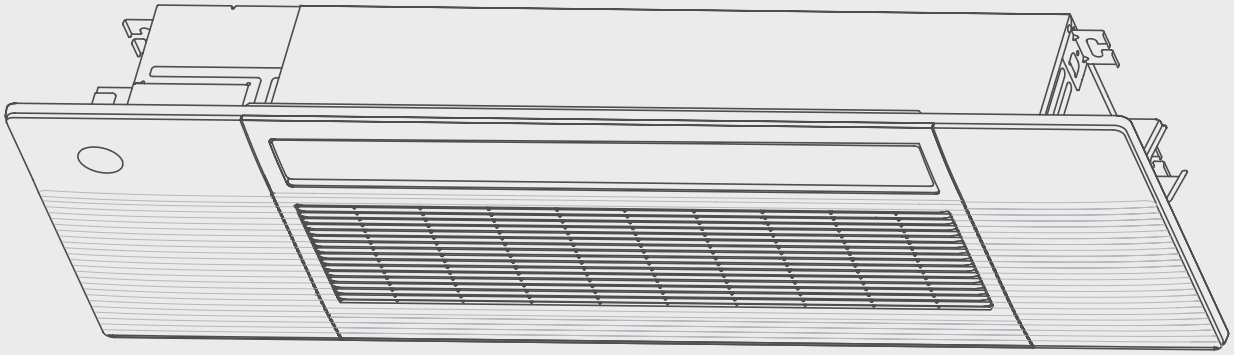
BOSCH

User Manual

One Way Cassette Ductless Split Air Conditioner/Heat Pump

Climate 5000 Series - Gen 4



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AHRI Standard 210/240
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1 Key to Symbols and Safety Instructions

1.1 Key to Symbols

Warnings

In warnings, signal words at the beginning of a warning are used to indicate the type and seriousness of the ensuing risk if measures for minimizing danger are not taken.

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

DANGER

DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

WARNING

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

CAUTION

CAUTION indicates a hazardous situation which, if not avoided, could result in minor to moderate injury.

NOTICE

NOTICE is used to address practices not related to personal injury.

Important information

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

1.2 Explanation of Symbols Displayed on the Indoor Unit / Outdoor Unit

Symbol	
	WARNING This symbol shows that this appliance used a flammable refrigerant. If the refrigerant is leaked and exposed to an external ignition source, there is a risk of fire.
	CAUTION This symbol shows that the operation manual should be read carefully.
	CAUTION This symbol shows that a service personnel should be handling this equipment with reference to the installation manual.
	
	CAUTION This symbol shows that information is available such as the operating manual or installation manual.

Table 1

1.3 Safety

Please read safety precautions

WARNING

Improper or dangerous operation!

Only contact a licensed contractor for repair or maintenance of this unit.

WARNING

Electrical hazard!

Do not modify the length of the power supply cord or use an extension cord to power the unit.

Do not share the electrical outlet with other appliances. Improper or insufficient power supply can cause fire or electrical shock.

WARNING

Personal injury, product damage!

This appliance is not intended for use by persons(including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

WARNING

Contains lead!

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.

WARNING

Fire, electrical shock, property damage, personal injury, or death!

Turn off the air condtioner and disconnect the power before performing any cleaning, installation or repairing. Failure to do so can cause electric shock.

If an abnormal situation arises (like a burning smell), immediately turn off the unit and disconnect the power. 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 your air conditioner in a wet room such as a bathroom or laundry room. Too much exposure to water can cause electrical components to short circuit.

Do not expose your body directly to cool air for a prolonged period of time.

Do not allow children to play with the air conditioner. Children must be supervised around the unit at all times.

If the air conditioner is used together with burners or other heating devices, thoroughly ventilate the room to avoid oxygen deficiency.

In certain functional environments, such as kitchens, server rooms, etc., the use of specially designed air-conditioning units is highly recommended.

WARNING

Electrical hazard!

In certain functional environments, such as kitchens, server rooms, etc., the use of specially designed air-conditioning units is highly recommended.

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

CAUTION

Burn hazard!

Do not operate your air conditioner in a wet room such as a bathroom or laundry room. Too much exposure to water can cause electrical components to short circuit.

CAUTION

Contains refrigerant!

This air-conditioning unit contains fluorinated gases. For specific information on the type of gas and the amount, please refer to the relevant label on the outdoor unit itself.

