



Meet the next generation of water valves.

Typical brass plumbing fixtures frequently leak and are designed to meet low cost requirements.

With Aquor, every aspect of engineering and material choice was examined to create the most robust valve design possible.

The unique valve design uses water pressure to seal, for an extremely reliable and low-maintenance outlet.

UNIQUE VALVE DESIGN

MARINE GRADE 316L STAINLESS STEEL

VITON® O-RINGS

HEAVY-DUTY POLYMER DELRIN® ACETAL RESIN





MARINE HERITAGE

15+ years of marine-proven reliability.

Originally designed for yachts and marine vessels, Aquor's valve design is backed with years of tried-and-true engineering and testing in harsh marine environments.

Who we serve.

MARINE/RV

RESIDENTIAL

MULTI-FAMILY

COMMERCIAL

CUSTOM & OEM



**Built different
from other spigots.**



HIGH-QUALITY MATERIALS

Aquor products are built to last.

Aquor uses professional-grade materials in order to produce the best outdoor faucets around.

Our products are made from marine-grade 316L stainless steel, Delrin® acetal resin copolymer, and Viton® O-Rings.

MARINE-GRADE 316L
STAINLESS STEEL



VITON® O-RINGS

DELRIN® ACETAL RESIN



INSTANT HOSE CONNECTIONS

Connect garden hoses in less than 1 second.

All it takes is a simple push and twist to engage the Aquor Wall Hydrant. Three grooves guide the connector into the right position, so it can be inserted in any direction.

Forget the hassle of scraping your knees and knuckles trying to thread on garden hoses - with Aquor, you can plug into your water outlet instantly. Water turns on automatically when you connect.





AUTOMATIC WATER ON/OFF

Unplug and walk away.

Water flow stops instantly when you disconnect. The valve closes in the same direction as water flow. Resulting in a stronger, more reliable seal, even at high water pressure.

ULTRA RELIABLE

No leaks, no drips, no wasted water.

The Aquor Wall Hydrant uses water pressure to keep its valve closed, instead of the typical screw-and-washer mechanism. This unique design is extremely reliable and low-maintenance.



SUB-ZERO FREEZE PROTECTION

7x better than brass.

As soon as you disconnect from the Wall Hydrant, your outlet automatically seals, drains, and winterizes. Never worry about uncovered hose bibs freezing in cold weather.

Stainless steel provides 7x better insulation than typical brass alloy 'frost-free' sillcocks. We've tested to -30° F, but performance depends on your home's wall insulation.





BUILT TO LAST

Durable, all year long.

Engineered and tested to withstand any weather conditions, from blazing sunlight to freezing cold.

Our chosen materials are commonly used in the marine, automotive, and aerospace industries for their performance and durability.



INSTANT CONNECTIONS

Heavy-duty hose connectors.

Attach to your hose once, and never deal with threads again.

Aquor connectors are made with rugged Delrin® acetal resin and Viton® O-rings for maximum durability and wear resistance. Tested to withstand 150,000+ cycles, and 200+ lbs of lateral force. So it won't break if you tug on it.

ZERO LEAD CONTENT

Sustainability without compromise.

Absolutely zero lead is used in our manufacturing. Many brass sillcocks still contain trace lead content (up to .25% allowed legally).

Marine-grade 316L stainless steel does not contain lead, will not rust or corrode, and will not leach dangerous chemicals.





SIMPLE SECURITY

Protect your home and resources.

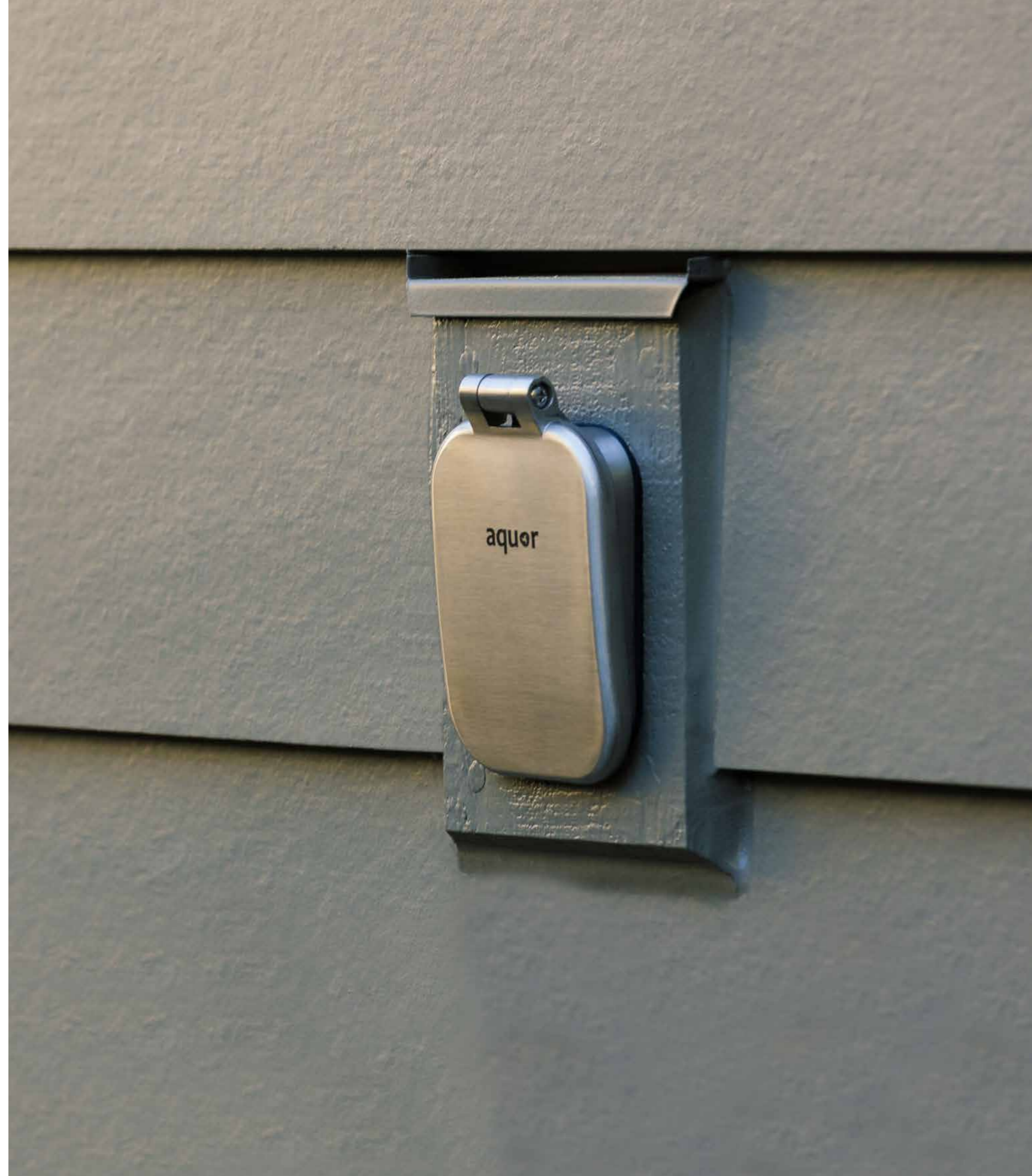
No loose keys, bulky padlocks, or expensive commercial boxes.

Simply store the Aquor connector with your garden hose, and you can control access to your water. The outlet is difficult to tamper with, and the stainless steel internals prevent vandalism.

RECOGNIZED BY LEADING BUILDERS

Award-winning design.

Proud 2x winner of the **Best Outdoor Living Product Award**, presented at the NAHB International Builder's Show.





Create true indoor-outdoor living spaces.



THIS OLD HOUSE™ 2021 IDEA HOUSE

Builder: Hartman Homes
Architects: D/O Architects
Photographer: Chad Holder
Location: St. Paul, Minnesota
Installed: **House Hydrant V2+** in Brushed Stainless



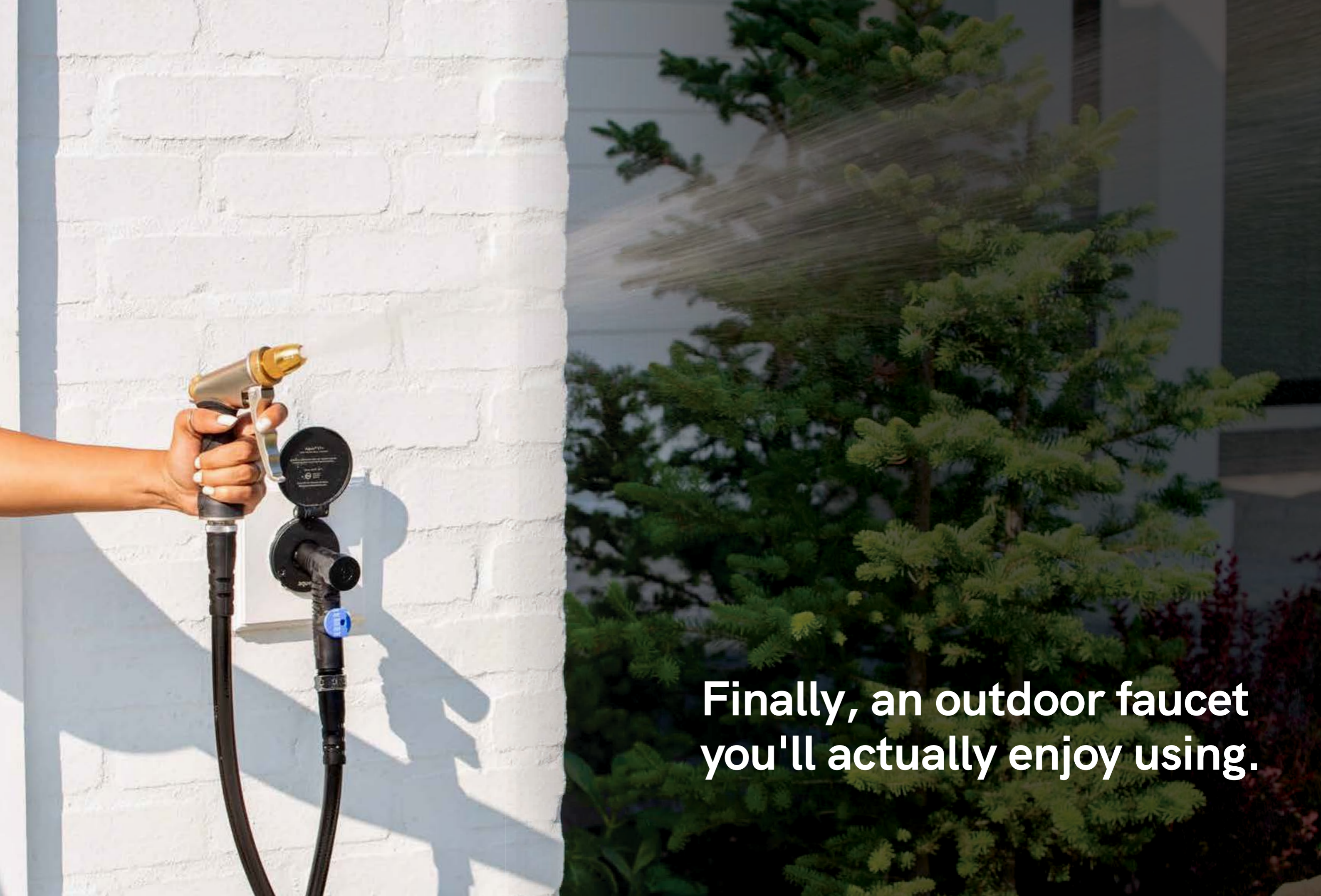
LOW-PROFILE DESIGN

Versatility for any location.

Aquor's commercial-grade washdown outlets can be installed nearly anywhere. Perfect for your home, RV, boat, or DIY projects as inlets or outlets.

Add simple convenience without distractions or safety hazards.

316L stainless steel is a surgical-grade alloy, and is 100% non-toxic.



**Finally, an outdoor faucet
you'll actually enjoy using.**



Aquor Water Systems, formerly a division of New Found Metals, has been producing hand-cast, high-quality marine hardware and accessories since 1975. Over the last decade, hundreds of thousands of our stainless steel valves and hydrants have been installed and are currently in trouble-free operation around the world.

Learn more at www.aquorwatersystems.com.





SCHLAGE CONNECT™

Touchscreen Deadbolt with Alarm

User Guide



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NEED HELP?

Please call customer support before returning the product to the store.

Toll-Free Calling From: U.S.A.: (888) 805-9837

Canada: (800) 997-4734

Mexico: 018005067866

Visit our web site for videos, FAQs and more: answers.schlage.com

REGISTER YOUR PRODUCT

Document your purchase and register your warranty at RegisterMySchlage.com, or use the included registration card.

WARRANTY AND FCC/IC STATEMENTS

Lifetime Limited Mechanical and Finish Warranty and 3-Year Limited Electronics Warranty

Subject to the terms and conditions of the warranty, Schlage extends a lifetime limited mechanical and finish warranty and a three-year limited electronics warranty to the original consumer user ("Original User") of our Schlage brand product ("Product") against defects in material and workmanship, as long as the Original User occupies the residential premises upon which the Product was originally installed. See answers.schlage.com for specific warranty details and limitations, or contact Schlage Customer Service at (888) 805-9837 in the U.S. and Canada or (800) 506-7866 in Mexico for assistance.

FCC Interference Statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules.

LOCK SETUP

Follow these steps to get your lock set up and ready to use. If you would like to use a home automation system to enable remote control of the lock, refer to **Enrolling on a Z-Wave Network** on page 13.

1 Decide what length you want the User Codes for the lock to be.

You can set User Codes to be from 4 - 8 digits in length. The default length is 4 digits. All User Codes must be the same length. Any time you change the User Code length, all current User Codes will be deleted from the lock.

- See **Change User Code Length** on page 7.

2 Add/Delete User Codes.

The lock comes preset with two unique User Codes. You can either use these codes or remove them and program your own codes.

- See **Add User Code** and **Delete User Code** on page 7.

3 Decide if you want to use the Auto-Lock feature or not.

When the Auto-Lock feature is enabled, the lock will automatically relock itself 30 seconds after being unlocked.

- See **Enable/Disable Auto-Lock** on page 7.

4 Turn on the alarm and decide which mode you want to use.

The alarm is turned off by default. If you want to use the alarm, you'll need to turn it on and decide on a mode.

- See **Programming the Alarm** on page 8.

⚠ PLEASE KEEP THIS GUIDE ⚠

This guide contains important information about your lock!

- Default User Codes and Programming Code are located on the sticker on the back of this guide! You will need these if you ever need to reset your lock back to factory default settings!
- The sticker also contains your serial number, which may be needed for warranty and customer service support.
- Instructions for adding and deleting User Codes, changing the lock behavior, troubleshooting, customer service and more are explained in this guide!

Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

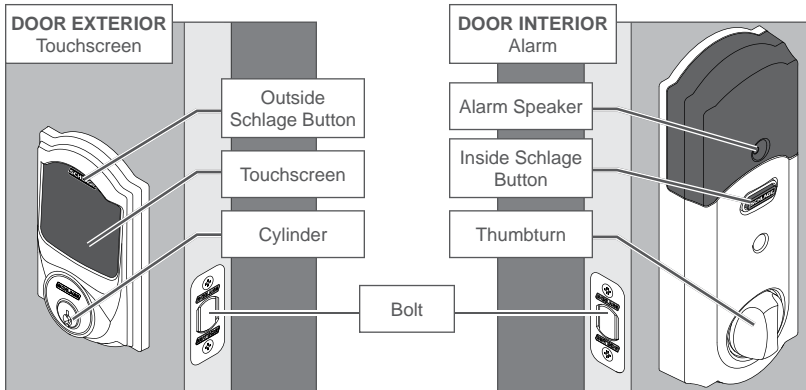
RF Exposure

To comply with FCC/IC RF exposure requirements for mobile transmitting devices, this transmitter should only be used or installed at locations where there is at least 20 cm separation distance between the antenna and all persons.

Under Industry Canada regulations, this radio transmitter may only operate using an antenna of a type and maximum (or lesser) gain approved for the transmitter by Industry Canada. To reduce potential radio interference to other users, the antenna type and its gain should be so chosen that the equivalent isotropically radiated power (e.i.r.p.) is not more than that necessary for successful communication.

This Device complies with Industry Canada License-exempt RSS standard(s). Operation is subject to the following two conditions: 1) this device may not cause interference, and 2) this device must accept any interference, including interference that may cause undesired operation of the device.

LOCK PARTS



- | | |
|-------------------------------|---|
| Inside Schlage Button | <ul style="list-style-type: none"> • Located on the inside of the door. • Has three distinct lights. • Used to program the alarm. See Programming the Alarm on page 8. • Does not lock or unlock the door. |
| Thumbturn | <ul style="list-style-type: none"> • Used to lock and unlock manually from the inside. |
| Outside Schlage Button | <ul style="list-style-type: none"> • Located on the outside of the door. • The first button you will press when entering a User Code and in the programming process. • Press to exit programming mode immediately. |
| Touchscreen | <ul style="list-style-type: none"> • Remains unlit until the Outside Schlage Button is pressed. • Located on the outside of the door. • Used to enter codes for programming and unlocking. |
| Cylinder | <ul style="list-style-type: none"> • Used to unlock only in emergency situations. See Emergency Key Override on page 12. |
| Alarm Speaker | <ul style="list-style-type: none"> • Sounds alarms based on the chosen settings. See Programming the Alarm on page 8. |
| Bolt | <ul style="list-style-type: none"> • Automatically extends and retracts when the touchscreen is used. • Manually extends and retracts when the thumbturn is rotated. |

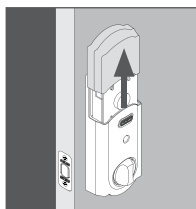
REPLACING THE BATTERIES

1. Replace the batteries in your lock at the same time each year that you test and replace the batteries in your smoke alarms. This will ensure continued reliable operation.
2. Use four high-quality alkaline AA batteries for replacement. Lithium batteries may cause undesirable operation.

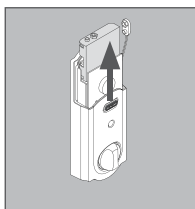
ELECTROSTATIC DISCHARGE WARNING!



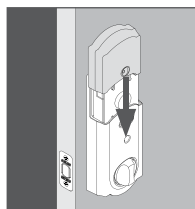
DO NOT TOUCH the circuit board!
You may damage the lock.



1. Remove the inside cover.



2. Unsnap the battery connector, remove the battery tray and replace the batteries.



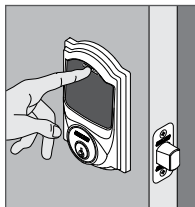
3. Replace the battery tray with the batteries facing the door. Snap the battery connector to the tray and replace the cover.

LOCKING AND UNLOCKING

- ① If you make a mistake while entering a User Code, press the Outside Schlage Button and then start again.

Locking from the Outside

1. Press the Outside Schlage Button.
 2. The lock will lock. The green check mark will light once.
- ① **If the bolt cannot fully extend, the red X will light and a tone will sound. The door may remain unlocked!**
- ① If the Lock & Leave feature is disabled, a valid User Code must be entered to **lock** the door. See **Enable/Disable Lock & Leave** on page 7.



Locking from the Inside

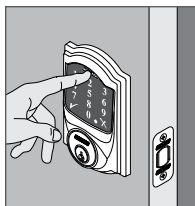
Rotate the Inside Thumbturn.

- ① The Inside Schlage Button will not lock the deadbolt. It is used to program and control the alarm. See **Programming the Alarm** on page 8.



Unlocking from the Outside

1. Press the Outside Schlage Button.
 2. Enter a valid User Code.
 3. The green success check mark will flash twice and one beep will sound. The deadbolt will unlock.
- ① If the red error X lights, the User Code was not valid.



Unlocking from the Inside

Rotate the Inside Thumbturn.

- ① The Inside Schlage Button will not unlock the deadbolt. It is used to program and control the alarm. See **Programming the Alarm** on page 8.



CLEANING THE LOCK

In order to properly clean the touchscreen from build-up of dirt, oils, or other contaminants; you should use a mild dish soap with warm water and follow the general rules below:

- Do rinse the touchscreen with warm water prior to cleaning process.
- Do follow the application of soap with a damp, lukewarm cloth
- Don't use abrasives, high alkaline cleaners, or gasoline
- Don't leave cleaners on touchscreen for long periods, wash immediately.
- Don't apply cleaners in direct sunlight or at elevated temperatures.
- Don't use scrapers, squeegees or razors.

