable Programmable Read-Only Memory) error  | 1                           | Off             | E0         |
| 2      | Indoor and outdoor unit communication malfunction                          | 2                           | Off             | E1         |
| 3      | Indoor fan speed malfunction   | 4                           | Off             | E3         |
| 4      | Indoor room temperature sensor error                                       | 5                           | Off             | E4         |
| 5      | Evaporator coil temperature sensor error                                   | 6                           | Off             | E5         |
| 6      | Refrigerant leak detection system malfunction                              | 7                           | Off             | EC         |
| 7      | Water level alarm malfunction  | 8                           | Off             | EE         |
| 8      | Dual indoor unit (twin model only) communication malfunction               | 9                           | Off             | E8         |
| 9      | Other twin model malfunction   | 10                          | Off             | E9         |
| 10     | Overload protection  | 1                           | On              | F0         |
| 11     | Outdoor temperature sensor error   | 2                           | On              | F1         |
| 12     | Outdoor condenser pipe sensor error  | 3                           | On              | F2         |
| 13     | Discharge air temperature sensor error                                     | 4                           | On              | F3         |
| 14     | Outdoor EEPROM (Electrically Erasable Programmable Read-Only Memory) error | 5                           | On              | F4         |
| 15     | Outdoor fan speed (DC fan motor only) malfunction                          | 6                           | On              | F5         |
| 16     | Inverter module IPM protection   | 1                           | Flash           | P0         |
| 17     | High/Low voltage protection  | 2                           | Flash           | P1         |
| 18     | Compressor top overheating protection                                      | 3                           | Flash           | P2         |
| 19     | Outdoor low temperature protection   | 4                           | Flash           | P3         |
| 20     | Compressor drive error   | 5                           | Flash           | P4         |
| 21     | Mode conflict  | 6                           | Flash           | P5         |
| 22     | Compressor low-pressure protection   | 7                           | Flash           | P6         |
| 23     | Outdoor IGBT sensor error  | 8                           | Flash           | P7         |
| 24     | Indoor unit communication malfunction                                      | 11                          | On              | FA         |

Table 3

## 6 Disposal Guidelines

### Components

Many parts in the Air Conditioner can be fully recycled in the end of the product life. Contact your city authorities for information about the disposal of recyclable products.

### Refrigerant

At the end of the service life of this appliance and prior to its environmental disposal, a person qualified to work with refrigerant circuits must recover the refrigerant from within the sealed system.



#### **CAUTION: CONTAINS REFRIGERANT**

- ▶ Improper disposal of this appliance endangers your health and is bad for the environment. Hazardous substances may leak into the ground water and enter the food chain.
- ▶ Disposing of this product correctly will help ensure that the waste undergoes the necessary treatment, recovery and recycling.



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