Installation, service, maintenance and repair of this unit must be performed by a certified technician.

Product removal and recycling must be performed by a certified technician.

If the system has a leak-detection system installed, it must be checked for leaks at least every 12 months.

When the unit is checked for leaks, proper record-keeping of all checks is strongly recommended.

WARNING

Flammable refrigerant!

Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer.

The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).

Do not pierce or burn.

Be aware that refrigerants may not contain an odor.

WARNING

Fire, electrical shock, property damage, personal injury, or death!

Turn off the device and disconnect the power before cleaning. Failure to do so can cause electric 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

Fire, personal injury, property damage!

Turn off the air conditioner and disconnect the power 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.

CAUTION

Fire, personal injury, product damage!

Remove all static electricity before touching units.

NOTICE

Improper operation, product damage!

Generation 4 Mini-Split products use R454B refrigerant and cannot be combined with models from previous Mini-Split generations (R410A refrigerant).
In addition, you must ONLY use R454B if additional refrigerant needs to be added into the system. DO NOT use any other refrigerant type.

2 Unit Specifications and Features

2.1 Unit Parts

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

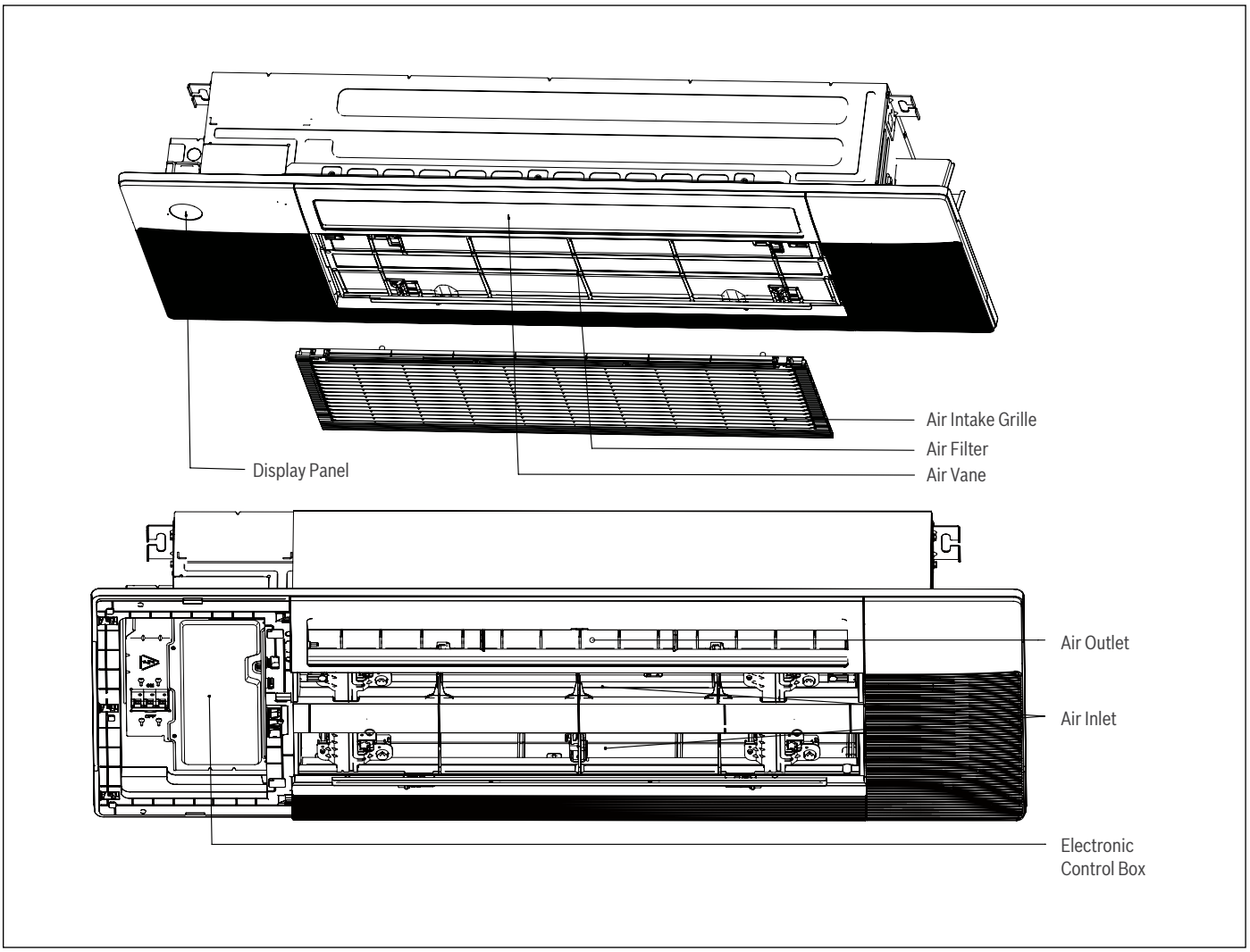


Figure 1

To further optimize the performance of your unit, do the following:

- Keep doors and windows closed.
- Limit energy usage by using TIMER ON and TIMER OFF functions.
- Do not block air inlets or outlets.
- Regularly inspect and clean air filters.

2.2 Indoor Unit Display

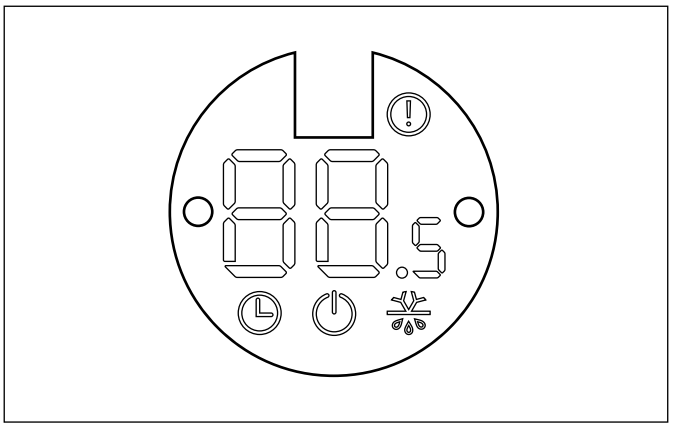


Figure 2

Icon	Description
	When the timer is set.
	When the unit is on.
	Alarm indicator.
	Pre-heating/defrost
	Displays temperature, operation feature and Error codes.
FP	When 46°F/8°C heating feature is turned on.
CL	When Active Clean feature is turned on.
FC	When Forced cooling feature is turned on.

Table 2

2.3 Features