The bolt itself can be cleaned, using a mild dish soap and warm water. This can help improve decreased performance.

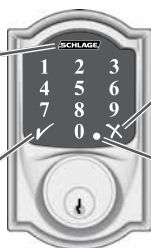
PROGRAMMING THE TOUCHSCREEN

Outside Schlage Button

- The first button you will press in the programming process.
- Can also be pressed to exit programming immediately.

Green Check Mark

- Blinks when a number key is pressed and when a function is complete.



Red X

- If there is a problem during programming, you will see the red error X.

Programming Indicator

- Blinks when Programming Mode is entered
- Solid while a programming function is being performed.

Tips for Successful Programming

- ① Watch the video before you begin! Browse to answers.schlage.com and watch **User and Alarm Programming For Touchscreen Deadbolt**.
- ① The lock comes preset with a unique default Programming Code and two unique Default User Codes. Use these codes to operate your lock or change them using the instructions in this guide.
- ① Default Codes are located on the back of the Alarm Assembly, and on the back of this guide.
- ① If you would like to use a home automation system to enable remote control of the lock, refer to **Enrolling on a Z-Wave Network** on page 13.

Programming Descriptions

Add User Code	User Codes unlock the deadbolt. Can be 4 - 8 digits long. All codes must be the same length. See Change User Code Length on page 7.
Delete User Code	Removes one User Code at a time.
Change Programming Code	The Programming Code is used to put the lock into Programming Mode. It is 6 digits long.
Enable Vacation Mode	Prevents all user codes from unlocking the deadbolt . Enable for extra security while you are away for an extended period of time.
Disable Vacation Mode	Returns lock to normal operation.
Enable/Disable Beeper	The beeper can be turned off if desired. Beeps will still sound during programming.
Delete ALL User Codes	Removes ALL User Codes from the lock.
Enable/Disable Lock & Leave	When enabled: Press the Outside Schlage Button to lock the deadbolt. (Default setting). When disabled: Press the Outside Schlage Button and then enter a user code to lock the deadbolt.
Change User Code Length	User Codes can be 4 - 8 digits in length. Default is 4 digits. Changing the User Code length will delete all existing User Codes!
Enable/Disable Auto-Lock	When enabled, the lock will automatically relock 30 seconds after unlocking. (Disabled by default.)
Temporarily Disable Auto-Lock	Auto-Lock must already be enabled. While the deadbolt is locked, press the Outside Schlage Button and then enter a 4-8 digit User Code to unlock the deadbolt. Within 5 seconds, manually lock and unlock the deadbolt using the thumbturn.
Restore Auto-Lock	Lock the deadbolt using the thumbturn.

Programming Procedures

- ① Determine how long you want your User Codes to be BEFORE adding any User Codes. If you change the User Code length, all existing User Codes will be deleted!

① Programming Mode will automatically time out after 30 seconds of inactivity.

1. Open the door and extend the deadbolt before beginning.
2. If you make a mistake, press the Outside Schlage Button to leave Programming Mode, and then start over.

WRITE YOUR PROGRAMMING CODE HERE FOR EASY ACCESS



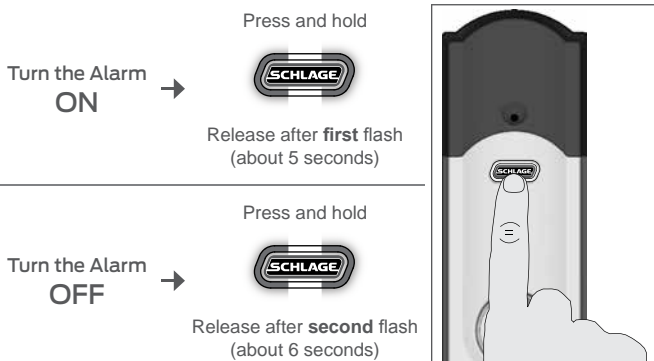
FUNCTION	ENTER PROGRAMMING MODE (PRESS)	FUNCTION STEPS (PRESS)	VERIFY
Add User Code	SCHLAGE → 6 Digit Programming Code	1 → New 4-8 Digit User Code → Same New 4-8 Digit User Code	✓ 2 blinks + 2 beeps
Delete User Code	SCHLAGE → 6 Digit Programming Code	2 → 4-8 Digit User Code → Same 4-8 Digit User Code	✓ 2 blinks + 2 beeps
Change Programming Code	SCHLAGE → 6 Digit Programming Code	3 → New 6 Digit Programming Code → Same New 6 Digit Programming Code	✓ 2 blinks + 2 beeps
Enable Vacation Mode	SCHLAGE → 6 Digit Programming Code	4 →	✓ 2 blinks + 2 beeps
Disable Vacation Mode	SCHLAGE → 6 Digit Programming Code	→	✓ 2 blinks + 2 beeps
Enable/Disable Beeper	SCHLAGE → 6 Digit Programming Code	5 →	✓ Enable: 1 blink + 1 beep Disable: 2 blinks + 2 beeps
Delete ALL User Codes	SCHLAGE → 6 Digit Programming Code	6 → 6 Digit Programming Code →	✓ 2 blinks + 2 beeps
Warning !	Removes ALL User Codes from the lock. User Codes cannot be retrieved after they are deleted!		
Enable/Disable Lock & Leave	SCHLAGE → 6 Digit Programming Code	7 →	✓ Enable: 1 blink + 1 beep Disable: 2 blinks + 2 beeps
Change User Code Length	SCHLAGE → 6 Digit Programming Code	8 → Desired User Code Length → Same Desired User Code Length	✓ 2 blinks + 2 beeps
Warning !	Changing the User Code length will delete all existing User Codes! User Codes cannot be retrieved after they are deleted!		
Enable/Disable Auto-Lock	SCHLAGE → 6 Digit Programming Code	9 →	✓ Enable: 1 blink + 1 beep Disable: 2 blinks + 2 beeps
Temporarily Disable Auto-Lock (deadbolt should be locked to begin)	SCHLAGE →	4-8 Digit User Code → Within 5 seconds, manually lock and unlock the deadbolt using the thumbturn.	✓ 1 blink + 1 beep
Restore Auto-Lock	Relock the deadbolt using the thumbturn.		✓ 2 blinks + 2 beeps

PROGRAMMING THE ALARM

1 Powering the Alarm

The alarm is turned off by default. After installation, you'll need to turn on your alarm.




- ① Program the alarm using the Inside Schlage Button, shown below.
- ① Not sure your alarm is turned on? Simply press and release the Inside Schlage Button once. It will beep and light up to confirm it is activated. If it does not, try turning the alarm on again, and check the batteries.
- ① Watch the video before you begin! Browse to answers.schlage.com and watch **User and Alarm Programming For Touchscreen Deadbolt**.



- ① If you want to silence an alarm early, press and hold the Inside Schlage Button until the alarm sound stops.
- ① Want to hear what the alarm sounds like in Activity or Forced Entry mode? Enter an incorrect code four times and the alarm will sound.

2 Alarm Setting Descriptions

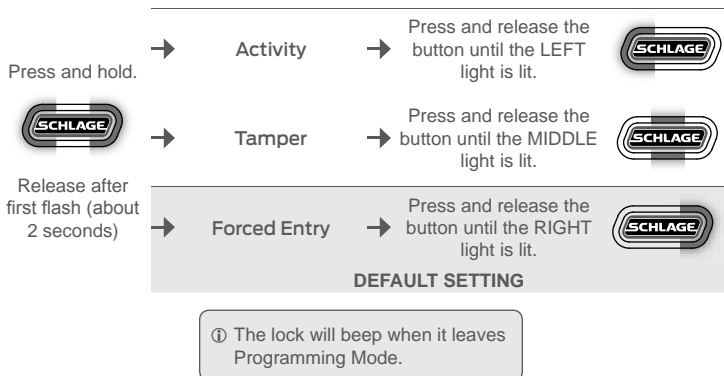
Decide which alarm setting is best for you.

MODE	DESCRIPTION	LIGHTS	SOUNDS
Activity Alarms when the door opens or closes.	Perfect for monitoring doors while you're at home. <ul style="list-style-type: none"> • After the alarm is triggered, there is a built-in 3-second delay for it to reset. 	Middle LED light flashes 	Two short beeps
Tamper Alarms when the lock is disturbed, while locked.	Senses subtle activity at the lock.	Left and right LED lights flash alternately 	15 second Alarm (90 dB=similar to the volume of your smoke alarm)
Forced Entry Alarms when significant force pushes against the door, while locked.	Perfect for nighttime or when you're away from home. <ul style="list-style-type: none"> • Least sensitive mode – many choose to use this alert setting all the time. 	All lights flash 	Three-minute shrill, steady alarm (90 dB=similar to the volume of your smoke alarm)

3 Changing the Alarm Mode

After you power on the alarm, it will be preset to the Forced Entry mode, by default. If you want to change the mode, follow these simple steps:

① The alarm must first be powered on before changing the alert setting!

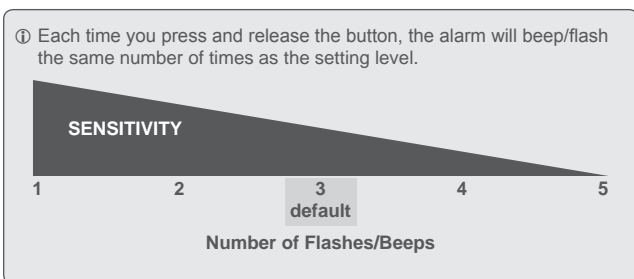


4 Adjusting the Sensitivity Level

Each alarm mode is preset to a sensitivity level of three. If your alarm is sounding too frequently, or not frequently enough, try changing this setting.

① You do not need to adjust this setting unless the alarm is sounding too frequently or not frequently enough.

① If you change the alarm mode, the sensitivity will revert back to the default setting.



MY CODES

Use these tables to record Programming and User Codes that you program into the lock.

- The Programming Code can be any combination of six numbers entered into the keypad to put the lock in Programming Mode.
- The first 4 - 6 numbers (depending on User Code Length) must be different from all of the User Codes currently in the lock.
- One Programming Code is programmed into the lock by default. This code can be found on the stickers, one on the back of the Alarm Assembly and one on the back of this guide.

① Use a pencil to enter the codes in the boxes so you can easily change them later.

User Codes

- A User Code can be any combination of 4 - 8 digits entered into the keypad to unlock the lock.
- The first 4-6 digits must be different from the first 4-6 digits of the Programming Code.
- Two User Codes are programmed into the lock by default. These two codes can be found on the stickers, one on the back of the Inside Alarm Assembly and one on the back of this guide.

① Up to 30 User Codes can be stored in the lock at one time.

Best Practices

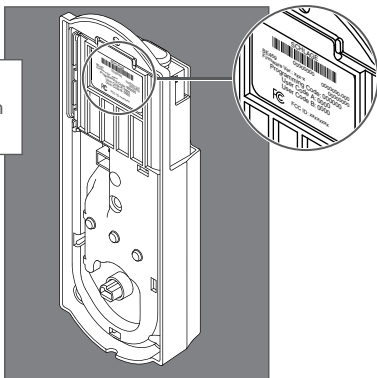
- Give each person their own unique User Code.
- Change User and Programming Codes periodically to ensure security.

Default Codes Locations

Codes are located on the sticker on the back of this guide. They are also located on the back of the Alarm Assembly.



The same codes are located in both places.



- ① DO NOT remove the sticker from the back of the Alarm Assembly! If you lose your Programming Code, you can reset your lock back to these default codes.

DATE**PROGRAMMING CODE**

--	--	--	--	--	--	--

USER NAME**USER CODE**

Example: John Smith	1234
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
13.	
14.	
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17.	
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25.	
26.	
27.	
28.	
29.	
30.	

FACTORY DEFAULT RESET

When should you perform a Factory Default Reset?

- If you want to move the lock to a different door, you need to restore default settings, move the lock to the new door, and then set up the lock again.
- If you have forgotten your Programming Code, you can restore the default codes.

⚠ WARNING ⚠

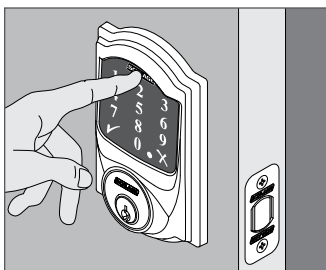
Locate the default Programming and User Codes on the back of this guide or the back of the Alarm Assembly before beginning! Default Programming and User Codes will be restored. All existing User Codes and current Programming Code will be erased.

CUSTOMER SERVICE CANNOT RETRIEVE LOST DEFAULT CODES! DO NOT RESTORE FACTORY SETTINGS UNLESS YOU CAN LOCATE THE DEFAULT CODES.

1. Disconnect the batteries. See **Replacing the Batteries** on page 4.
2. Press and hold the Outside Schlage Button.
3. While holding the Outside Schlage Button, reconnect the batteries.
4. Release the Outside Schlage Button.

ⓘ **If you are moving the lock to a new door, install the lock on that door before continuing.**

5. To check that the lock was reset, press the Outside Schlage Button and enter one of the Default User Codes. See **Default Codes Locations** on page 10.
6. If the reset was successful, the lock will perform a setup routine. Wait until the bolt stops moving. The reset and setup are complete.

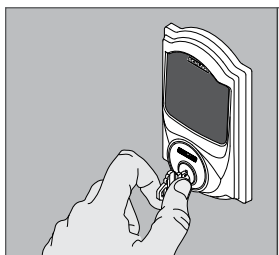


EMERGENCY KEY OVERRIDE

Emergency Key Override can be used when the battery is completely dead, or when no valid User Code is known.

Insert key and rotate to unlock, just like any lock. See **Replacing the Batteries** on page 4.

This lock may be rekeyed to match other locks in a residence. Contact a locksmith for assistance.



Z-WAVE

This lock is equipped with a Z-Wave® radio.

- ① The Z-Wave radio is disabled by default to conserve battery life. When the lock is enrolled for the first time, the radio is automatically enabled.

About Z-Wave

This lock is a Security Enabled Z-Wave Product.

- This lock may be included into any Z-Wave network to enable remote control of the lock, from any manufacturer or service provider.
- Listening nodes from any manufacturer or service provider can act as repeaters to extend network range.
- The lock will have limited functionality if included with a non-secure controller.
- Replication is the process of copying the network data from a primary controller to a secondary controller on the network. For more information, please see your controller's documentation.
- This device supports Anti-Theft. Enabling Anti-Theft protection requires an Anti-Theft enabled controller. For more information, please see your controller's website or documentation.

Enrolling on a Z-Wave Network

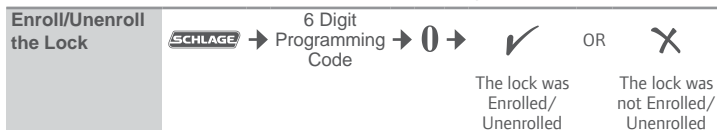
This lock may be included into any Z-Wave network, from any manufacturer.



Refer to your home automation system's documentation or website for more information, then continue.

Enroll your lock:

Extend the bolt on the lock and then perform the following:



To verify enrollment:

1. Remove the battery cover. See **Replacing the Batteries** on page 4.
2. Disconnect the battery connector.
3. While watching the inside Schlage button, reconnect the battery connector.
4. The inside Schlage button will blink if the lock is enrolled.

PROGRAMMING USING Z-WAVE

Many home automation systems support features of the deadbolt including locking, unlocking, and various other programming options.

Refer to your home automation system documentation or website for more information.

TROUBLESHOOTING

PROBLEM	SOUNDS	LIGHTS	SOLUTION
I forgot my Programming Code.	—	—	Check the back of this guide or the back of the Alarm Assembly for default Programming Code.
			If needed, restore lock to factory settings. See Factory Default Reset on page 12.
I need to delete a User Code that I don't remember.	—	—	Delete all User Codes. Then add all needed User Codes back into the lock. See Programming the Touchscreen on page 6.
Cannot add a new User Code.	2 beeps	Yellow dot flashing	1 was not pressed after entering Programming Mode.
		2 Red ✕	30 User Codes already exist. Delete a User Code before adding a new one. See Delete User Code on page 7.
			Second User Code entry did not match first User Code entry. The new User Code matches the first 4 - 6 digits of the existing Programming Code.
Cannot delete a User Code.	2 beeps	Yellow dot flashing	2 was not pressed after entering Programming Mode.
		2 Red ✕	First User Code entered did not match any current User Code.
			Second User Code entered did not match first User Code entered.
Cannot change Programming Code.	2 beeps	Yellow dot flashing	3 was not pressed after entering Programming Mode.
		2 Red ✕	Second Programming Code entered did not match first Programming Code entered.
			First 4 - 6 digits of new Programming Code match an existing User Code.
Cannot delete all User Codes.	—	Yellow dot flashing	6 was not pressed after entering Programming Mode.
			The 2nd Programming Code entered was not valid.
User Code does not unlock lock.	1 beep	1 Red ✕	User Code entered is not a valid User Code.
User Code cannot be entered after Outside Schlage button is pressed.	1 beep	Green ✓ then Red ✕	Vacation Mode is enabled. Disable Vacation Mode. See Disable Vacation Mode on page 7.
	1 beep	1 Red ✕	Too many incorrect User Codes have been entered. Wait 30 seconds and try again.
Backlighting does not come on when Outside Schlage button is pressed and User Code cannot be entered.	—	—	Batteries are completely dead and no electronic operations are possible. See Replacing the Batteries on page 4.
			The battery tray is not connected.
			The cable that runs through the door is not connected. Remove the Alarm Assembly and check the connection. See Step 8 of the Touchscreen Deadbolt with Alarm Installation Instructions for help.

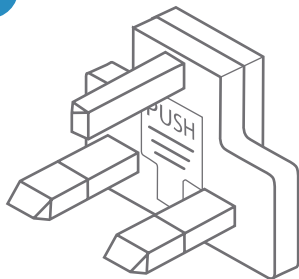
PROBLEM	SOUNDS	LIGHTS	SOLUTION
After entering a User Code to unlock the lock, the yellow dot is flashing and there is a delay before unlock.	Several beeps	Outside yellow dot flashing	Battery is low and should be replaced. See Replacing the Batteries on page 4.
Inside Schlage Button is flashing but no alarm is sounding.	—	Inside Schlage Button flashes every 5 seconds	
3 Red ✕ when Outside Schlage Button is pressed.	—	3 Red ✕	Battery is critical and must be replaced. See Replacing the Batteries on page 4.
Pressing Outside Schlage button when deadbolt is unlocked does not cause deadbolt to relock.	—	—	The Lock & Leave feature is not enabled. See Enable/Disable Lock & Leave on page 7. If you do not want to enable Lock & Leave, then enter a valid User Code to lock the door.
Deadbolt will not extend or retract as expected.	1 long beep	1 Red ✕	Adjust bolt/frame alignment. Browse to answers.schlage.com for help.
Deadbolt requires two attempts to lock or unlock.	—	Green ✓	Deadbolt/frame alignment is marginal. Adjust door/frame for best operation. Browse to answers.schlage.com for help.
Alarm will not sound.	—	—	Turn on Alarm.
Alarm sounds too frequently/ false alarm, or not frequently enough.	Alarm	—	Sensitivity level is too high (at 1 or 2) or too low (at 4 or 5) and should be adjusted. See Adjusting the Sensitivity Level on page 9.
The tamper alert is not sounding.	—	—	There is a 60-second delay before device alarms to allow you to exit and lock the door. See Alarm Setting Descriptions on page 8.
The bolt was operating smoothly, but now is not.	—	—	The bolt has become soiled. Clean with mild detergent and warm water.
			The strike has become worn. Flip the strike over for continued smooth operation.

ring

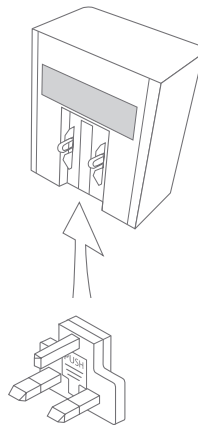
Chime



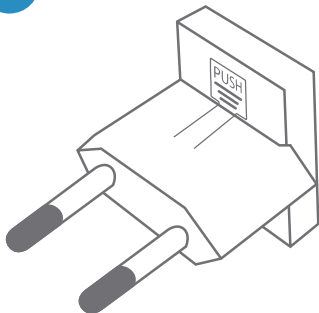
1A



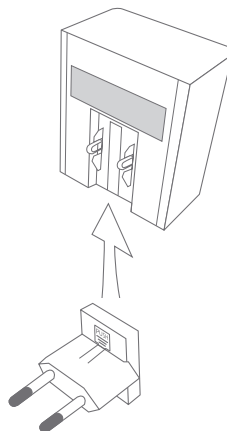
2A



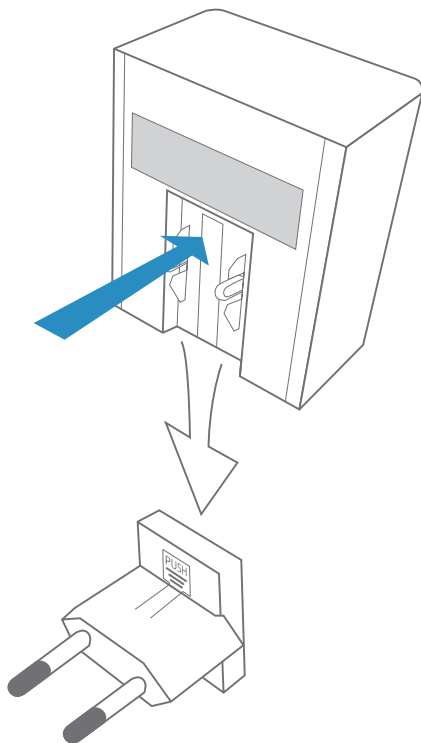
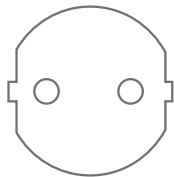
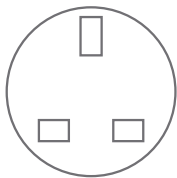
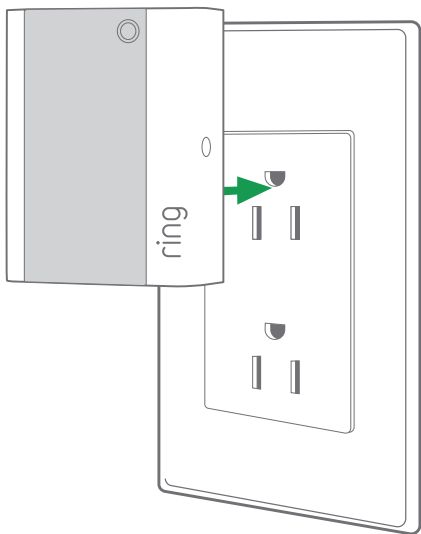
1B



2B



3





Quick Start...



Power your Chime

Plug your Chime into a power socket and then open the Ring app.



Set up your Chime in the app

Select "Set Up Device" in the app, then select Chime.



Digital Download

Get detailed install directions in English at: ring.com/manuals



Démarrage rapide...



Démarrage de votre Chime

Branchez votre Chime dans une prise électrique et ouvrez l'application Ring.



Paramétrez votre Chime dans l'appli

Sélectionnez "Paramétrer l'appareil" dans l'appli, puis sélectionnez Chime.



Téléchargement numérique

Obtenez des instructions d'installation détaillées en français à l'adresse: ring.com/manuals



Schnellstart...



Starten Sie Ihr Chime

Stecken Sie Ihr Chime in eine Steckdose und öffnen Sie dann die Ring-App.



Richten Sie Ihre Chime in der App ein

Wählen "Sie die Einrichtung" des Geräts in der App aus, dann wählen Sie die Chime.



Digitaler Download

Erhalten Sie detaillierte Anweisungen zur Installation auf Deutsch unter: ring.com/manuals



Avvio rapido...



Carica il tuo Chime

Collega il tuo Chime ad una presa di corrente prima di aprire l'App Ring.



Configura Chime nell'app

Seleziona "Configura dispositivo" nell'app, quindi scegli Chime.



Download digitale

Puoi consultare le istruzioni di installazione dettagliate in italiano all'indirizzo: ring.com/manuals



Inicio rápido...

1

Enciende tu Chime

Conecta tu Chime a una toma de corriente y luego abre la app de Ring.



2

Configure su Chime en la aplicación

Seleccione "Configurar dispositivo" en la aplicación y, a continuación, seleccione Chime.



Descarga digital

Obtenga instrucciones detalladas de instalación en español en: ring.com/manuals



Hurtig start...

1

Tænd din Chime

Slut din Chime til en stikkontakt og åbn derefter Ring-appen.



2

Konfigurer Chime i appen

Vælg Set Up Device (Konfigurer enhed) i appen, og vælg så Chime.



Digitalt download

Få en detaljeret installationsvejledning på dansk på: ring.com/manuals



Pika-aloitus...



Kytke Chimesi

Kytke Chimesi virtalähteeseen ja avaa Ring-sovellus.



Määritä Chime -ovikello sovelluksessa

Valitse sovelluksessa Set Up Device (Määritä laite) ja valitse Chime.



Digitaalinen lataus

Lue tarkat asennusohjeet suomeksi osoitteessa:
ring.com/manuals



Aan de slag...



Je Chime aansluiten

Stop de stekker van je Chime in het stop-contact en open dan de Ring-app.



Stel uw Chime in via de app

Selecteer Set Up Device (Apparaat configureren) in de app en kies vervolgens 'Chime'.



Digitale download

Bekijk de uitgebreide installatie-instructies in het Nederlands op:
ring.com/manuals



Hurtigstart...



Strøm din Chime

Koble Chime til en stikkontakt, og åpne deretter Ring-appen.



Sett opp Chime i appen

Velg Set Up Device (Sett opp enhet) i appen. Deretter velg Chime.



Digital nedlasting

Få detaljerte installasjonsveiledninger på norsk på: ring.com/manuals



Schnabbstart...



Starta din Chime

Anslut din Chime till ett eluttag och öppna sedan Ring-appen.



Installera din Chime via appen

Välj Set Up Device (Installera enhet) i appen, välj sedan Chime.



Digital nedladdning

Få detaljerad installationsinformation på svenska på: ring.com/manuals



ring.com/help



+44 1727 26 3045



+800 8700 9781

ring

Ring

Singel 542

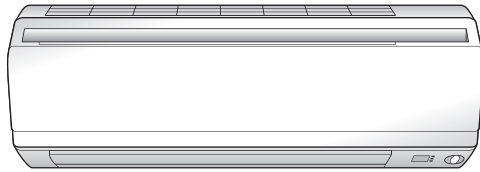
1017 AZ Amsterdam

The Netherlands

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DAIKIN



DAIKIN ROOM AIR CONDITIONER

OPERATION MANUAL

INVERTER

English

Français

Español



MODELS

- FTXS09LVJU
- FTXS12LVJU
- CTXS07LVJU

Feature

For your comfort and energy saving



INTELLIGENT EYE

The INTELLIGENT EYE sensor detects the human movement in a room. If no one is room for more than 20 minutes, the operation automatically changes to energy saving operation.

▶Page 15



WEEKLY TIMER

Up to 4 timer settings can be saved for each day of the week according to your family's life style. The WEEKLY TIMER allows you to set on/off time and the desired temperature. ▶Page 22

Other functions



COMFORT AIRFLOW

The airflow direction will be in upward mode while in COOL operation, in downward mode while in HEAT operation. This function will prevent cold or warm air from directly blowing on your body. ▶Page 15



OUTDOOR UNIT QUIET

OUTDOOR UNIT QUIET operation lowers the noise level of the outdoor unit. This function is useful in consideration of your neighbors.










▶Page 18

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ECONO

This function enables efficient operation by limiting the maximum power consumption. It is useful when using the air conditioner and other electrical devices simultaneously. ▶Page 19


Safety Considerations


Read these **Safety Considerations for Operations** carefully before operating an air conditioner or heat pump.


Make sure that the unit operates properly during the startup operation. Instruct the user on how to operate and maintain the unit.


Inform users that they should store this operation manual with the installation manual for future reference.

Meanings of **DANGER**, **WARNING**, **CAUTION**, and **NOTE** Symbols:

 **DANGER** Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.

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

 **CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury. It may also be used to alert against unsafe practices.

 **NOTE** Indicates situations that may result in equipment or property-damage accidents only.

DANGER

- Do not install the unit in an area where flammable materials are present due to risk of explosion resulting in serious injury or death.
- Any abnormalities in the operation of the air conditioner or heat pump, such as smoke or fire, could result in severe injury or death. Turn off the power and contact your dealer immediately.
- Refrigerant gas may produce toxic gas if it comes into contact with fire, such as from a fan heater, stove, or cooking device. Exposure to this gas could cause severe injury or death.
- For refrigerant leakage, consult your dealer. Refrigerant gas is heavier than air and replaces oxygen. A massive leak could lead to oxygen depletion, especially in basements, and an asphyxiation hazard could occur leading to serious injury or death.
- If equipment utilizing a burner is used in the same room as the air conditioner or heat pump, there is the danger of oxygen deficiency which could lead to an asphyxiation hazard resulting in serious injury or death. Be sure to ventilate the room sufficiently to avoid this hazard.
- Safely dispose of the packing materials. Packing materials, such as nails and other metal or wooden parts, may cause stabs or other injuries.
- Tear apart and throw away plastic packaging bags so that children will not play with them. Children playing with plastic bags face the danger of death by suffocation.

WARNING

- Contact your dealer for repair and maintenance. Improper repair and maintenance may result in water leakage, electric shock, and fire. Only use accessories made by Daikin that are specifically designed for use with the equipment and have them installed by a professional.
- Contact your dealer to move and reinstall the air conditioner or heat pump. Incomplete installation may result in water leakage, electric shock, and fire.
- Never let the indoor unit or the remote controller get wet. Water can cause an electric shock or a fire.
- Never use flammable spray such as hair spray, lacquer, or paint near the unit. Flammable spray may cause a fire.
- When a fuse blows out, never replace it with one of incorrect ampere ratings or different wires. Always replace any blown fuse with a fuse of the same specification.
- Never remove the fan guard of the unit. A fan rotating at high speed without the fan guard is very dangerous.
- Never inspect or service the unit by yourself. Contact a qualified service person to perform this work.
- Turn off all electrical power before doing any maintenance to avoid the risk of serious electric shock; never sprinkle or spill water or liquids on the unit.
- Do not touch the switch with wet fingers. Touching a switch with wet fingers can cause electric shock.
- Do not allow children to play on or around the unit to prevent injury.
- The heat exchanger fins are sharp enough to cut. To avoid injury wear gloves or cover the fins while working around them.
- Do not put a finger or other objects into the air inlet or air outlet. The fan is rotating at high speed and will cause injury.
- Check the unit foundation for damage on a continuous basis, especially if it has been in use for a long time. If left in a damaged condition the unit may fall and cause injury.
- Placing a flower vase or other containers with water or other liquids on the unit could cause a shock or fire if a spill occurs.
- Do not touch the air outlet or horizontal blades while the swing flap is in operation because fingers could get caught and injured.
- Never touch the internal parts of the controller. Do not remove the front panel because some parts inside are dangerous to touch. To check and adjust internal parts, contact your dealer.

CAUTION

- Do not use the air conditioner or heat pump for any other purposes other than comfort cooling or heating. Do not use the unit for cooling precision instruments, food, plants, animals or works of art.

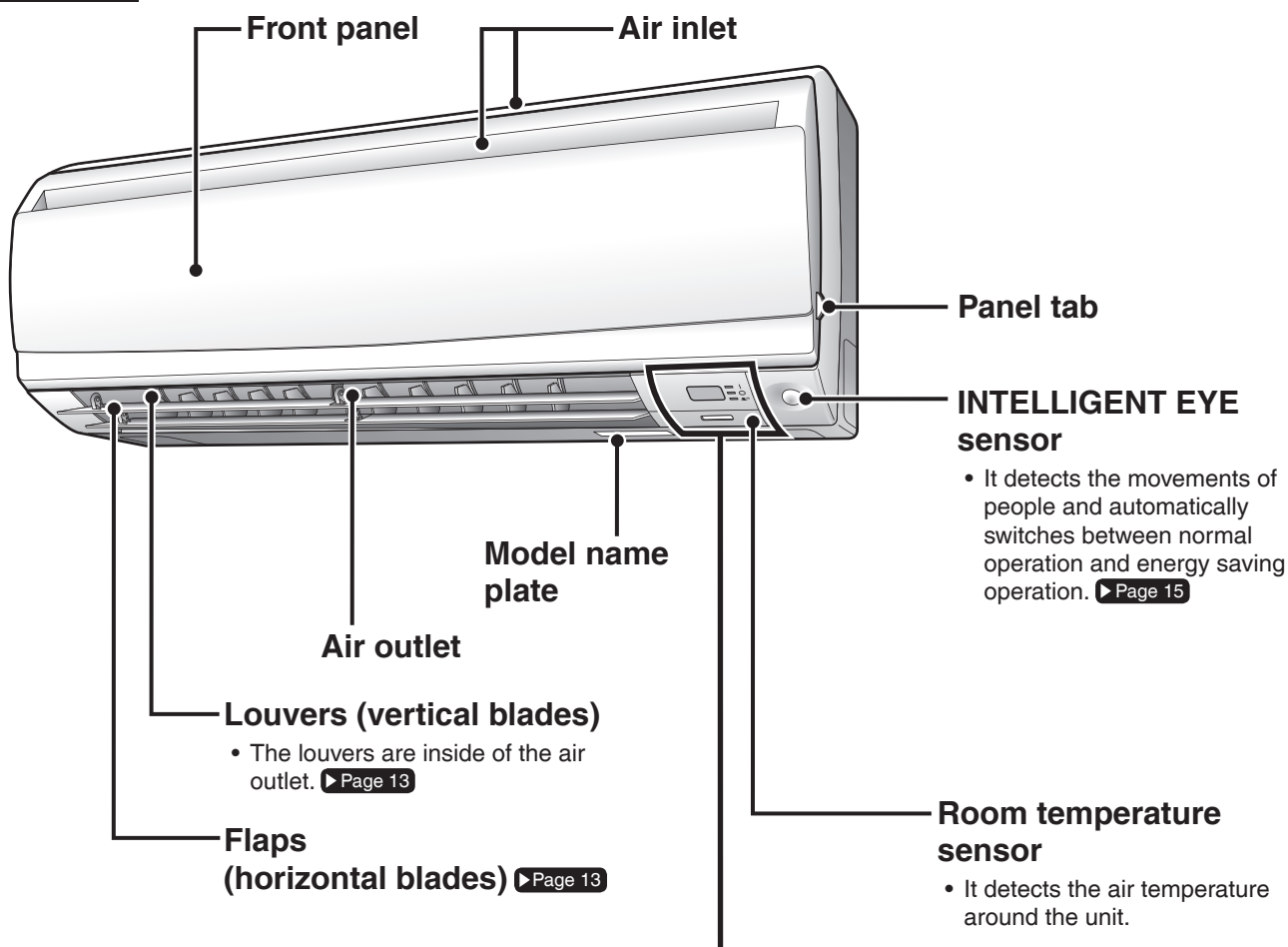
- Do not place items under the indoor unit as they may be damaged by condensates that may form if the humidity is above 80% or if the drain outlet gets blocked.
- Before cleaning, stop the operation of the unit by turning the power off or by pulling the supply cord out from its receptacle. Otherwise, an electric shock and injury may result.
- Do not wash the air conditioner or heat pump with excessive water. An electric shock or fire may result.
- Avoid placing the controller in a spot splashed with water. Water entering the controller may cause an electric shock or damage the internal electronic parts.
- Do not operate the air conditioner or heat pump when using a room-fumigation type of insecticide. Failure to observe this could cause the chemicals to be deposited in the unit and can endanger the health of those who are hypersensitive to chemicals.
- Do not turn off the power immediately after stopping operation. Always wait for at least 5 minutes before turning off the power. Otherwise, water leakage may occur.
- The appliance is not intended for use by young children or infirm persons without supervision.
- The remote controller should be kept away from children so they cannot play with it.
- Consult with the installation contractor for cleaning.
- Incorrect cleaning of the inside of the air conditioner or heat pump could make the plastics parts break and cause water leakage or electric shock.
- Do not touch the air inlet or aluminum fin of the air conditioner or heat pump as they can cut and cause injury.
- Do not place objects in direct proximity of the outdoor unit. Do not let leaves and other debris accumulate around the unit. Leaves are a hotbed for small animals which can enter the unit. Once inside the unit, animals can cause the unit to malfunction, and cause smoke or fire when they make contact with electrical parts.
- Dismantling of the unit, disposal of the refrigerant, oil, and additional parts, should be done in accordance with the relevant local, state, and national regulations.
- Operate the air conditioner or heat pump in a sufficiently ventilated area and not surrounded by obstacles. Do not use the air conditioner or heat pump in the following places.
 - a. Places with a mist of mineral oil, such as cutting oil.
 - b. Locations such as coastal areas where there is a lot of salt in the air.
 - c. Locations such as hot springs where there is a lot of sulfur in the air.
 - d. Locations such as factories where the power voltage varies a lot.
 - e. In cars, boats, and other vehicles.
 - f. Locations such as kitchens where oil may splatter or where there is steam in the air.
 - g. Locations where equipment produces electromagnetic waves.
 - h. Places with an acid or alkaline mist.
 - i. Places where fallen leaves can accumulate or where weeds can grow.
- Take snow protection measures. Contact your dealer for the details of snow protection measures, such as the use of a snow protection hood.
- Do not attempt to do electrical work or grounding work unless you are licensed to do so. Consult with your dealer for electrical work and grounding work.
- Pay attention to operating sound. Be sure to use the following places:
 - a. Places that can sufficiently withstand the weight of the air conditioner or heat pump yet can suppress the operating sound and vibration.
 - b. Places where warm air from the air outlet of the outdoor unit or the operating sound of the outdoor unit does not annoy neighbors.
- Make sure that there are no obstacles close to the outdoor unit. Obstacles close to the outdoor unit may drop the performance of the outdoor unit or increase the operating sound of the outdoor unit.
- Consult your dealer if the air conditioner or heat pump in operation generates unusual noise.
- Make sure that the drainpipe is installed properly to drain water. If no water is discharged from the drainpipe while the air conditioner or heat pump is in the cooling mode, the drainpipe may be clogged with dust or dirt and water leakage from the indoor unit may occur. Stop operating the air conditioner or heat pump and contact your dealer.

 **NOTE**

- Never press the button of the remote controller with a hard, pointed object. The remote controller may be damaged.
- Never pull or twist the electric wire of the remote controller. It may cause the unit to malfunction.
- Do not place appliances that produce open flames in places that are exposed to the airflow of the unit or under the indoor unit. It may cause incomplete combustion or deformation of the unit due to the heat.
- Do not expose the controller to direct sunlight. The LCD display can become discolored and may fail to display the data.
- Do not wipe the controller operation panel with benzene, thinner, chemical dust cloth, etc. The panel may get discolored or the coating can peel off. If it is heavily dirty, soak a cloth in water-diluted neutral detergent, squeeze it well and wipe the panel clean. Then wipe it with another dry cloth.

Names of Parts

Indoor Unit

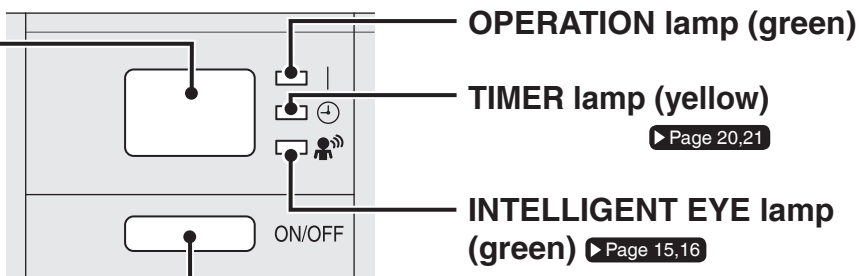


Display

Signal receiver

- It receives signals from the remote controller.
- When the unit receives a signal, you will hear a beep sound.