Every time the air conditioner is powered on, a buzzing sound will be heard to indicate that the product has been powered on normally. If there is no sound, it is possible that the unit is abnormal. Please power on again or check the circuit.

The actual functions are subject to the product you purchased, please check the indoor display and remote control of your AC. See the <Remote Controller Manual> for more features.

Default Setting

When the air conditioner restarts after a power failure, it will default to the factory settings (AUTO mode, AUTO fan, 24°C (76°F)). This may cause inconsistencies on the remote control and unit panel. Use your remote control to update the status.

Auto-Restart

In case of power failure, the system will immediately stop. When power returns, the Operation light on the indoor unit will flash. To restart the unit, press the ON/OFF button on the remote control. If the system has an auto restart function, the unit will restart using the same settings.

Three-Minute Protection Feature

A protection feature prevents the air conditioner from being activated for approximately 3 minutes when it restarts immediately after operation.

Louver Angle Memory Function

Some models are designed with a louver angle memory function. When the unit restarts after a power failure, the angle of the horizontal louvers will automatically return to the previous position.

The angle of the horizontal louver should not be set too small as condensation may form and drip into the machine. To reset the louver, press the manual button, which will reset the horizontal louver settings.

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.

Sleep Operation

The SLEEP function is used to decrease energy use while you sleep (and don't need the same temperature settings to stay comfortable). This function can only be activated via remote control. And the Sleep function is not available in FAN or DRY mode.

Press the SLEEP button when you are ready to go to sleep. When in COOL mode, the unit will increase the temperature by 1°C (2°F) after 1 hour, and will increase an additional 1°C (2°F) after another hour.

When in HEAT mode, the unit will decrease the temperature by 1°C (2°F) after 1 hour, and will decrease an additional 1°C (2°F)after another hour. The sleep feature will stop after 8 hours and the system will keep running with final situation.