Case	Sound type
Operation start	beep-beep
Setting changed	beep
Operation stop	long beep



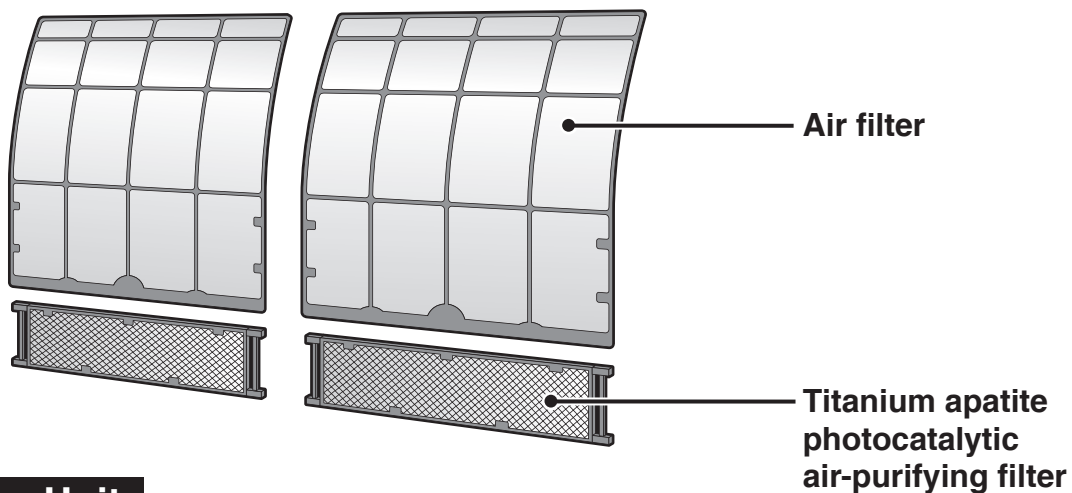
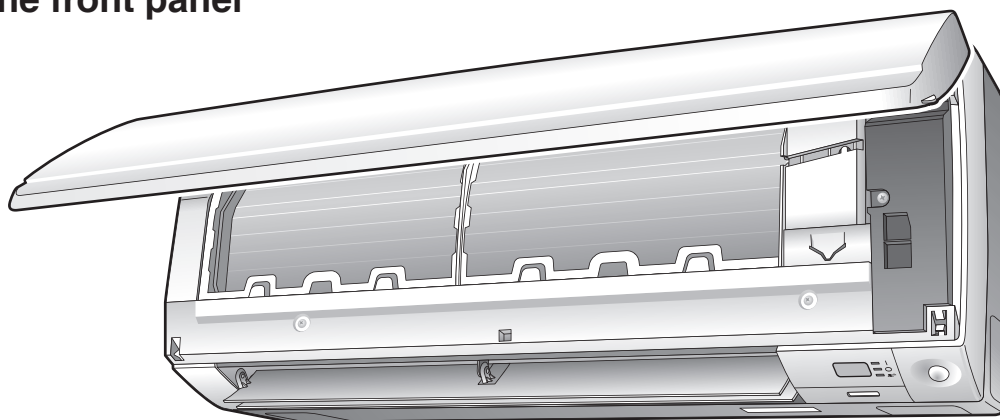
Indoor unit ON/OFF switch

- Press this switch once to start operation. Press once again to stop it.
- The operation mode refer to the following table.

Mode	Temperature setting	Airflow rate
AUTO	77°F (25°C)	AUTO

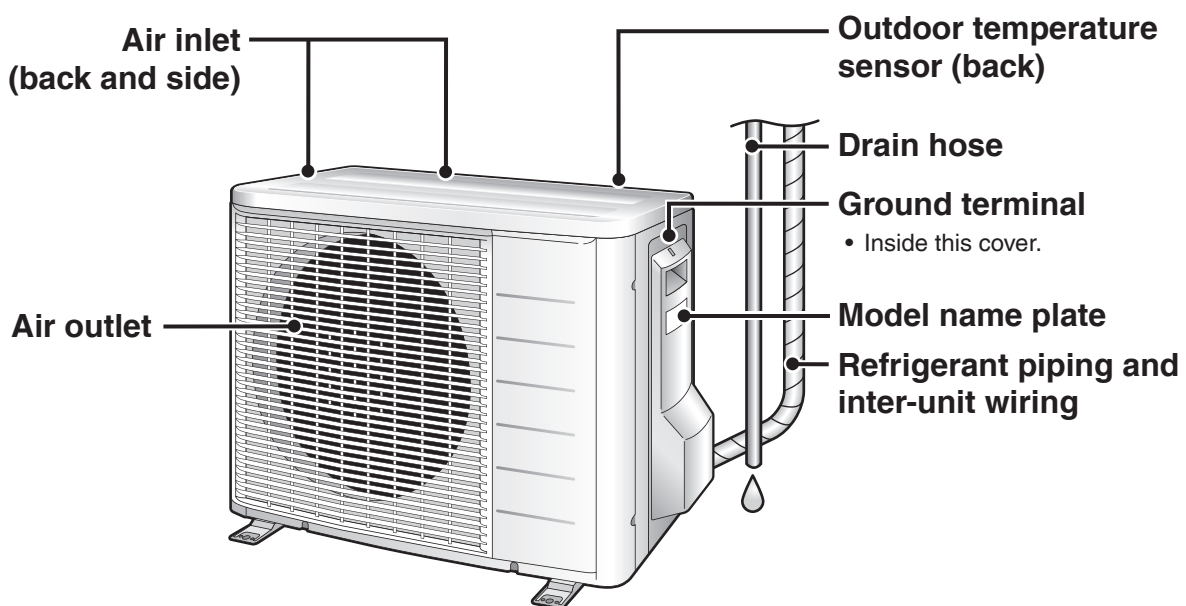
- This switch is useful when the remote controller is missing.

■ Open the front panel



Outdoor Unit

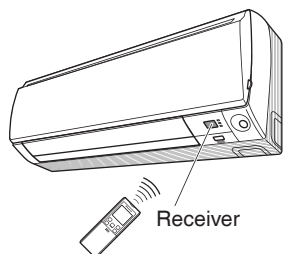
• Appearance of the outdoor unit may differ from some models.



Names of Parts

Remote Controller

Signal transmitter



- To use the remote controller, aim the transmitter at the indoor unit. If there is anything to block signals between the unit and the remote controller, such as a curtain, the unit will not operate.
- Do not drop the remote controller. Do not get it wet.
- The maximum distance for communication is approximately 23ft (7m).

Display (LCD)

- Displays the current settings. (In this illustration, each section is shown with all its displays on for the purpose of explanation.)

TEMPERATURE adjustment buttons

- Changes the temperature setting.

▶ Page 12

ON/OFF button

- Press this button once to start operation.

Press once again to stop it. ▶ Page 11

Front cover

- Open the front cover. ▶ Page 8

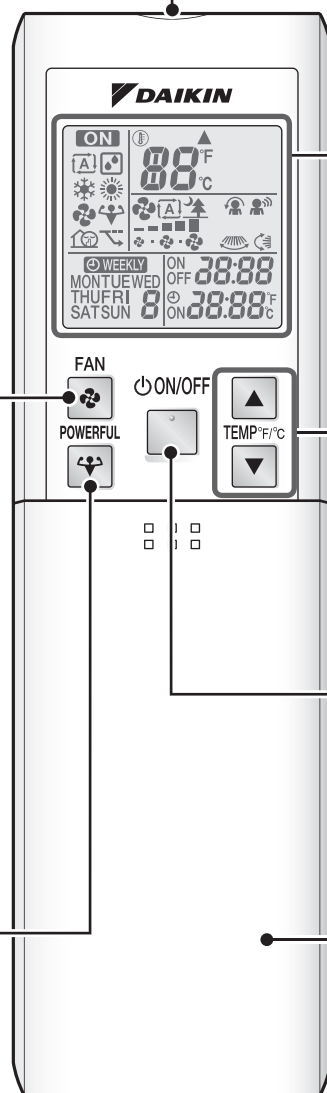
FAN setting button

- Selects the airflow rate setting.

▶ Page 14

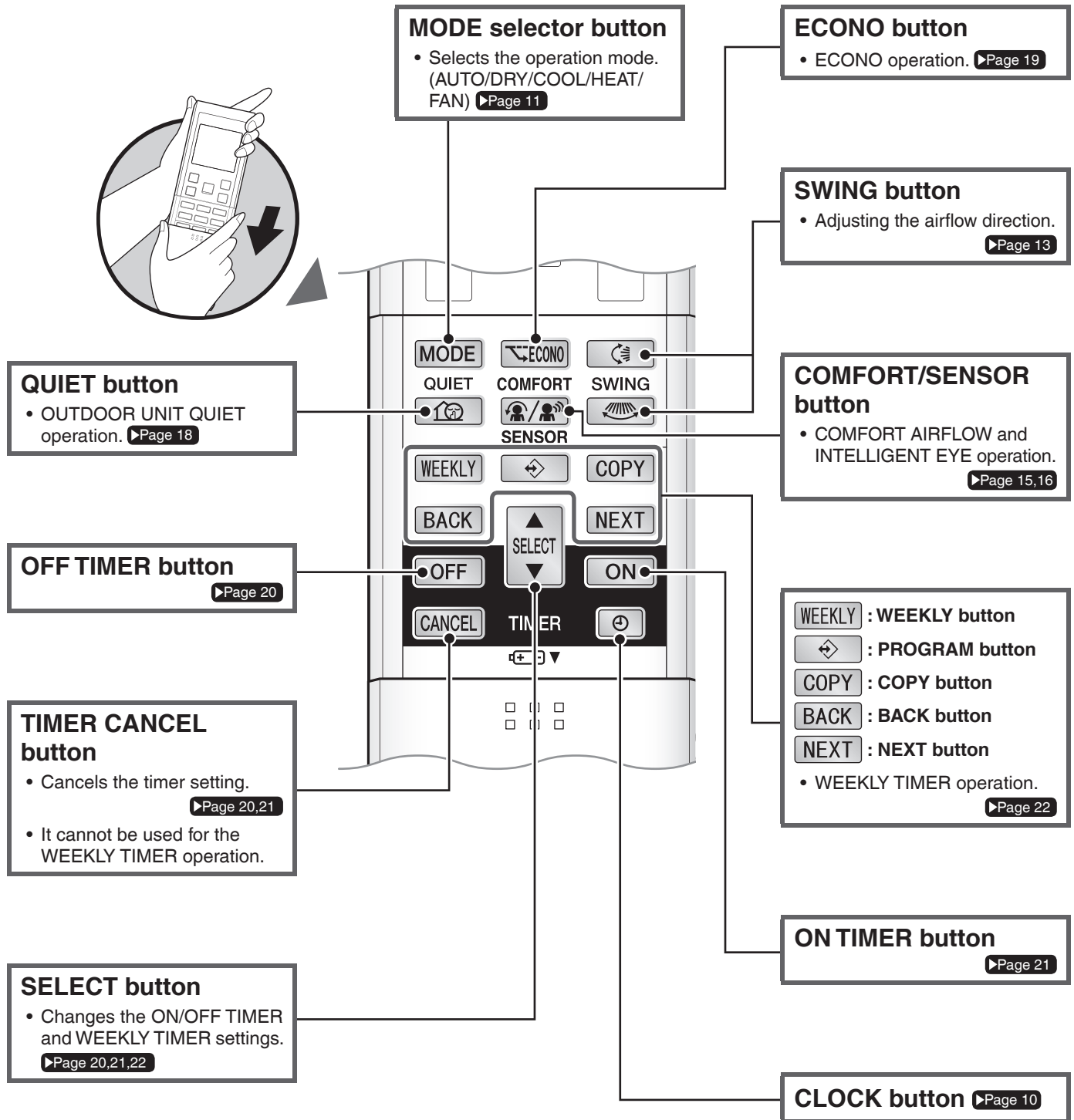
POWERFUL button

- POWERFUL operation. ▶ Page 17

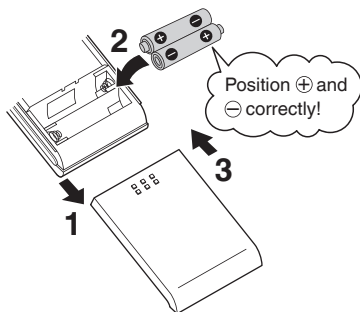


<ARC452A21>

■ Open the front cover



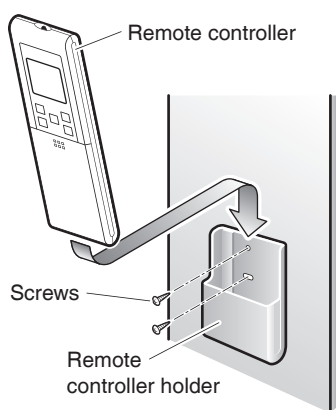
Preparation before Operation



■ To set the batteries

1. Slide the front cover to take it off.
2. Set two dry batteries AAA.LR03 (alkaline).
3. Set the front cover as before.

■ To fix the remote controller holder to a wall



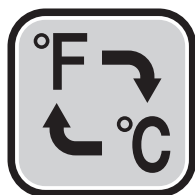
1. Choose a place from where the signals reach the unit.
2. Fix the holder to a wall, a pillar, etc. with the screws supplied with the holder.
3. Place the remote controller in the remote controller holder.

■ Celsius/Fahrenheit display switch

- The Celsius or Fahrenheit display is selectable with the following buttons.

Press  and  simultaneously for 5 seconds.

- The temperature will be displayed in Fahrenheit if it is presently displayed in Celsius, and vice versa.



NOTE

■ Notes on batteries

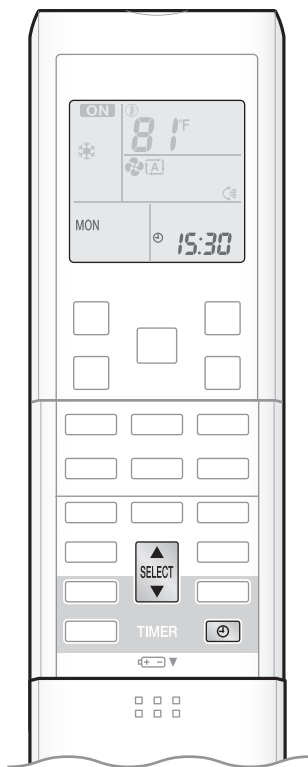
- When replacing the batteries, use batteries of the same type, and replace both batteries at the same time.
- When the system is not used for a long time, take the batteries out.
- The batteries will last for approximately 1 year. If the remote controller display begins to fade and the degradation of reception performance occurs within a year, however, replace both batteries with new, size AAA.LR03 (alkaline).
- The attached batteries are provided for the initial use of the system.
The usable period of the batteries may be short depending on the manufactured date of the air conditioner.

■ Notes on remote controller

- Never expose the remote controller to direct sunlight.
- Dust on the signal transmitter or receiver will reduce the sensitivity. Wipe off dust with a soft cloth.
- Signal communication may be disabled if an electronic-starter-type fluorescent lamp (such as inverter-type lamps) is in the room. Consult the shop if that is the case.
- If the remote controller signals happen to operate another appliance, move that appliance somewhere else, or consult the service shop.

■ Celsius/Fahrenheit display change function of remote controller

- The set temperature may increase when the display is changed to Celsius from Fahrenheit, because a fraction of 0.5°C is rounded up.
- Example: A set temperature of 65°F (equivalent to 18.5°C) will be converted into 19°C.
When the display is changed to Fahrenheit again, the set temperature will be converted into 66°F (equivalent to 19°C) instead of the original set temperature (65°F) but a set temperature of 66°F (equivalent to 19°C) will be converted into 19°C with no temperature change.
- A reception sound will go off for the transmission of set temperature to the indoor unit at the time of setting the Celsius/Fahrenheit display change function.



■ Turn the breaker on

- After the power is turned on, the flaps of the indoor unit open and close once to set the reference position.

■ To set the clock

1. Press .



- "0:00" is displayed.
- "MON" and "⏻" blink.

2. Press to set the current day of the week.

3. Press .



- "⏻" blinks.

4. Press to set the clock to the present time.

- Holding down ▲ or ▼ rapidly increases or decreases the time display.

5. Press .

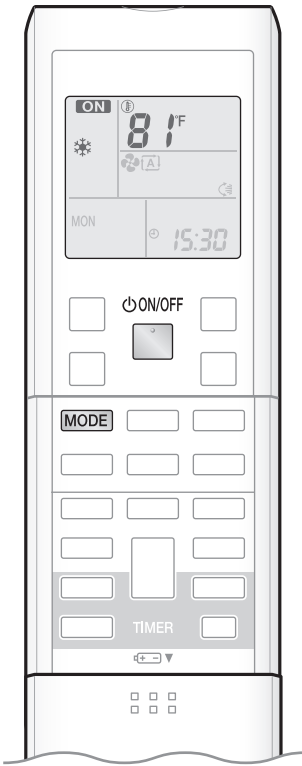
- Point the remote controller at the indoor unit when pressing the buttons.



- "⏻" blinks.



AUTO · DRY · COOL · HEAT · FAN Operation

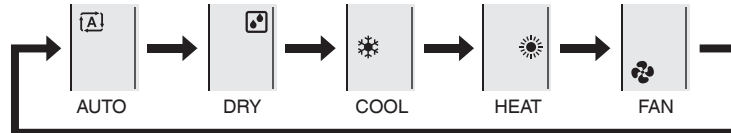


The air conditioner operates with the operation mode of your choice. From the next time on, the air conditioner will operate with the same operation mode.

To start operation

1. Press **MODE** and select an operation mode.

- Each pressing of the button advances the mode setting in sequence.



2. Press **ON/OFF**.

- “**ON**” is displayed on the LCD.
- The OPERATION lamp lights green.



Display

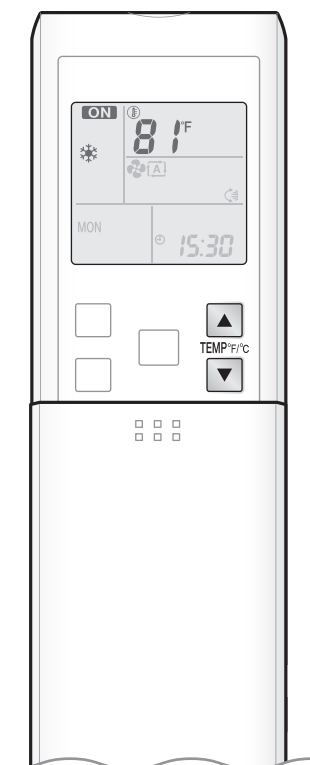
To stop operation

Press **ON/OFF** again.



- “**ON**” is no longer displayed on the LCD.
- The OPERATION lamp goes off.

NOTE

MODE	Notes on each operation mode
HEAT	<ul style="list-style-type: none"> • Since this air conditioner heats the room by taking heat from outdoor air to indoors, the heating capacity becomes smaller in lower outdoor temperatures. If the heating effect is insufficient, it is recommended to use another heating appliance in combination with the air conditioner. • The heat pump system heats the room by circulating hot air around all parts of the room. After the start of HEAT operation, it takes some time before the room gets warmer. • In HEAT operation, frost may occur on the outdoor unit and lower the heating capacity. In that case, the system switches into defrosting operation to take away the frost. • During defrosting operation, hot air does not flow out of indoor unit.
COOL	<ul style="list-style-type: none"> • This air conditioner cools the room by releasing the heat in the room outside. Therefore, the cooling performance of the air conditioner may be degraded if the outdoor temperature is high.
DRY	<ul style="list-style-type: none"> • The computer chip works to rid the room of humidity while maintaining the temperature as much as possible. It automatically controls temperature and airflow rate, so manual adjustment of these functions is unavailable.
AUTO	<ul style="list-style-type: none"> • In AUTO operation, the system selects an appropriate operation mode (COOL or HEAT) based on the room and outside temperatures and starts the operation. • The system automatically reselects setting at a regular interval to bring the room temperature to user-setting level.
FAN	<ul style="list-style-type: none"> • This mode is valid for fan only.



■ To change the temperature setting

Press  or  .

- The displayed items on the LCD will change whenever either one of the buttons is pressed.

COOL operation	HEAT operation	AUTO operation	DRY or FAN operation
64-90°F (18-32°C)	50-86°F (10-30°C)	64-86°F (18-30°C)	The temperature setting cannot be changed.
Press ▲ to raise the temperature and press ▼ to lower the temperature.			