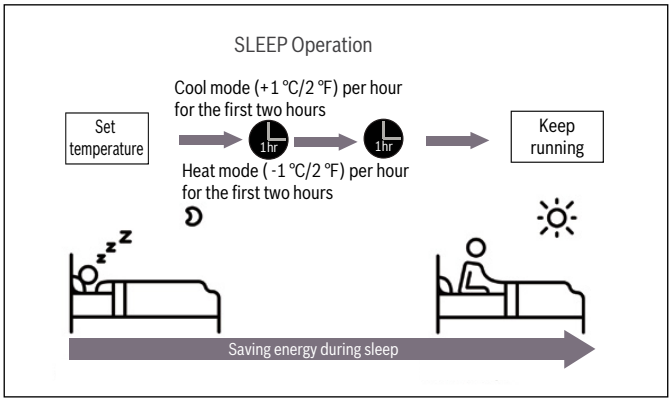


Figure 3

Active Clean Function (Multi-Zone Systems models do not have this function)

The Active Clean Technology washes away dust when it adheres to the heat exchanger by automatically freezing and then rapidly thawing the frost. A “pi-pi” sound will be heard. The Active clean operation is used to produce more condensed water to improve the cleaning eect, and the cold air will blow out. After cleaning, the internal wind wheel then keeps operating with hot air to blow-dry the evaporator, thus keeping the inside clean.

- When this function is turned on, the indoor unit display window appears “CL ” , after 20 to 130 minutes, the unit will turn o automatically and cancel Active Clean function.
- For some units, the system will start high temperature cleaning process, and the temperature of air outlet is very high. Please keep away from it. And this would lead to the rising of the room temperature .

Heat Exchanger Dust Removal Function

This feature helps keep the outdoor coil cleaner and may extend the duration between regular maintenance intervals depending on local conditions. When the unit is turned o, a 10 second delay occours then the outdoor fan runs in reverse rotation for 70 seconds to blow o loose accumulated dust and debris.

Refrigerant Leakage Detection

- When the system detects refrigerant leakage, the indoor unit will automatically display “EL0C(Refrigerant detection failure)” , “EHC1,EHC2(Refrigerant sensor detects leakage)” or “ECC1(Other indoor unit refrigerant sensor detects leakage (Multi zone)”.
- When the refrigerant sensor detects that the refrigerant density exceeds the upper limit of its measurement range, temperature or humidity exceeds the upper or is below the lower limit of its measurement range, the indoor unit will automatically display “EHC2”.
- When the refrigerant sensor detects that the refrigerant density is below the lower limit of its measurement range, the indoor unit will automatically display “EHC3”.
- When “EHC1” or “EHC2”error occurs, the buzzer will continue to beep for 5 minutes before stopping. You can also press any button on the remote controller to stop the buzzer.

Lifting Panel Operation

In the stand-by mode, press the “Mode” and “Down” buttons for 3 seconds at the same time, the remote controller enters the setting panel state, and the remote controller displays "F2". When setting the panel status, press the “Up” or “Down” buttons of the remote controller to control the rise or fall of the grille, and press any other button to exit the setting.

The up and down height of the panel can reach a maximum of 1.5 meters. During the decline, if the grille is raised by the obstacles, it will stop. During the ascending process, if the grille is blocked and does not rise to the correct height or a finger is pinched, it will automatically descend after a period of time and then ascend. If the grille is bocked for the third times, then the display panel will report an error and prompt for manual processing.

Breeze Away

This feature allows for a gentler airflow into the room by closing the main louver, reducing the potential for high volume air blowing directly onto the user.

For a detailed explanation of your unit’s advanced functionality, refer to the Remote Control Manual.

Energy Saving Tips

- 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.
- Clean the air filter every two weeks. A dirty filter can reduce cooling or heating efficiency.
- Adjust louvers properly and avoid direct airflow.
- DO NOT set the unit to excessive temperature levels.
- While cooling, close the curtains to avoid direct sunlight.
- Closing curtains during heating also helps keep the heat in.

3 Care and Maintenance

3.1 Cleaning Precautions

WARNING

Fire, electric shock, personal injury, product damage!

REMEMBER TO DISCONNECT THE POWER BEFORE CLEANING OR MAINTENANCE, EXCEPT FOR CLEANING AIR FILTER. TURN THE CURCUIT BREAKER OF THE INDOOR UNIT TO OFF IS NOT A KIND OF POWER DISCONNECTION.

Contact an authorized service technician for repair or maintenance. Improper repair and maintenance may cause water leakage, electrical shock, or fire, and may void your warranty.

DO NOT substitute a blown fuse with a higher or lower amperage rating fuse, as this may cause circuit damage or an electrical fire.

Make sure the drain hose is set up according to the instructions. Failure to do so could cause leakage and result in personal property damage, fire and electric shock.

Make sure that all wires are connected properly. Failure to connect wires according to instructions can result in electrical shock or fire.

CAUTION

Personal injury, property damage!

Only use a soft, dry cloth to wipe the unit clean. If the unit is especially dirty, you can use a clothsoaked in warm water to wipe it clean.

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.

Do not use water hotter than 40℃ (104℉) to clean the front panel. This can cause the panel to deform or become discolored.

DO NOT wash the unit under running water. Doing so creates an electrical hazard. Clean the unit using a damp, lint-free cloth and neutral detergent. Dry the unit with a dry, lint-free cloth.

WARNING

Personal injury!

DO NOT REMOVE OR CLEAN THE FILTER BY YOURSELF. Removing and cleaning the filter can be dangerous. Removal and maintenance must be performed by a certified technician.

3.2 Clean Your Indoor Unit (Air Filter)

The filter prevents dust and other particles from entering the indoor unit. Dust buildup can reduce the efficiency of the air conditioner. For optimum eciency, clean the air filter every two weeks or more frequently if you live in a dusty area. Replace the filter with a new one if it's heavily clogged and cannot be cleaned.

In households with animals, you will have to periodically wipe down the grille to prevent animal hair blocking airflow.

1. In the stand-by mode, press the "MODE" and "DOWN" buttons on the remote controller a the same time for 3 seconds, the remote controller enters the panel-setting state, the remote controller displays "F2".
2. Then press "DOWN" button on the remote controller, the air grille automatically goes down. When it stops, pick up the air filter.

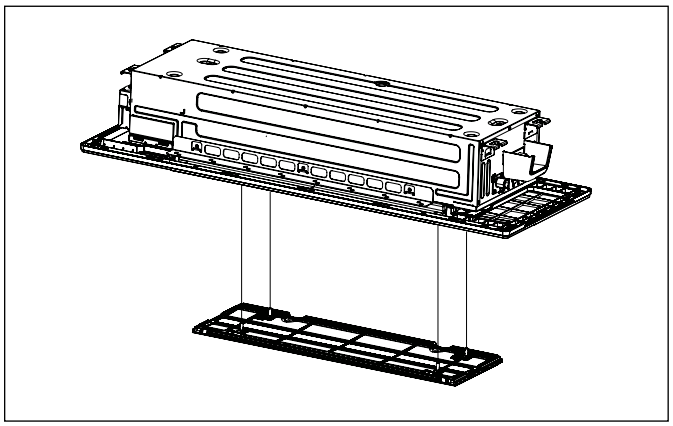


Figure 4

3. Hold the upper edge of the filter with both hands. Gently turn and lift until the upper edge is free from the wire rope (Fig. 5, A).
4. Lift the filter and move it forward slightly until the filter is separated from the 4 wire ropes (Fig 5, B).
5. Move the filter to the right until it is separated from the air grille , and then the filter can be taken out (Fig.5, C).

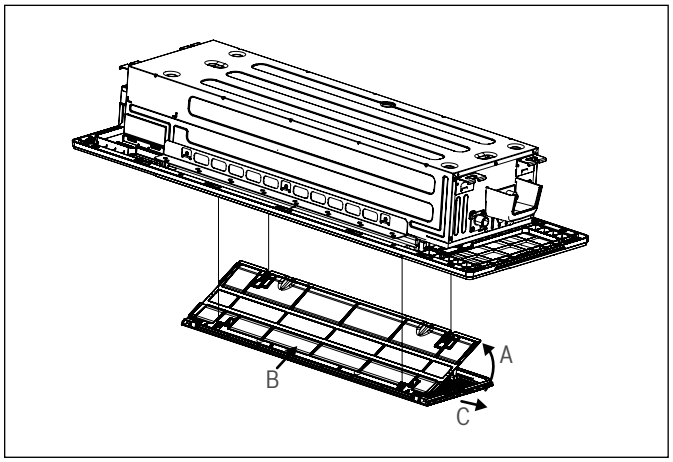


Figure 5

6. Clean the air filter

Dusts will accumulate on the filter along with the unit operation, and need to be removed from the filter,or the unit would not function effectively.