■ Operating conditions

■ Recommended temperature setting

- For cooling: 78-82°F (26-28°C)
- For heating: 68-75°F (20-24°C)

■ Tips for saving energy

- Be careful not to cool (heat) the room too much.
Keeping the temperature setting at a moderate level helps save energy.
- Cover windows with a blind or a curtain.
Blocking sunlight and air from outdoors increases the cooling (heating) effect.
- Clogged air filters cause inefficient operation and waste energy. Clean them once in about every 2 weeks. [▶Page 32](#)

■ Notes on the operating conditions

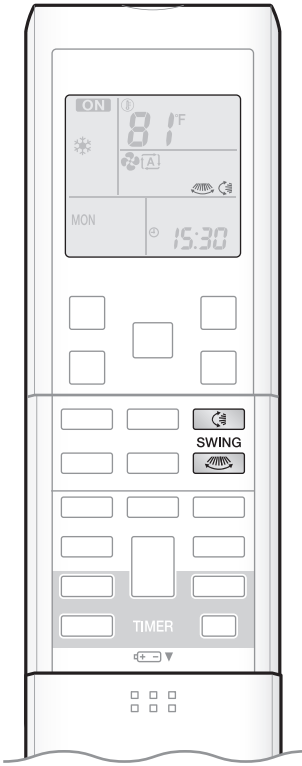
- The air conditioner always consumes a small amount of electricity even while it is not operating.
- If you are not going to use the air conditioner for a long period, for example in spring or autumn, turn the breaker off.
- Use the air conditioner in the following conditions.

MODE	Operating conditions	If operation is continued out of this range
COOL	Outdoor temperature: 50-115°F (10-46°C) Indoor temperature: 64-90°F (18-32°C) Indoor humidity: 80% max.	<ul style="list-style-type: none"> • A safety device may work to stop the operation. (In multi system, it may work to stop the operation of the outdoor unit only.) • Condensation may occur on the indoor unit and drip.
HEAT	Outdoor temperature: [2/3MXL]: -13-75°F (-25-24°C) [Other models]: 5-75°F (-15-24°C) Indoor temperature: 50-86°F (10-30°C)	<ul style="list-style-type: none"> • A safety device may work to stop the operation.
DRY	Outdoor temperature: 50-115°F (10-46°C) Indoor temperature: 64-90°F (18-32°C) Indoor humidity: 80% max.	<ul style="list-style-type: none"> • A safety device may work to stop the operation. • Condensation may occur on the indoor unit and drip.

- Operation outside this humidity or temperature range may cause a safety device to disable the system.



Adjusting the Airflow Direction and Rate




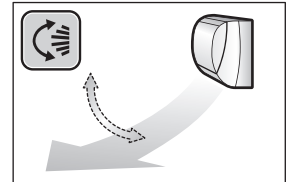
You can adjust the airflow direction to increase your comfort.

■ To start auto swing

Upper and lower airflow direction


Press  .

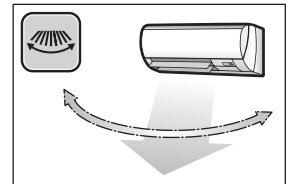
- “” is displayed on the LCD.
- The flaps (horizontal blades) will begin to swing.



Right and left airflow direction





Press  .

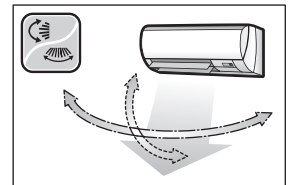
- “” is displayed on the LCD.
- The louvers (vertical blades) will begin to swing.



The 3-D airflow direction

Press  and  .



- “” and “” are displayed on the LCD.
- The flaps and louvers move in turn.
- To cancel 3-D airflow, press either  or  again. The flaps or louvers will stop moving.

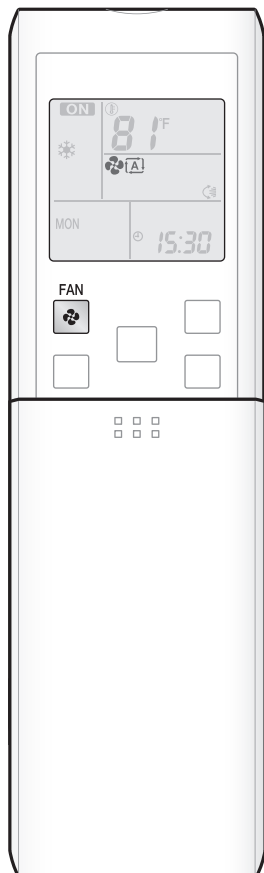


■ To set the flaps or louvers at the desired position

- This function is effective while flaps or louvers are in auto swing mode.


Press  and  when the flaps or louvers reach the desired position.

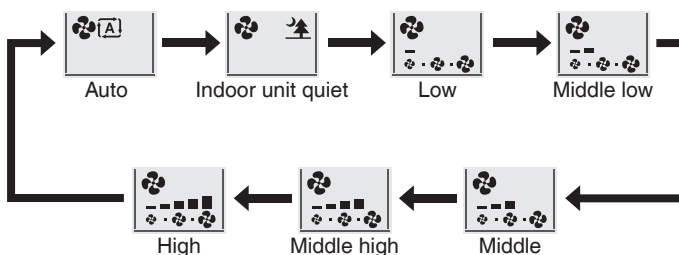
- In the 3-D airflow, the flaps and louvers move in turn.
- “” or “” disappears from the LCD.




■ To adjust the airflow rate setting

Press .

- Each pressing of  advances the airflow rate setting in sequence.

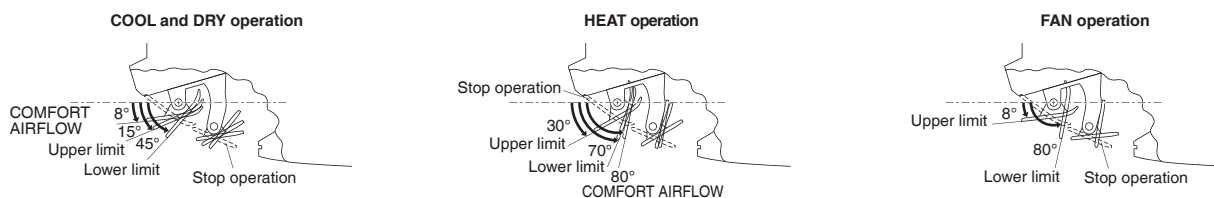


- When the airflow is set to “”, indoor unit quiet operation will start and the noise from the unit will become quieter.
- In indoor unit quiet operation, the airflow rate is set to a weak level.
- In DRY operation, the airflow rate setting cannot be changed.

NOTE

■ Notes on the angles of the flaps

- The flaps swinging range depends on the operation. (See the figure.)



■ Note on 3-D airflow

- Using 3-D airflow circulates cold air, which tends to collect at the bottom of the room, and hot air, which tends to collect near the ceiling, throughout the room, preventing areas of cold and hot developing.

■ Note on airflow rate setting

- At smaller airflow rates, the cooling (heating) effect is also smaller.

CAUTION

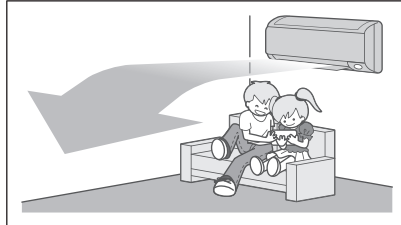
- Always use a remote controller to adjust the angles of the flaps and louvers.
 - If you attempt to move the flaps and louvers forcibly by hand when they are swinging, the mechanism may be damaged.
 - Inside the air outlet, a fan is rotating at a high speed.



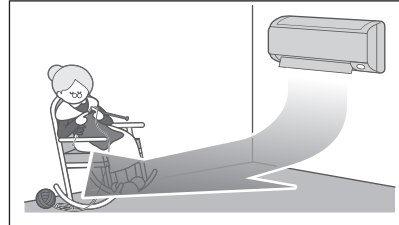
COMFORT AIRFLOW / INTELLIGENT EYE Operation

COMFORT AIRFLOW operation

The flow of air will be in the upward direction while in COOL operation and in the downward direction while in HEAT operation, which will provide a comfortable wind that will not come in direct contact with people.



COOL operation



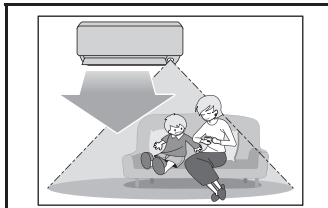
HEAT operation

INTELLIGENT EYE operation

“INTELLIGENT EYE” is the infrared sensor which detects the human movement.

If no one is in the room for more than 20 minutes, the operation automatically changes to energy saving operation.

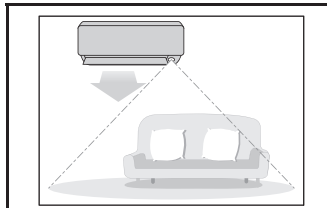
[Example]



When someone is in the room

Normal operation

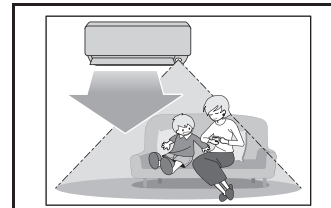
- The air conditioner is in normal operation while the sensor is detecting the movement of people.



When no one is in the room

20 minutes after, start energy saving operation.

- The set temperature is shifted in $\pm 3.6^{\circ}\text{F}$ ($\pm 2^{\circ}\text{C}$) steps.



Someone is back in the room

Back to normal operation.

- The air conditioner will return to normal operation when the sensor detects the movement of people again.

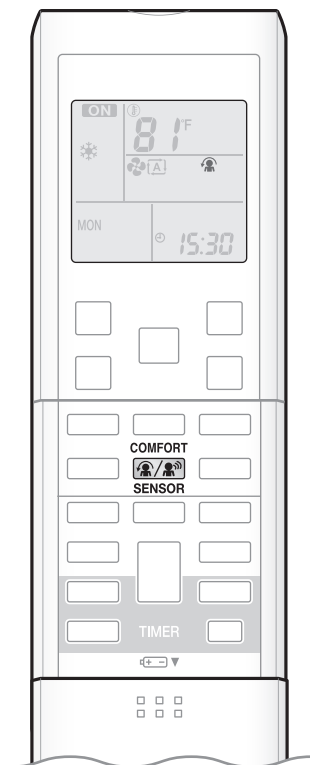
INTELLIGENT EYE operation is useful for energy saving

Energy saving operation

- If no presence is detected in the room for 20 minutes, the energy saving operation will start, and the INTELLIGENT EYE lamp goes off. If human movement is detected again, the INTELLIGENT EYE lamp lights up and energy saving operation terminates.
- This operation changes the temperature -3.6°F (-2°C) in HEAT / $+3.6^{\circ}\text{F}$ ($+2^{\circ}\text{C}$) in COOL / $+3.6^{\circ}\text{F}$ ($+2^{\circ}\text{C}$) in DRY operation from set temperature. When the room temperature exceeds 86°F (30°C), the operation changes the temperature $+1.8^{\circ}\text{F}$ ($+1^{\circ}\text{C}$) in COOL / $+1.8^{\circ}\text{F}$ ($+1^{\circ}\text{C}$) in DRY operation from set temperature.
- This operation decreases the airflow rate slightly in FAN mode only.


Combination COMFORT AIRFLOW and INTELLIGENT EYE operation

The air conditioner can go into operation with the COMFORT AIRFLOW and INTELLIGENT EYE functions combined.





■ To start operation

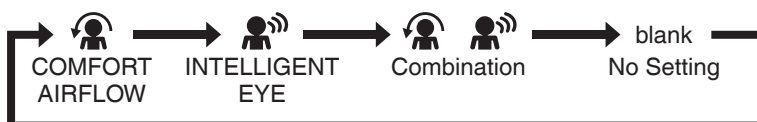
Press  and select the desired mode.

- Each time the  is pressed a different setting option is displayed on the LCD.
- When INTELLIGENT EYE is selected, the INTELLIGENT EYE lamp lights green.



Display

- By selecting “ ” from the following icons, the air conditioner will be in COMFORT AIRFLOW operation combined with INTELLIGENT EYE operation.



- When the flaps (horizontal blades) are swinging, selecting any of the modes above will cause the flaps (horizontal blades) to stop.

■ To cancel operation

Press  and select “blank” on the LCD.

- If the INTELLIGENT EYE operation was being used, the INTELLIGENT EYE lamp goes off.

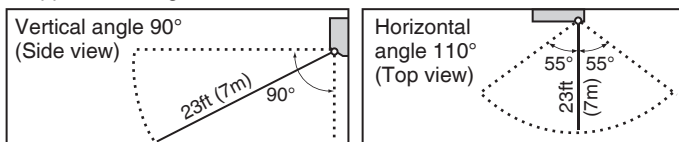
NOTE

■ Notes on COMFORT AIRFLOW operation

- The position of the flaps will change, preventing air from blowing directly on the occupants of the room.
- POWERFUL operation and COMFORT AIRFLOW operation cannot be used at the same time. Priority is given to the function of whichever button is pressed last.
- The airflow rate will be set to AUTO. If the upper and lower airflow direction is selected, the COMFORT AIRFLOW function will be canceled.

■ Notes on INTELLIGENT EYE operation

- Application range is as follows.



- Sensor may not detect moving objects further than 23ft (7m) away. (Check the application range)
- Sensor detection sensitivity changes according to indoor unit location, the speed of passersby, temperature range, etc.
- The sensor also mistakenly detects pets, sunlight, fluttering curtains and light reflected off of mirrors as passersby.
- INTELLIGENT EYE operation will not go on during POWERFUL operation.
- NIGHT SET mode [▶ Page 20](#) will not go on during use of INTELLIGENT EYE operation.

■ Notes on combination of COMFORT AIRFLOW operation and INTELLIGENT EYE operation

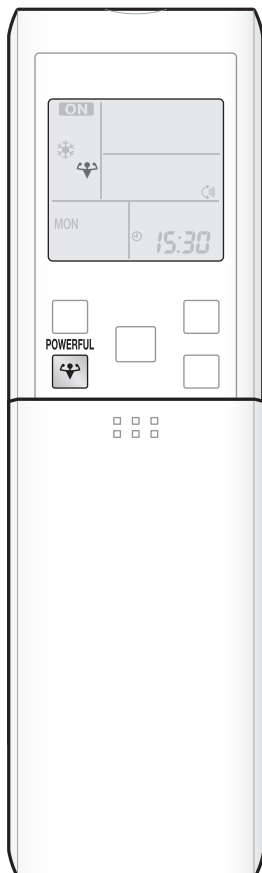
- The airflow rate will be set to AUTO. If the upper and lower airflow direction is selected, the COMFORT AIRFLOW operation will be canceled. Priority is given to the function of whichever button is pressed last.

CAUTION

- Do not place large objects near the sensor.
Also keep heating units or humidifiers outside the sensor's detection area. This sensor can detect undesirable objects.
- Do not hit or violently push the INTELLIGENT EYE sensor. This can lead to damage and malfunction.




POWERFUL Operation



POWERFUL operation quickly maximizes the cooling (heating) effect in any operation mode. You can get the maximum capacity.

■ To start POWERFUL operation

Press  during operation.

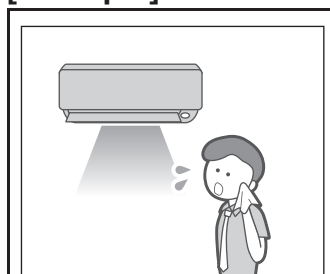
- POWERFUL operation ends in 20 minutes. Then the system automatically operates again with the previous settings which were used before POWERFUL operation.
- “” is displayed on the LCD.

■ To cancel POWERFUL operation

Press  again.

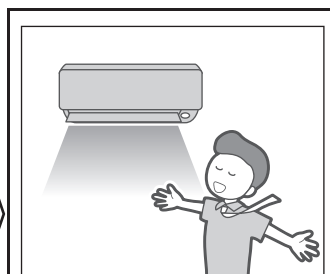
- “” is no longer displayed on the LCD.

[Example]



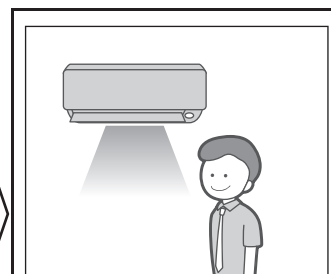
■ Normal operation

- When you want to get the cooling effect quickly, start the POWERFUL operation.



■ POWERFUL operation



- POWERFUL operation will work for 20 minutes.



■ Back to normal operation

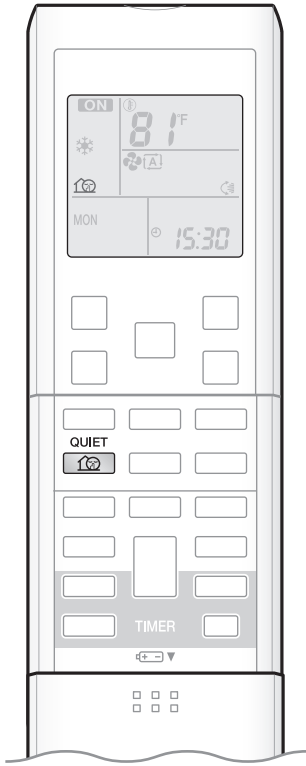
NOTE

■ Notes on POWERFUL operation

- When using POWERFUL operation, there are some functions which are not available.
- POWERFUL operation cannot be used together with ECONO, COMFORT AIRFLOW or OUTDOOR UNIT QUIET operation. Priority is given to the function of whichever button is pressed last.
- POWERFUL operation can only be set when the unit is running. Pressing  causes the settings to be canceled, and “” is no longer displayed on the LCD.
- POWERFUL operation will not increase the capacity of the air conditioner if the air conditioner is already in operation with its maximum capacity demonstrated.
- **In COOL, HEAT and AUTO operation**
To maximize the cooling (heating) effect, the capacity of outdoor unit increases and the airflow rate becomes fixed at the maximum setting. The temperature and airflow settings cannot be changed.
- **In DRY operation**
The temperature setting is lowered by 4.5°F (2.5°C) and the airflow rate is slightly increased.
- **In FAN operation**
The airflow rate is fixed to the maximum setting.



OUTDOOR UNIT QUIET Operation



OUTDOOR UNIT QUIET operation lowers the noise level of the outdoor unit by changing the frequency and fan speed on the outdoor unit. This function is convenient during the night.

■ To start OUTDOOR UNIT QUIET operation

Press .

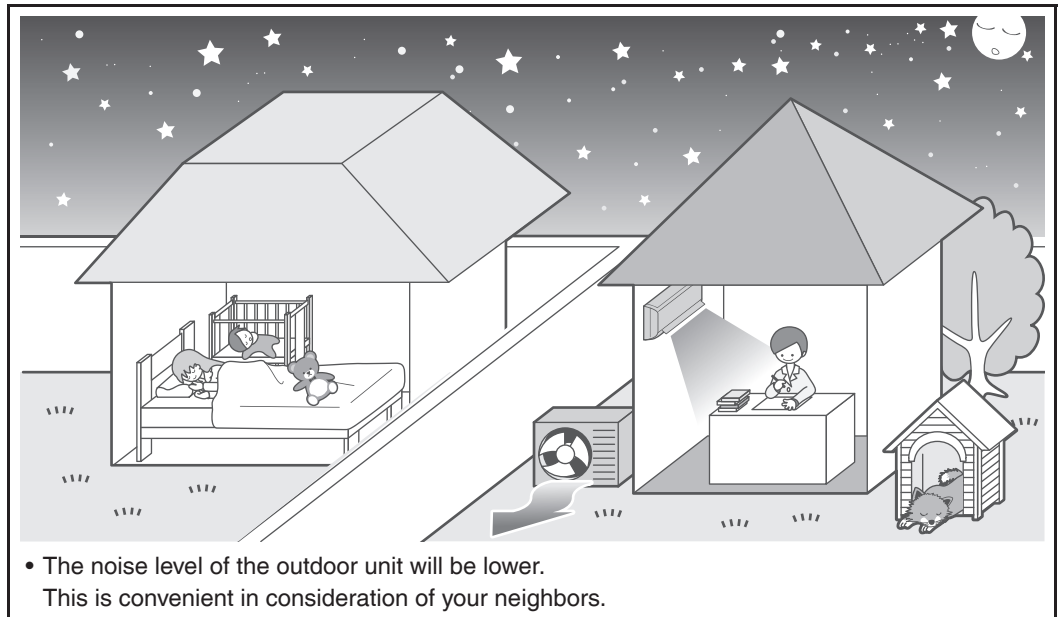
- “” is displayed on the LCD.