Clean the filter every two weeks when you use the unit regularly.

Clean the air filter with a vacuum cleaner or water.

a. The air intake side should face up when using a vacuum cleaner.

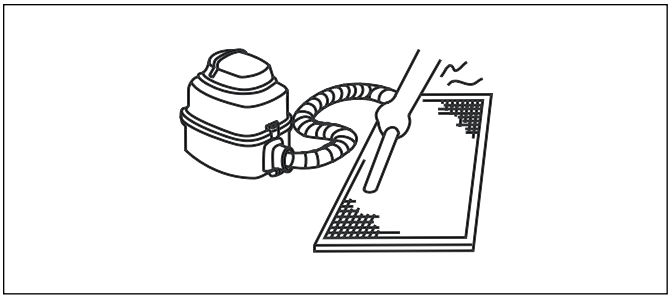


Figure 6

b. The air intake side should face down when using clean water.

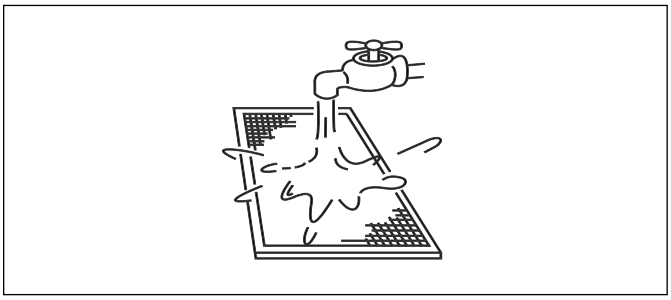


Figure 7

For excessive dusts, use a soft brush and natural detergent to clean it and dry in a cool place.

NOTICE

Product damage!

Do not dry out the air filter under direct sunshine or with fire.

The air filter should be installed before the unit body installation.

7. Re-install the air filter.
8. Press “UP” button on the remote controller to reset the air grille.

CAUTION

Personal injury, product damage!

Before changing the filter or cleaning, turn off the unit .

When removing filter, do not touch metal parts in the unit. The sharp metal edges can hurt you.

Do not use water to clean the inside of the indoor unit. This can destroy insulation and cause electrical shock.

Do not expose filter to direct sunlight when drying. This can shrink the filter.

Any maintenance and cleaning of outdoor unit should be performed by an authorized dealer or a licensed service provider.

Any unit repairs should be performed by an authorized dealer or a licensed service provider.

When the air grille is rising, please do not hinder the grille from rising with your hands or other objects. Please do not pull the wire rope, if necessary, please contact the local customer service team.

3.3 Maintenance – Long Periods of Non-Use

If you plan not to use your air conditioner for an extended period of time, do the following:

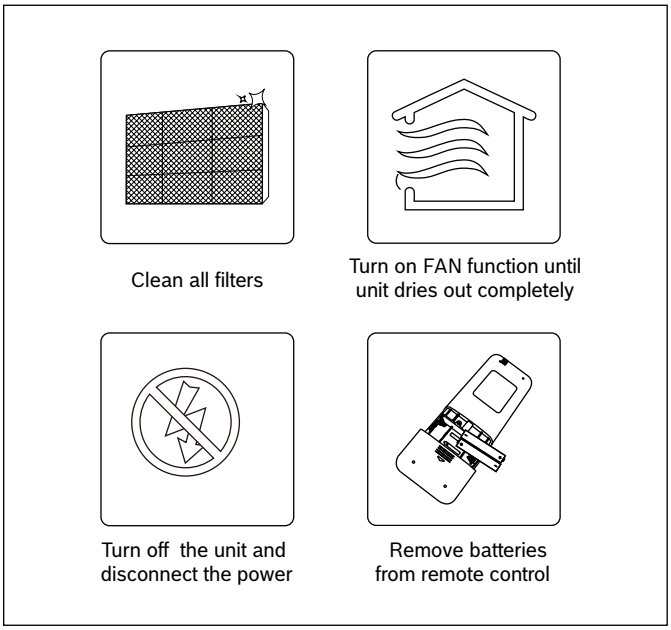


Figure 8

3.4 Maintenance – Pre-Season Inspection

After long periods of non-use, or before periods of frequent use, do the following:

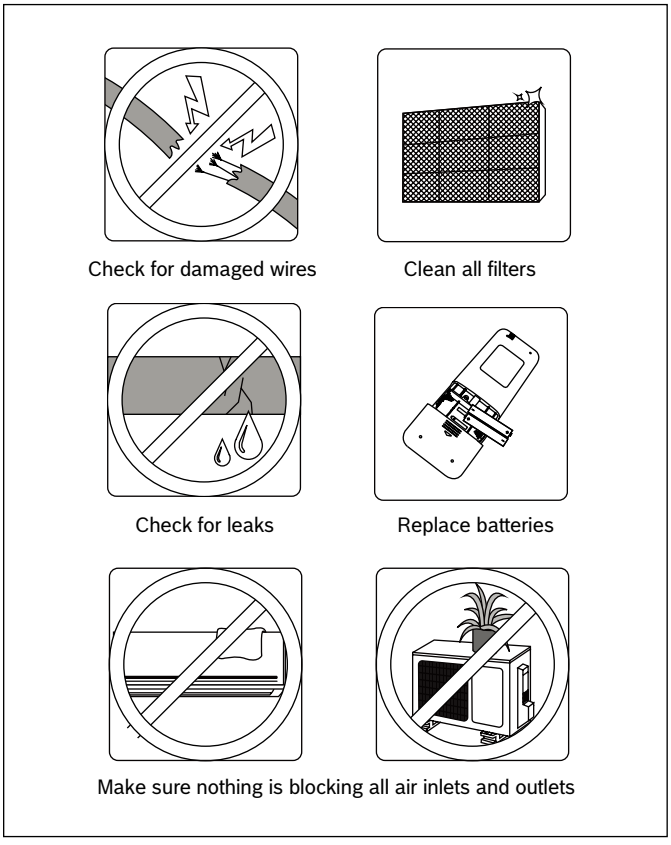


Figure 9

4 Troubleshooting

CAUTION

Personal injury, product damage, property damage!

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

- The power cord is damaged or abnormally warm
- You smell a burning odor
- The unit emits loud or abnormal sounds
- A power fuse blows or the circuit breaker frequently trips
- Water or other objects fall into or out of the unit

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

4.1 Common Issues

The following problems are not a malfunction and in most situations will not require repairs.

Issue	Possible Causes
Unit does not turn on when pressing 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.
	Cooling and Heating Models: 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.
	In Cooling-only Models: If the "Fan Only" indicator is lit up, the outdoor temperature is too cold and the unit's anti-freeze protection 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.
	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	A rushing air sound may occur when the louver resets its position.
	A squeaking sound may occur after running the unit in HEAT mode due to expansion & contraction of the unit's plastic parts.
	A squeaking sound is heard when the system is OFF or in COOL mode. The noise is also heard when the drain pump (optional) is in operation.
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.
	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.
	Squeaking sound: Normal expansion and contraction of plastic and metal parts caused by temperature changes during operation can cause squeaking noises.
The outdoor unit makes noises	The unit will make different sounds based on its current 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 may absorb odors from the environment (such as furniture, cooking, cigarettes, etc.) which will be emitted during operations.
	The unit's filters have become moldy and should be cleaned.

Table 3

4.2 Troubleshooting Tips

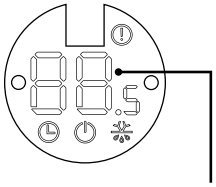
When trouble occurs, please check the following points before contacting a contractor.

Issue	Possible Causes
The unit is not working	Power failure
	The power switch is off
	The fuse is burned out
	Remote control batteries are dead
	The unit's 3-minute protection has been activated
The unit starts and stops frequently	There's too much or too little refrigerant in the system
	Incompressible gas or moisture has entered the system.
	System circuit is blocked
	The compressor is broken
	The voltage is too high or too low
Poor cooling performance	Temperature setting may be higher than the ambient room temperature
	The heat exchanger on the indoor or outdoor unit is dirty
	The air filter is dirty
	The air inlet or outlet of either unit is blocked
	Doors and windows are open
	Excessive heat is generated by sunlight
	Too many sources of heat in the room (people, computers, electronics, etc.)
	Low refrigerant due to leak or long-term use.
Poor heating performance	Cold air is entering through doors and windows
	Low refrigerant due to leak or long-term use.
Indicator lamps continue flashing	The unit may stop operation or continue to run safely. If the indicator lamps continue to flash or error codes appear, wait for about 10 minutes. The problem may resolve itself. If not, disconnect the power, then connect it again. Turn the unit on. If the problem persists, disconnect the power and contact your nearest customer service center.
"Error code appears and begins with the letters as the following in the window display of indoor unit: E(x), P(x), F(x) EH(xx), EL(xx), EC(xx) PH(xx), PL(xx), PC(xx)"	