■ To cancel OUTDOOR UNIT QUIET operation

Press  again.

- “” is no longer displayed on the LCD.


[Example] Using the OUTDOOR UNIT QUIET operation during the night.



- The noise level of the outdoor unit will be lower.
This is convenient in consideration of your neighbors.

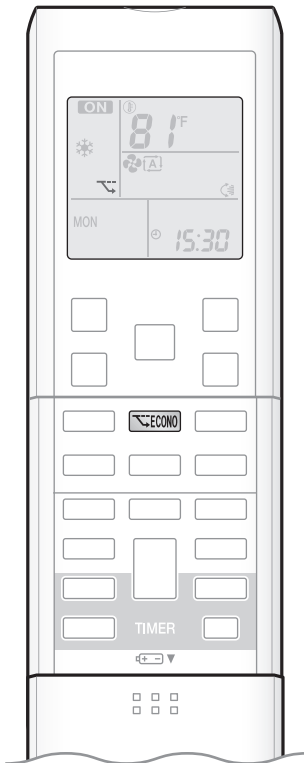
NOTE

■ Notes on OUTDOOR UNIT QUIET operation

- If using a multi system, the OUTDOOR UNIT QUIET operation will work only when this function is set on all operated indoor units. However, if using priority room setting, refer to “Note for multi system”. ▶Page 28
- This function is available in COOL, HEAT, and AUTO operation.
This is not available in FAN and DRY operation.
- POWERFUL operation and OUTDOOR UNIT QUIET operation cannot be used at the same time.
Priority is given to the function of whichever button is pressed last.
- Even the operation is stopped using the remote controller or the indoor unit ON/OFF switch when using OUTDOOR UNIT QUIET operation, “” will remain on the remote controller display.
- OUTDOOR UNIT QUIET operation will drop neither the frequency nor fan speed if they have been already dropped low enough.



ECONO Operation



ECONO operation is a function which enables efficient operation by limiting the maximum power consumption value.

This function is useful for cases in which attention should be paid to ensure a circuit breaker will not trip when the product runs alongside other appliances.

■ To start ECONO operation

Press during operation.

- “” is displayed on the LCD.

■ To cancel ECONO operation

Press again.

- “” is no longer displayed on the LCD.

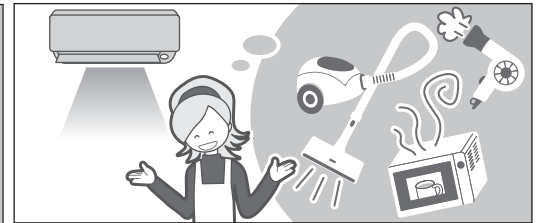
[Example]

Normal operation



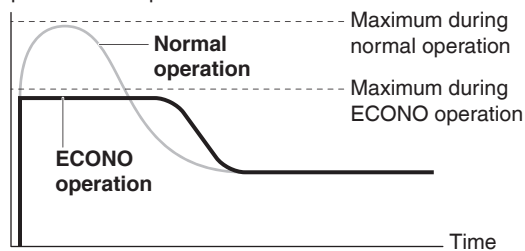
- In case the air conditioner and other appliances which require high power consumption are used at same time, a circuit breaker may trip if the air conditioner operate with its maximum capacity.

ECONO operation



- The maximum power consumption of the air conditioner is limited by using ECONO operation. The circuit breaker is unlikely to trip even if the air conditioner and other appliances are used at same time.

Running current and power consumption



From start up until set temperature is reached

- This diagram is a representation for illustrative purposes only.

The maximum running current and power consumption of the air conditioner in ECONO operation vary with the connecting outdoor unit.

NOTE

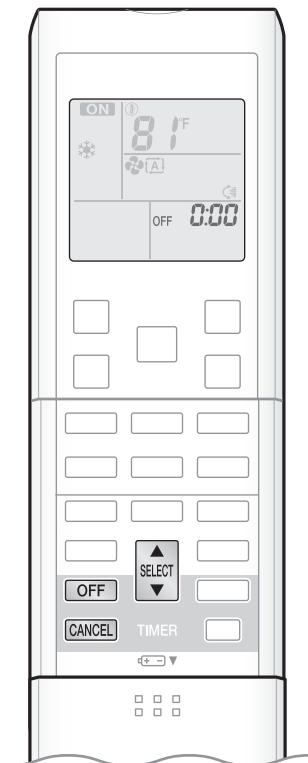
■ Notes on ECONO operation

- ECONO operation can only be set when the unit is running. Pressing causes the settings to be canceled, and “” is no longer displayed on the LCD.
- ECONO operation functions in AUTO, COOL, DRY, and HEAT operation.
- POWERFUL and ECONO operation cannot be used at the same time. Priority is given to the function of whichever button is pressed last.
- If the level of power consumption is already low, ECONO operation will not drop the power consumption.



OFF TIMER Operation

Timer functions are useful for automatically switching the air conditioner on or off at night or in the morning. You can also use OFF TIMER and ON TIMER in combination.



■ To use OFF TIMER operation

- Check that the clock is correct.
If not, set the clock to the present time. ▶Page 10

1. Press OFF.



“0:00” is displayed on the LCD.
“OFF” blinks.

- “⊕” is no longer displayed on the LCD.

2. Press SELECT until the time setting reaches the point you like.



- Each pressing of either button increases or decreases the time setting by 10 minutes. Holding down either button changes the time setting rapidly.

3. Press OFF again.

- “OFF” and setting time are displayed on the LCD.
- The TIMER lamp lights yellow.



Display

■ To cancel OFF TIMER operation

Press CANCEL.

- “OFF” and setting time are no longer displayed on the LCD.
- “⊕” and day of the week are displayed on the LCD.
- The TIMER lamp goes off.

NOTE

■ Notes on TIMER operation

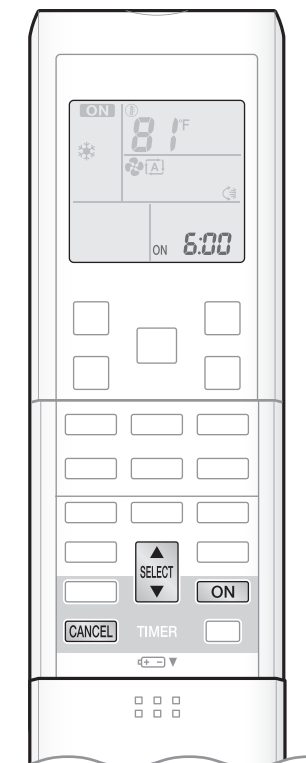
- When TIMER is set, the present time is not displayed.
- Once you set ON/OFF TIMER, the time setting is kept in the memory. The memory is canceled when remote controller batteries are replaced.
- When using the ON/OFF TIMER to start/stop operation, the actual operation start/stop time may differ from the time set. (Maximum of about 10 minutes)

■ NIGHT SET mode

- When the OFF TIMER is set, the air conditioner automatically adjusts the temperature setting (0.9°F (0.5°C) up in COOL, 3.6°F (2.0°C) down in HEAT) to prevent excessive cooling (heating) for your pleasant sleep.



ON TIMER Operation



■ To use ON TIMER operation

- Check that the clock is correct.
If not, set the clock to the present time. ▶Page 10

1. Press **ON**.



“6:00” is displayed on the LCD.
“ON” blinks.

- “⌚” and day of the week are no longer displayed on the LCD.

2. Press **SELECT** until the time setting reaches the point you like.

- Each pressing of either button increases or decreases the time setting by 10 minutes.
Holding down either button changes the setting rapidly.

3. Press **ON** again.

- “ON” and setting time are displayed on the LCD.
- The TIMER lamp lights yellow.



Display

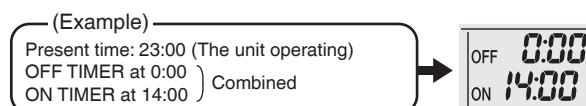
■ To cancel ON TIMER operation

Press **CANCEL**.

- “ON” and setting time are no longer displayed on the LCD.
- “⌚” and day of the week are displayed on the LCD.
- The TIMER lamp goes off.

■ To combine ON TIMER and OFF TIMER

- A sample setting for combining the 2 timers is shown below.



NOTE

■ In the following cases, set the timer again.

- After a breaker has turned off.
- After a power failure.
- After replacing batteries in the remote controller.



WEEKLY TIMER Operation

Up to 4 timer settings can be saved for each day of the week. It is convenient if the WEEKLY TIMER is set according to the family's life style.

Using in these cases of WEEKLY TIMER

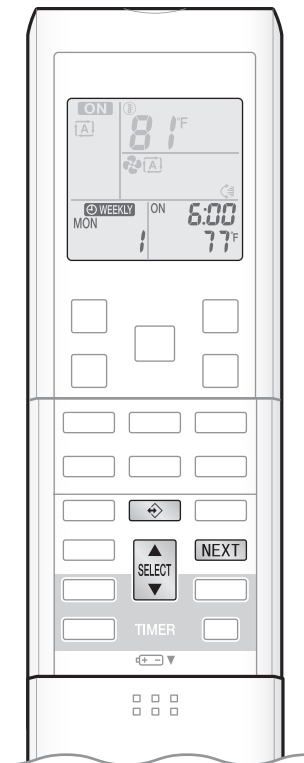
Example: The same timer settings are made for the week from Monday through Friday while different timer settings are made for the weekend.

<p>[Monday]</p>	<p>Make timer settings up to programs 1-4. ▶Page 23</p>
<p>[Tuesday to Friday]</p>	<p>Use the copy mode to make settings for Tuesday to Friday, because these settings are the same as those for Monday. ▶Page 25</p>
<p>[Saturday]</p>	<p>No timer settings</p>
<p>[Sunday]</p>	<p>Make timer settings up to programs 1-4. ▶Page 23</p>

- Up to 4 reservations per day and 28 reservations per week can be set in the WEEKLY TIMER. The effective use of the copy mode ensures ease of making reservations.
- The use of ON-ON-ON-ON settings, for example, makes it possible to schedule operating mode and set temperature changes. Furthermore, by using OFF-OFF-OFF-OFF settings, only the turn off time of each day can be set. This will turn off the air conditioner automatically if the user forgets to turn it off.



WEEKLY TIMER Operation

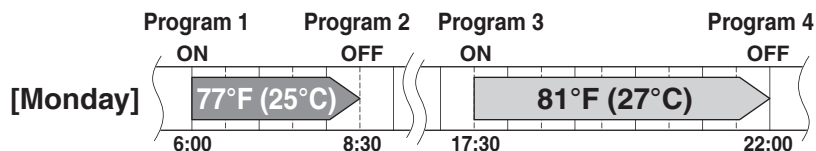


■ To use WEEKLY TIMER operation

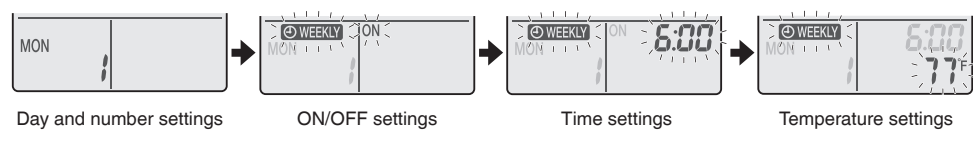
Setting mode

- Make sure the day of the week and time are set. If not, set the day of the week and time.

▶ Page 10



Setting Displays



1. Press

- The day of the week and the reservation number of the current day will be displayed.
- 1 to 4 settings can be made per day.

2. Press to select the desired day of the week and reservation number.

- Pressing changes the reservation number and the day of the week.

3. Press

- The day of the week and reservation number will be set.
- “ WEEKLY” and “ON” blink.

4. Press to select the desired mode.

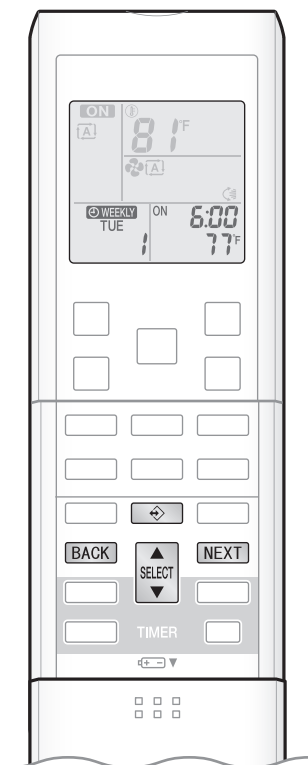
- Pressing changes “ON” or “OFF” setting in sequence.



- In case the reservation has already been set, selecting “blank” deletes the reservation.
- Go to **STEP 9** if “blank” is selected.

5. Press

- The ON/OFF TIMER mode will be set.
- “ WEEKLY” and the time blink.



6. Press to select the desired time.

- The time can be set between 0:00 and 23:50 in 10 minute intervals.
- To return to the ON/OFF TIMER mode setting, press **BACK**.
- Go to **STEP 9** when setting the OFF TIMER.

7. Press .

- The time will be set.
- “**WEEKLY**” and the temperature blink.

8. Press to select the desired temperature.

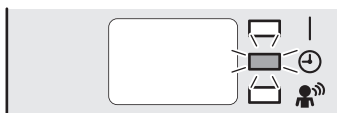
- The temperature can be set between 50°F (10°C) and 90°F (32°C).
Cooling: The unit operates at 64°F (18°C) even if it is set at 50°F (10°C) to 63°F (17°C).
Heating: The unit operates at 86°F (30°C) even if it is set at 87°F (31°C) to 90°F (32°C).
- To return to the time setting, press **BACK**.
- The set temperature is only displayed when the mode setting is on.

9. Press .

- The temperature will be set and go to the next reservation setting.
- To continue further settings, repeat the procedure from **STEP 4**.

10. Press to complete the setting.

- Be sure to direct the remote controller toward the indoor unit and check for a receiving tone and flashing the OPERATION lamp.
- “**WEEKLY**” is displayed on the LCD and WEEKLY TIMER operation is activated.
- The TIMER lamp lights yellow.




Display

- A reservation made once can be easily copied and the same settings used for another day of the week. Refer to **Copy mode**. ▶Page 25

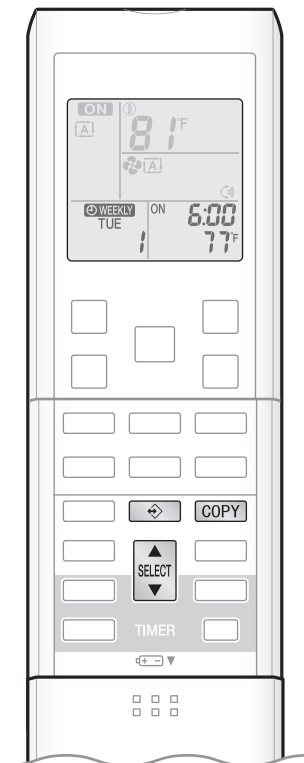
NOTE

■ Notes on WEEKLY TIMER operation

- Do not forget to set the clock on the remote controller first. ▶Page 10
- The day of the week, ON/OFF TIMER mode, time and set temperature (only for ON TIMER mode) can be set with WEEKLY TIMER. Other settings for ON TIMER are based on the settings just before the operation.
- Both WEEKLY TIMER and ON/OFF TIMER operation cannot be used at the same time. The ON/OFF TIMER operation has priority if it is set while WEEKLY TIMER is still active. The WEEKLY TIMER will go into standby state, and “**WEEKLY**” will be no longer displayed on the LCD. When ON/OFF TIMER is up, the WEEKLY TIMER will automatically become active.
- Only the time and set temperature with the WEEKLY TIMER are sent with the . Set the WEEKLY TIMER only after setting the operation mode, the airflow rate and the airflow direction ahead of time.
- Shutting the breaker off, power failure, and other similar events will render operation of the indoor unit's internal clock inaccurate. Reset the clock. ▶Page 10
- The **BACK** can be used only for the time and temperature settings. It cannot be used to go back to the reservation number.

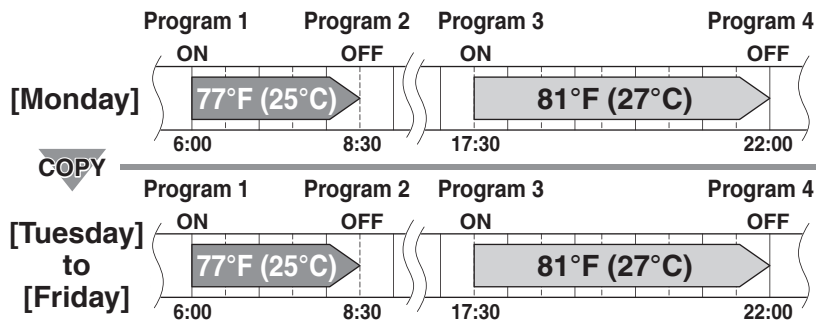


WEEKLY TIMER Operation

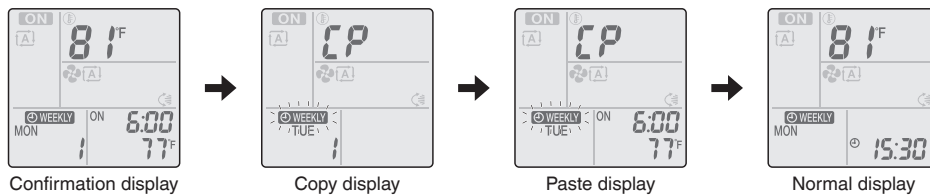


Copy mode

- A reservation made once can be copied to another day of the week. The whole reservation of the selected day of the week will be copied.



Setting Displays



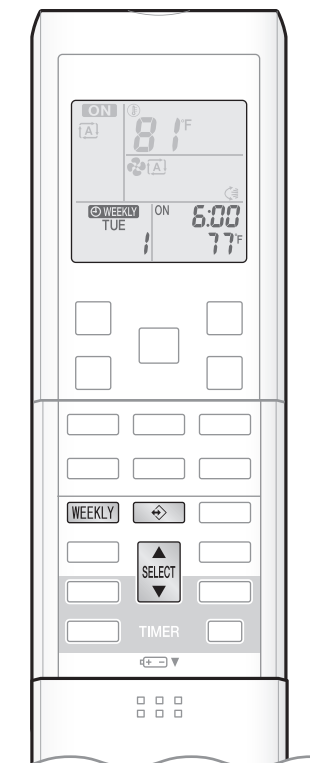
1. Press .
2. Press to confirm the day of the week to be copied.
3. Press .
 - The whole reservation of the selected day of the week will be copied.
4. Press to select the destination day of the week.
5. Press .
 - The reservation will be copied to the selected day of the week. The whole reservation of the selected day of the week will be copied.
 - To continue copying the settings to other days of the week, repeat **STEP 4** and **STEP 5**.
6. Press to complete the setting.
 - “ WEEKLY” is displayed on the LCD and WEEKLY TIMER operation is activated.

NOTE

■ Note on COPY MODE

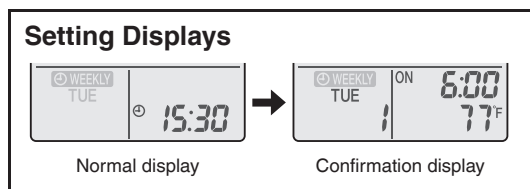
- The entire reservation of the source day of the week is copied in the copy mode.

In the case of making a reservation change for any day of the week individually after copying the content of weekly reservations, press and change the settings in the steps of **Setting mode** .



■ Confirming a reservation


- The reservation can be confirmed.



1. Press .

- The day of the week and the reservation number of current day will be displayed.

2. Press to select the day of the week and the reservation number to be confirmed.

- Pressing  displays the reservation details.
- To change the confirmed reserved settings, select the reservation number and press **NEXT**.

The mode is switched to setting mode. Go to **Setting mode STEP 4.**  **Page 23**

3. Press to exit confirming mode.

- “**WEEKLY**” is displayed on the LCD and WEEKLY TIMER operation is activated.
- The TIMER lamp lights yellow.



Display

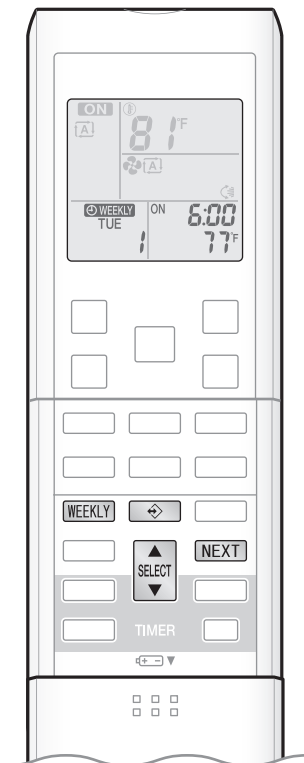
■ To deactivate WEEKLY TIMER operation

Press **WEEKLY** while “**WEEKLY**” is displayed on the LCD.

- “**WEEKLY**” will be no longer displayed on the LCD.
- The TIMER lamp goes off.
- To reactivate the WEEKLY TIMER operation, press **WEEKLY** again.
- If a reservation deactivated with **WEEKLY** is activated once again, the last reservation mode will be used.



WEEKLY TIMER Operation



To delete reservations

The individual reservation

1. Press

- The day of the week and the reservation number will be displayed.

2. Press to select the day of the week and the reservation number to be deleted.

3. Press .

- “ WEEKLY” and “ON” or “OFF” blink.

4. Press and select “blank”.

- Pressing changes ON/OFF TIMER mode.
- The reservation will be no setting with selecting “blank”.



5. Press .

- The selected reservation will be deleted.

6. Press .

- If there are still other reservations, WEEKLY TIMER operation will be activated.

The reservations for each day of the week

- This function can be used for deleting reservations for each day of the week.
- It can be used while confirming or setting reservations.

1. Press .

- The day of the week and the reservation number will be displayed.

2. Press to select the day of the week to be deleted.

3. Hold for 5 seconds.

- The reservation of the selected day of the week will be deleted.

4. Press .

- If there are still other reservations, WEEKLY TIMER operation will be activated.

All reservations

Hold for 5 seconds while normal display.

- Be sure to direct the remote controller toward the indoor unit and check for a receiving tone.
- This operation is not effective on the setting display of WEEKLY TIMER.
- All reservations will be deleted.

Note for Multi System

Multi system has one outdoor unit connected to multiple indoor units.

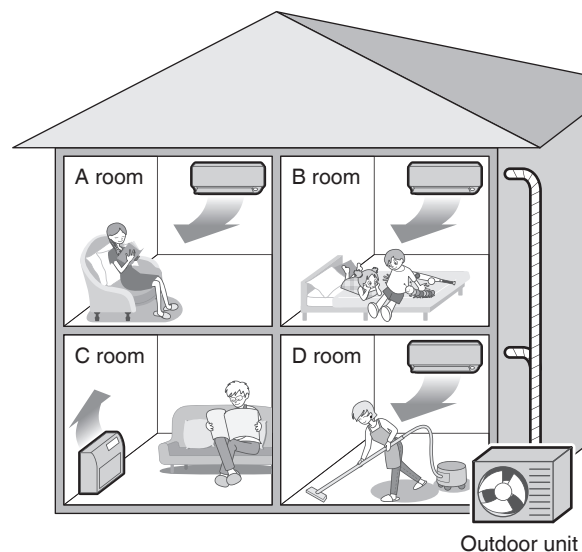
■ Selecting the operation mode

With the priority room setting present but inactive or not present.

When more than one indoor unit is operating, priority is given to the first unit that was turned on.

In this case, set the units that are turned on later to the same operation mode as the first unit.

Otherwise, they will enter the standby state, and the OPERATION lamp will flash: this does not indicate malfunction.



NOTE

■ Notes on operation mode for multi system

- COOL, DRY and FAN operation may be used at the same time.
- AUTO operation automatically selects COOL operation or HEAT operation based on the room temperature. Therefore, AUTO operation is available when selecting the same operation mode as that of the room with the first unit to be turned on.

⚠ CAUTION

- Normally, the operation mode in the room where the unit is first run is given priority, but the following situations are exceptions, so please keep this in mind.

If the operation mode of the first room is **FAN operation**, then using **HEAT operation** in any room after this will give priority to **HEAT operation**. In this situation, the air conditioner running in FAN operation will go on standby, and the OPERATION lamp will flash.

With the priority room setting active.

Refer to “**Priority room setting**” on the next page.

■ NIGHT QUIET mode (Available only for COOL operation)

NIGHT QUIET mode requires initial programming during installation. Please consult your retailer or dealer for assistance. NIGHT QUIET mode reduces the operation noise of the outdoor unit during the nighttime hours to prevent annoyance to neighbors.

- The NIGHT QUIET mode is activated when the temperature drops 10.8°F (6°C) or more below the highest temperature recorded that day. Therefore, when the temperature difference is less than 7.2°F (4°C), this function will not be activated.
- NIGHT QUIET mode reduces slightly the cooling efficiency of the unit.

■ OUTDOOR UNIT QUIET operation

Refer to “**OUTDOOR UNIT QUIET operation**”. ▶ Page 18

With the priority room setting present but inactive or not present.

When using the OUTDOOR UNIT QUIET operation feature with the Multi system, set all indoor units to OUTDOOR UNIT QUIET operation using their remote controllers.

When clearing OUTDOOR UNIT QUIET operation, clear one of the operating indoor units using their remote controller.

However OUTDOOR UNIT QUIET operation display remains on the remote controller for other rooms.

We recommend you release all rooms using their remote controllers.

With the priority room setting active.

Refer to “**Priority room setting**” on the next page.

Note for Multi System

■ COOL / HEAT mode lock

The COOL / HEAT mode lock requires initial programming during installation. Please consult your authorized dealer for assistance. The COOL / HEAT mode lock sets the unit forcibly to either COOL or HEAT operation. This function is convenient when you wish to set all indoor units connected to the multi system to the same operation mode.

■ Priority room setting

The priority room setting requires initial programming during installation. Please consult your authorized dealer for assistance. The room designated as the priority room takes priority in the following situations.

Operation mode priority

- As the operation mode of the priority room takes precedence, the user can select a different operation mode from other rooms.

[Example]

- Room A is the priority room in the examples.
When COOL operation is selected in room A while operating the following modes in room B, C and D :

Operation mode in room B, C and D	Status of room B, C and D when the unit in room A is in COOL operation
COOL or DRY or FAN	Current operation mode maintained
HEAT	The unit enters standby mode. Operation resumes when the room A unit stops operating.
AUTO	If the unit is set to COOL operation, it continues. If the unit is set to HEAT operation, it enters standby mode. Operation resumes when the room A unit stops operating.

Priority when POWERFUL operation is used

[Example]

- Room A is the priority room in the examples.
The indoor units in rooms A, B, C and D are all operating. If the unit in room A enters POWERFUL operation, operation capacity will be concentrated in room A. In such a case, the cooling (heating) efficiency of the units in room B, C and D may be slightly reduced.

Priority when using OUTDOOR UNIT QUIET operation

[Example]

- Room A is the priority room in the examples.
Just by setting the unit in room A to QUIET operation, the air conditioner starts OUTDOOR UNIT QUIET operation. You don't have to set all the operated indoor units to QUIET operation.

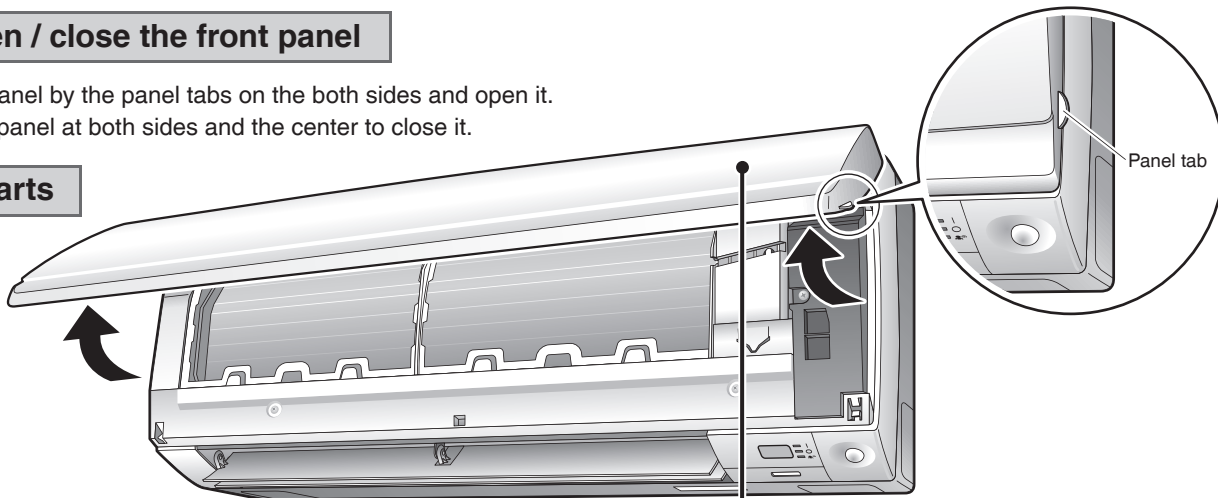
Care and Cleaning

■ Quick reference

How to open / close the front panel

- Hold the front panel by the panel tabs on the both sides and open it.
- Press the front panel at both sides and the center to close it.

Cleaning parts

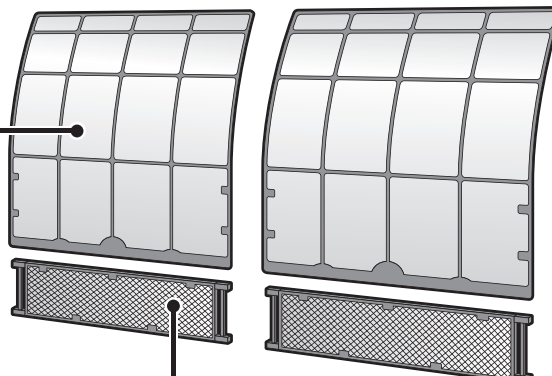


Air filter

- Vacuum dust or wash the filter.

**Once every
2 weeks**

Refer to ▶Page 32



Front panel

- Wipe it with a soft damp cloth.

If bothered by dirt

Refer to ▶Page 31

Titanium apatite photocatalytic air-purifying filter

- Vacuum dust or replace the filter.

[Cleaning]

Once every 6 months

Refer to ▶Page 33

[Replacement]

Once every 3 years

Refer to ▶Page 33

Indoor unit, Outdoor unit and Remote controller

- Wipe them with a soft cloth.

If bothered by dirt

Notes on cleaning

■ For cleaning, do not use the materials as follows.

- Hot water above 104°F (40°C).
- Benzine, gasoline, thinner, other volatile oils.
- Polishing compound.
- Scrubbing brushes, other hard stuff.



⚠ CAUTION

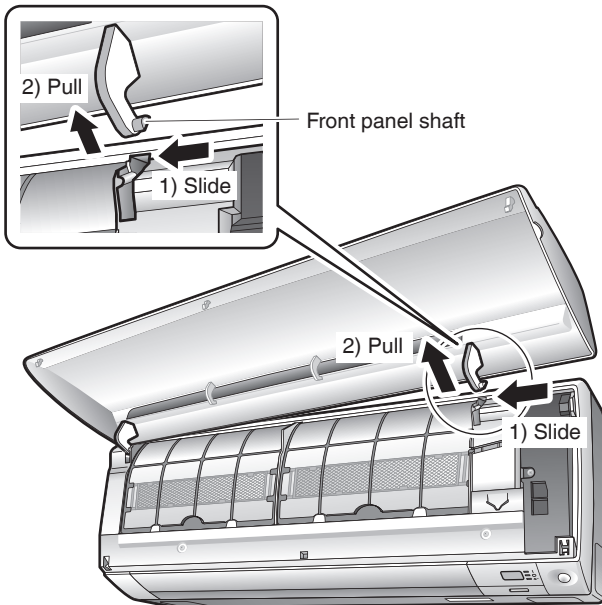
- Before cleaning, be sure to stop the operation and turn the breaker off.
- Do not touch the aluminum fins of the indoor unit. If you touch those parts, this may cause an injury.

Care and Cleaning

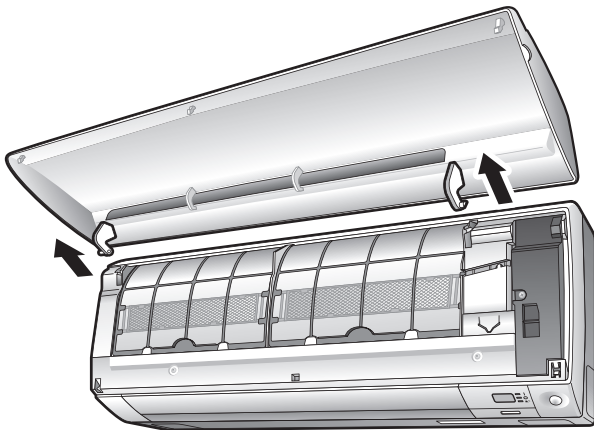
■ Front panel

1. Remove the front panel.

- Open the front panel.
- Slide the front panel to either the left or right and pull it toward you. This will disconnect the front panel shaft on one side.



- Disconnect the front panel shaft on the other side in the same manner.

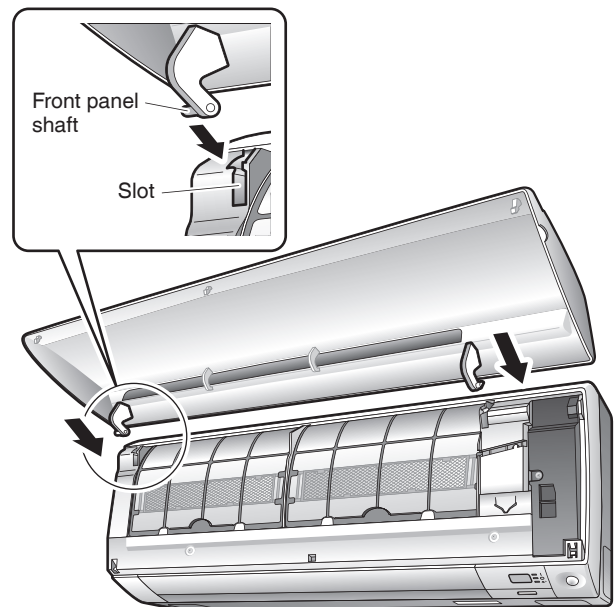


2. Clean the front panel.

- Wipe it with a soft damp cloth.
- Only neutral detergent may be used.
- In case of washing the panel with water, wipe it with a dry soft cloth, and let it dry in the shade after washing.

3. Attach the front panel.

- Align the front panel shaft on the left and right of the front panel with the slots, then push them all the way in.



- Close the front panel slowly. (Press the panel at both sides and the central area.)

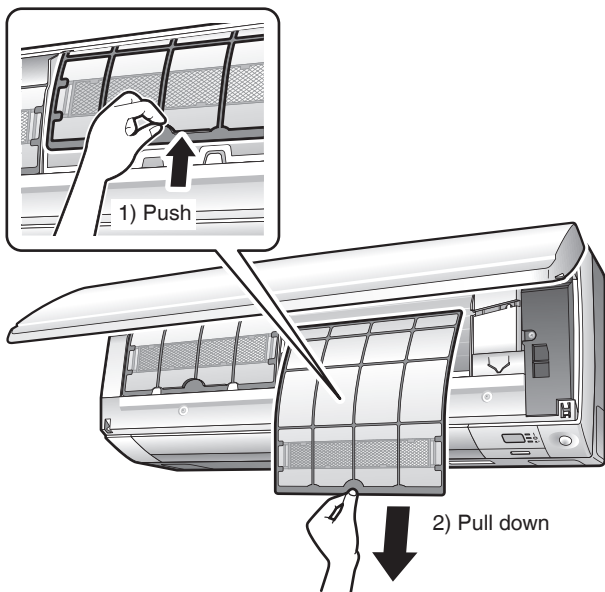
⚠ CAUTION

- When removing or attaching the front panel, stand on a solid, stable base and take care not to fall.
- When removing or attaching the front panel, support the panel securely with hand to prevent it from falling.
- After cleaning, make sure that the front panel is securely fixed.

■ Air filter

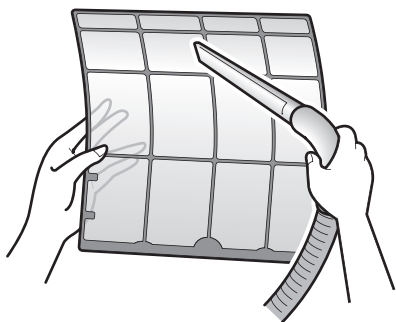
1. Pull out the air filters.

- Open the front panel.
- Push the filter tab at the center of each air filter slightly upward, then pull it down.



2. Wash the air filters with water or clean them with vacuum cleaner.

- It is recommended to clean the air filters every 2 weeks.



If the dust does not come off easily

- Wash the air filters with neutral detergent thinned with lukewarm water, then let them dry in the shade.
- Be sure to remove the titanium apatite photocatalytic air-purifying filter. Refer to “Titanium apatite photocatalytic air-purifying filter” on the next page.



3. Set the filters as they were and close the front panel.

- Press the front panel at both sides and the central area.



⚠ CAUTION

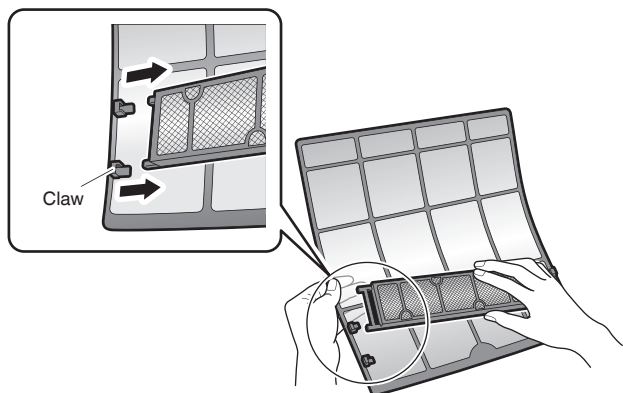
- Do not touch the aluminum fins by bare hand at the time of dismounting or mounting the filter.

Care and Cleaning

■ Titanium apatite photocatalytic air-purifying filter

1. Take off the titanium apatite photocatalytic air-purifying filter.

- Open the front panel and pull out the air filters.
- Hold the recessed parts of the frame and unhook the 4 claws.

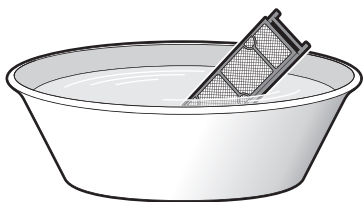


2. Clean or replace the titanium apatite photocatalytic air-purifying filter.

[Maintenance]

2-1 Vacuum dust, and soak in lukewarm water or water for about 10 to 15 minutes if dirt is heavy.

- Do not remove the filter from frame when washing with water.

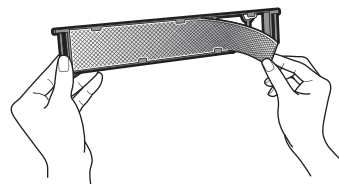


2-2 After washing, shake off remaining water and dry in the shade.

- Since the material is made out of polyester, do not wring out the filter when removing water from it.

[Replacement]

Remove the tabs on the filter frame and replace with a new filter.



- Do not throw away the filter frame. Reuse the filter frame when replacing the titanium apatite photocatalytic air-purifying filter.
- Dispose of the old filter as non-flammable waste.

3. Set the filters as they were and close the front panel.

- Press the front panel at both sides and the central area.



NOTE

- Operation with dirty filters:
 - cannot deodorize the air,
 - cannot clean the air,
 - results in poor heating or cooling,
 - may cause odor.
- Dispose of old filters as non-flammable waste.
- To order a titanium apatite photocatalytic air-purifying filter, contact the dealer where you bought the air conditioner.



Item	Titanium apatite photocatalytic air-purifying filter (without frame) 1 set
Part No.	KAF970A46

■ Check the units

- Check that the base, stand and other fittings of the outdoor unit are not decayed or corroded.
 - Check that nothing blocks the air inlets and the outlets of the indoor unit and the outdoor unit.
 - Check that the drain comes smoothly out of the drain hose during COOL or DRY operation.
 - If no drain water is seen, water may be leaking from the indoor unit. Stop operation and consult the service shop if this is the case.
-

■ Before a long idle period

1. Operate the FAN only for several hours on a nice day to dry out the inside.

- Press **MODE** and select “” operation.
- Press  and start the operation.