Table 4

4.3 Error Codes

When the indoor unit encounters a recognized error, then an error code will be displayed on the HMI screen with letters first, then numbers. These error codes are described in the following table:



The error code will remain displayed until the cause has been determined and resolved. Once resolved, power the unit off, wait ten seconds, and power back on to clear the error code.

Number	Display*	Error Information
1	EH 00/EH 0A	Indoor unit EEPROM Malfunction / Indoor unit EEPROM parameter error
2	EL 01	Indoor / outdoor unit communication error
3	EL 11	Communication malfunction between main unit and secondary units
4	EH 03	The indoor fan speed is operating outside of the normal range(for some models)
5	EH 60	Indoor room temperature sensor T1 is in open circuit or has short circuited
6	EH 61	Evaporator coil temperature sensor T2 is in open circuit or has short circuited
7	EL 0C	Refrigerant Leakage Detection(for some models)
8	EH 0E	Water-level alarm malfunction
9	EH 12	Main unit or secondary units malfunction
10	EH 3A	External fan DC bus voltage is too low protection
11	EH 3B	External fan DC bus voltage is too high fault
12	EH bA	Communication malfunction between indoor unit and external fan module
13	EH C1	Refrigerant sensor detects leakage
14	EH C2	Working condition of the refrigerant sensor is out of range and leakage is detected
15	EH C3	Working condition of the refrigerant sensor is out of range
16	EC 53	Outdoor room temperature sensor T4 is in open circuit or has short circuited
17	EC 52	Condenser coil temperature sensor T3 is in open circuit or has short circuited
18	EC 54	Compressor discharge temperature sensor TP is in open circuit or has short circuited
19	EC 56	Evaporator coil outlet temperature sensor T2B is in open circuit or has short circuited(for free-match indoor units)
20	EC 51	Outdoor unit EEPROM parameter error
21	EC 07	The outdoor fan speed is operating outside of the normal range(for some models)
22	EC C1	Other indoor unit refrigerant leakage detection (Multi-zone)
23	PC 00	IPM malfunction or IGBT over-strong current protection
24	PC 01	Over voltage or over low voltage protection
25	PC 02	Top temperature protection of compressor or High temperature protection of IPM module
26	PC 04	Inverter compressor drive error
27	PC 03	High pressure protection or low pressure protection (for some models)
28	PC OL	Low ambient temprature protection (for some models)
29	EC 0d	Outdoor unit malfunction
30	FH 07	Communication malfunction between indoor unit and auto-lifting panel.
31	FH CC	Refrigerant sensor error
32	--	Indoor units mode conflict(match with multi outdoor unit)

Table 5

5 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 it's environmental disposal, a person qualifi ed to work with refrigerant circuits must recover the refrigerant from within the sealed system.

CAUTION

Personal injury, product damage!

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.

Online Help Resources

Alternatively, please visit our Service & Support webpage to find FAQs, videos, service bulletins, and more; www.boschheatingcooling.com/service or use your cellphone to scan the code below.

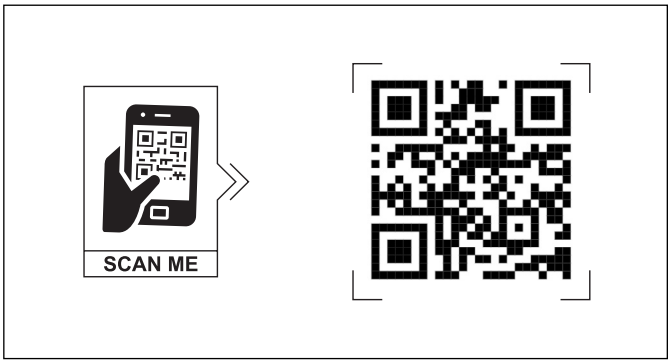


Figure 10

NOTES:

United States and Canada
Bosch Thermotechnology Corp.
65 Grove St.
Watertown, MA 02472

Tel: 800-283-3787
www.bosch-homecomfort.us

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