2. After operation stops, turn off the circuit breaker for the room air conditioner.

3. Clean the air filters and set them again.

4. Take out batteries from the remote controller.

- When a multi outdoor unit is connected, make sure the HEAT operation is not being used in other rooms before you use the FAN operation. [▶Page 28](#)

■ We recommend periodical maintenance

- In certain operating conditions, the inside of the air conditioner may get foul after several seasons of use, resulting in poor performance. It is recommended to have periodical maintenance by a specialist aside from regular cleaning by the user.
- For specialist maintenance, contact the service shop where you purchased the air conditioner.
- The maintenance cost must be borne by the user.

Troubleshooting

■ These incidents are not malfunctions.

- The following incidents do not indicate a malfunctioning air conditioner and have explanations. The air conditioner can continue to operate.

Indoor unit

Possible sounds.

■ Flowing water

- Generated because the refrigerant in the air conditioner is flowing.
- This is a pumping sound of the water in the air conditioner it is heard when the water is pumped out from the air conditioner in cooling or drying operation.
- The refrigerant flows in the air conditioner even if the air conditioner is not working when the indoor units in other rooms are in operation.

■ Blowing

- Generated when the flow of the refrigerant in the air conditioner is switched over.

■ Ticking

- Generated when the size of the air conditioner slightly expands or shrinks as a result of temperature changes.

■ Whistling sound

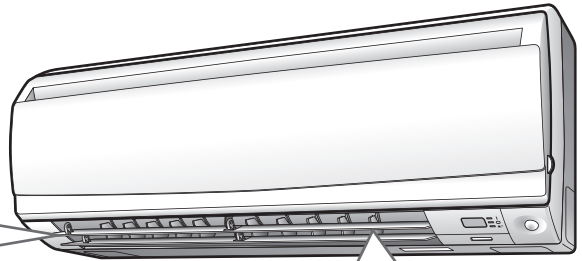
- Generated when refrigerant flows during defrosting operation.

■ Clicking sound during operation or idle time

- Generated when the refrigerant control valves or the electrical parts operate.

■ Clipping sound

- Heard from the inside of the air conditioner when the exhaust fan is activated while the room doors are closed. Open the window or turn off the exhaust fan.



The flaps do not start swinging immediately. The flaps move soon after startup.

- The air conditioner is adjusting the position of the flaps. The flaps will start moving soon.

The HEAT operation stops suddenly and a flowing sound is heard.

- The outdoor unit is taking away the frost. The HEAT operation starts after the frost on the outdoor unit is removed. You should wait for about 4 to 12 minutes.

Operation does not start soon.

■ When "ON/OFF" button was pressed soon after operation was stopped.

■ When the mode was reselected.

- This is to protect the air conditioner. You should wait for about 3 minutes.

Outdoor unit

Operating sound is loud.

- When frost forms on the heat exchanger of the outdoor unit, the operating sound level increases slightly.

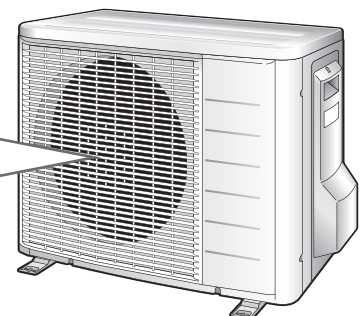
The outdoor unit emits water or steam.

■ In HEAT operation

- The frost on the outdoor unit melts into water or steam when the air conditioner is in defrost operation.

■ In COOL or DRY operation

- Moisture in the air condenses into water on the cool surface of outdoor unit piping and drips.



- Troubleshooting measures are classified into the following two types on a remedial basis. Take an appropriate measure according to the symptom.



Not malfunction

- The following conditions do not indicate a problem with the system.



Check

- Please check again before calling a repair person.

The air conditioner does not operate. (OPERATION lamp is off.)

- Is a breaker off or a fuse blown?
- Is there a power failure?
- Are batteries set in the remote controller?
- Is the timer setting correct?



Air does not come out.

■ In HEAT operation

- The air conditioner is warming up. Wait for about 1 to 4 minutes.
- During defrosting operation, hot air does not flow out of the indoor unit.

■ When the air conditioner operates immediately after the circuit breaker is turned on

- The air conditioner is preparing to operate. Wait for about 3 to 20 minutes.



Operation stopped suddenly. (OPERATION lamp is on.)

- For system protection, the air conditioner may stop operating on a sudden large voltage fluctuation. It automatically resumes operation in about 3 minutes.



Operation stopped suddenly. (OPERATION lamp flashes.)

- Are the air filters clean?
Clean the air filters.
- Is there anything to block the air inlet or the outlet of the indoor and the outdoor units?
- Turn the bleaker off and take all obstacles away. Then turn it on again and try operating the air conditioner with the remote controller. If the lamp still flashes, call the service shop where you purchased the air conditioner.
- Are operation modes all the same for indoor units connected to outdoor units in the **multi system**?
If not, set all indoor units to the same operation mode and confirm that the lamps flash.
When the operation mode is in "AUTO", set all indoor unit operation modes to "COOL" or "HEAT" for a moment and check again that the lamps are normal. If the lamps stop flashing after the above steps, there is no malfunction. ▶Page 28



Mist comes out of the indoor unit.

- This happens when the air in the room is cooled into mist by the cold airflow during COOL operation.
- This is because the air in the room is cooled by the heat exchanger and becomes mist during defrosting operation.



Troubleshooting

Cooling (Heating) effect is poor.

- Are the air filters clean?
- Is there anything to block the air inlet or the outlet of the indoor and the outdoor units?
- Is the temperature setting appropriate?
- Are the windows and doors closed?
- Are the airflow rate and the airflow direction set appropriately?



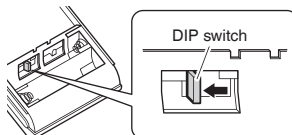
Remote controller does not work properly.

- No remote controller signals are displayed.
- Remote controller sensitivity is low.
- Display is low in contrast or blacked out.
- Display runs out of control.
 - The batteries are dying and the remote controller is malfunctioning. Replace all the batteries with new, size AAA.LR03 (alkaline). For details, refer to “To set the batteries” of this manual. ▶Page 9



HEAT operation cannot be selected, even though the unit is heat pump model.

- Slide the DIP switch to the left as shown in the illustration so that the HEAT operation can be selected with the “MODE” button.



The ON/OFF TIMER does not operate according to the settings.

- Check if the ON/OFF TIMER and the WEEKLY TIMER are set to the same time. Change or deactivate the settings in the WEEKLY TIMER. ▶Page 22



The indoor unit gives out odor.

- This happens when smells of the room, furniture, or cigarettes are absorbed into the unit and discharged with the airflow. (If this happens, have the indoor unit washed by a technician from the service shop where you purchased the air conditioner.)



The outdoor fan rotates while the air conditioner is not in operation.

- After operation is stopped
 - The outdoor fan continues rotating for another 60 seconds for system protection.
- While the air conditioner is not in operation
 - When the outdoor temperature is very high, the outdoor fan starts rotating for system protection.



An abnormal functioning happens during operation.

- The air conditioner may malfunction with lightning or radio waves. Turn the breaker off, turn it on again and try operating the air conditioner with the remote controller.



■ Call the service shop immediately

WARNING

- **When an abnormality (such as a burning smell) occurs, stop operation and turn the breaker off.**
 - Continued operation in an abnormal condition may result in malfunctioning, electric shocks or fire.
 - Consult the service shop where you purchased the air conditioner.
- **Do not attempt to repair or modify the air conditioner by yourself.**
 - Incorrect work may result in electric shocks or fire.
 - Consult the service shop where you purchased the air conditioner.

If one of the following symptoms occurs, call the service shop immediately.

- The power cord is abnormally hot or damaged.
- An abnormal sound is heard during operation.
- The safety breaker, a fuse, or the ground leakage breaker cuts off the operation frequently.
- A switch or a button often fails to work properly.
- There is a burning smell.
- Water leaks from the indoor unit.

Turn the breaker off and call the service shop.



■ After a power failure

- The air conditioner automatically resumes operation in about 3 minutes. Wait for it to restart.

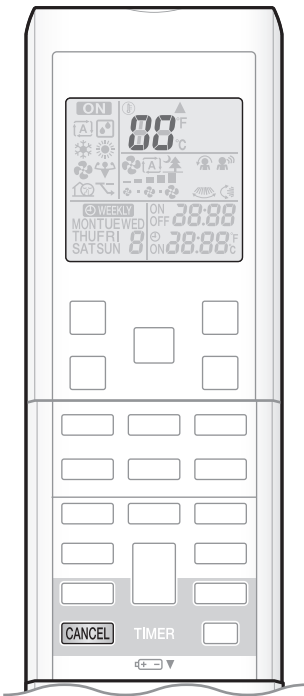
■ Lightning

- If lightning may strike the neighboring area, stop operation and turn the breaker off for system protection.

■ Disposal requirements

- Dismantling the unit, and treatment of refrigerant, oil, and other parts, should be done in accordance with the relevant local and national regulations.

Troubleshooting



■ Fault diagnosis by remote controller

- The remote controller can receive a corresponding error code from the indoor unit.

1. When **CANCEL** is held down for about 5 seconds, “00” blinks in the temperature display section.

2. Press **CANCEL** repeatedly until a continuous beep is produced.

- The code indication changes as displayed in the following table, and notifies with a long beep.

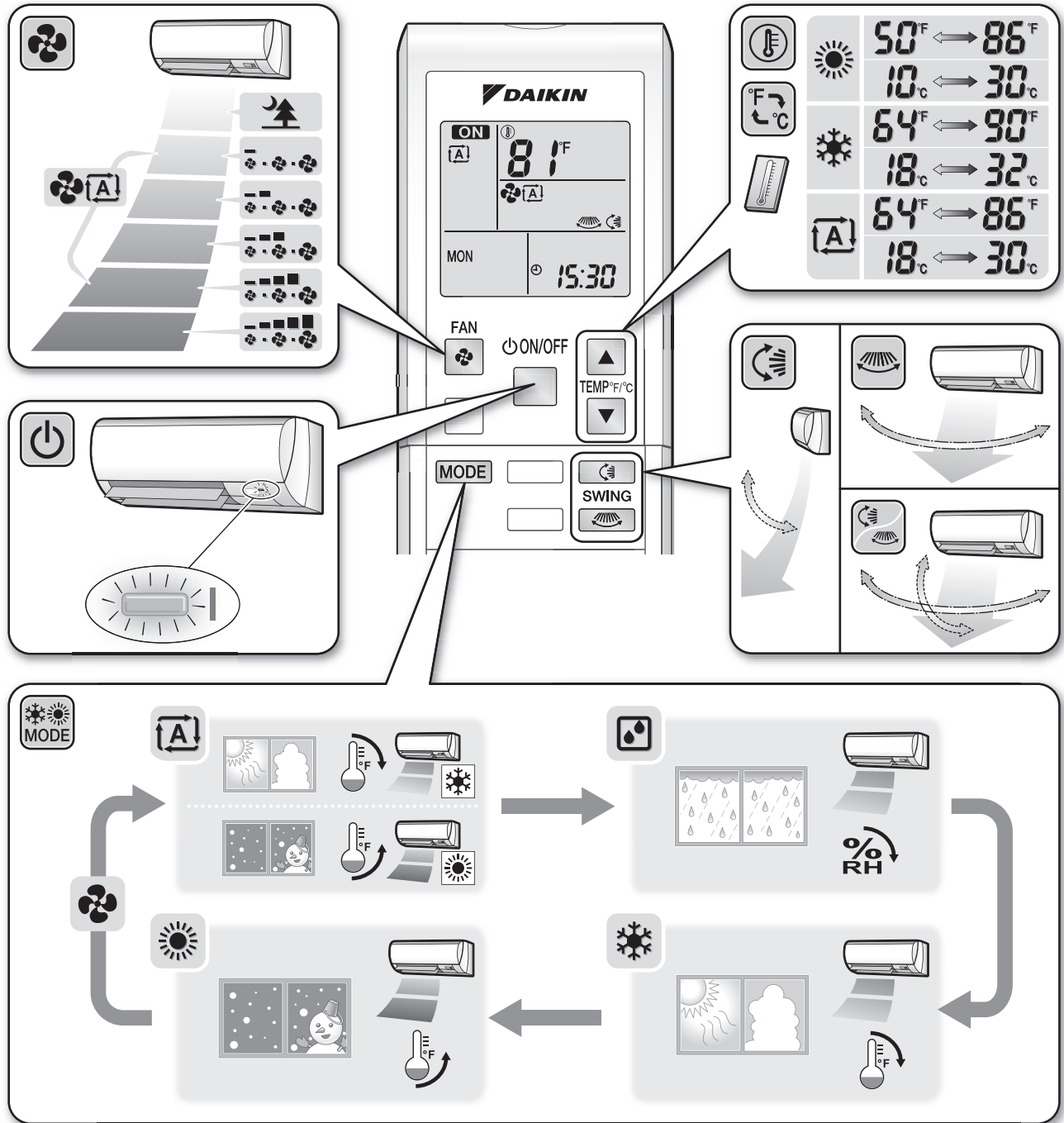
	CODE	MEANING
SYSTEM	00	NORMAL
	UA	INDOOR-OUTDOOR UNIT COMBINATION FAULT
	U0	REFRIGERANT SHORTAGE
	U2	DROP VOLTAGE OR MAIN CIRCUIT OVERVOLTAGE
	U4	FAILURE OF TRANSMISSION (BETWEEN INDOOR UNIT AND OUTDOOR UNIT)
INDOOR UNIT	A1	INDOOR PCB DEFECTIVENESS
	A5	HIGH PRESSURE CONTROL OR FREEZE-UP PROTECTOR
	A6	FAN MOTOR FAULT
	C4	FAULTY HEAT EXCHANGER TEMPERATURE SENSOR
	C9	FAULTY SUCTION AIR TEMPERATURE SENSOR
OUTDOOR UNIT	EA	COOLING-HEATING SWITCHING ERROR
	E1	CIRCUIT BOARD FAULT
	E5	OL STARTED
	E6	FAULTY COMPRESSOR START UP
	E7	DC FAN MOTOR FAULT
	E8	OVERCURRENT INPUT
	F3	HIGH TEMPERATURE DISCHARGE PIPE CONTROL
	F6	HIGH PRESSURE CONTROL (IN COOLING)
	H0	SENSOR FAULT
	H6	OPERATION HALT DUE TO FAULTY POSITION DETECTION SENSOR
	H8	DC CURRENT SENSOR FAULT
	H9	FAULTY SUCTION AIR TEMPERATURE SENSOR
	J3	FAULTY DISCHARGE PIPE TEMPERATURE SENSOR
	J6	FAULTY HEAT EXCHANGER TEMPERATURE SENSOR
	L3	ELECTRICAL PARTS HEAT FAULT
L4	HIGH TEMPERATURE AT INVERTER CIRCUIT HEATSINK	
L5	OUTPUT OVERCURRENT	
P4	FAULTY INVERTER CIRCUIT HEATSINK TEMPERATURE SENSOR	

NOTE

- A short beep and two consecutive beeps indicate non-corresponding codes.
- To cancel the code display, hold **CANCEL** for 5 seconds. The code display also cancel itself if the button is not pressed for 1 minute.

■ MEMO

Quick Reference



GOODMAN MANUFACTURING COMPANY, L.P.

5151 San Felipe, Suite 500
Houston, TX 77056 USA

DAIKIN INDUSTRIES, LTD.

Head office:
Umeda Center Bldg., 2-4-12, Nakazaki-Nishi,
Kita-ku, Osaka, 530-8323 Japan

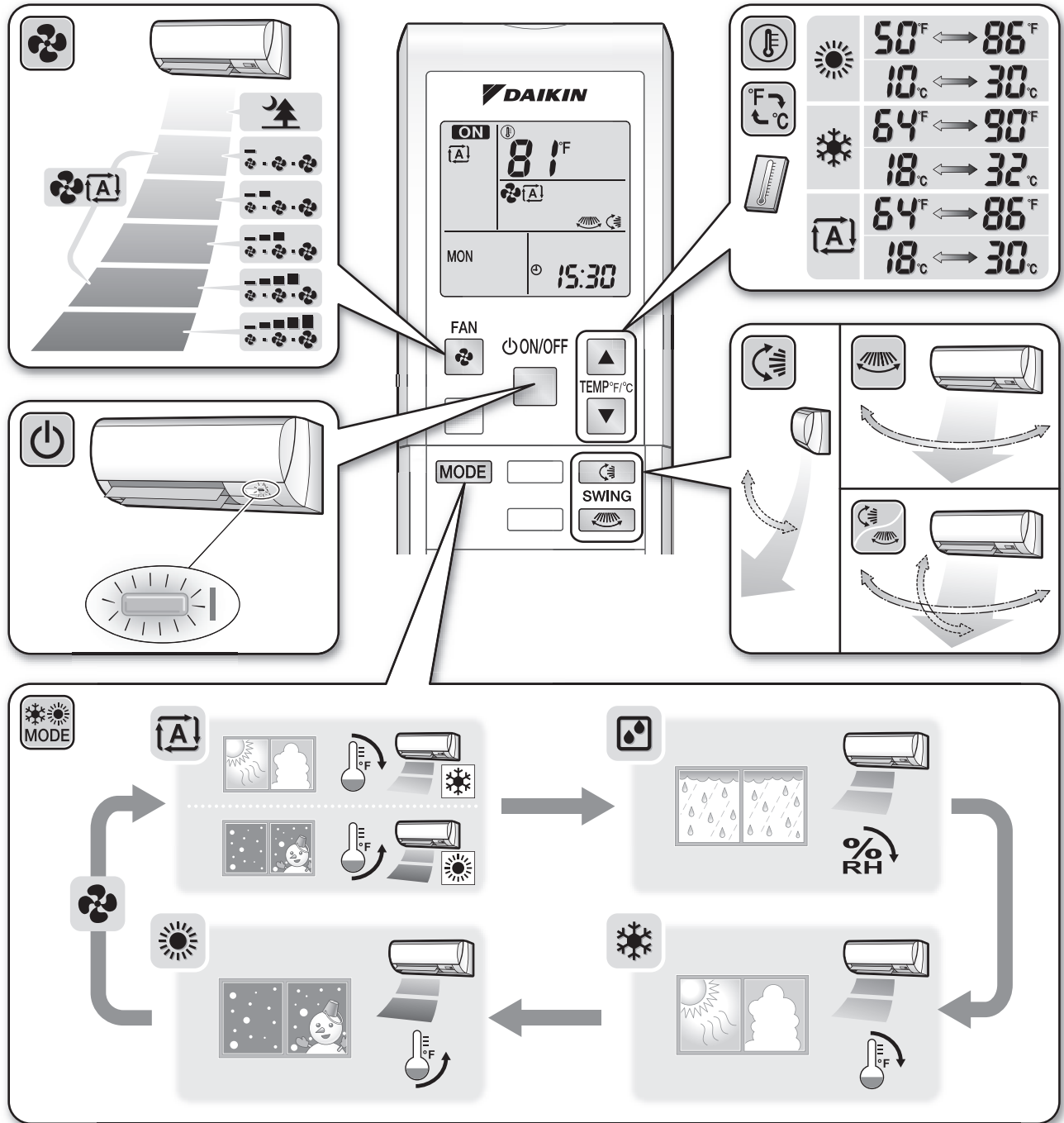
Tokyo office:
JR Shinagawa East Bldg., 2-18-1, Konan,
Minato-ku, Tokyo, 108-0075 Japan
<http://www.daikin.com>



The two-dimensional bar code is a manufacturing code.

3P297290-1C | M11B116A (1511) HT

Quick Reference



GOODMAN MANUFACTURING COMPANY, L.P.

5151 San Felipe, Suite 500
Houston, TX 77056 USA

DAIKIN INDUSTRIES, LTD.

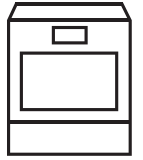
Head office:
Umeda Center Bldg., 2-4-12, Nakazaki-Nishi,
Kita-ku, Osaka, 530-8323 Japan

Tokyo office:
JR Shinagawa East Bldg., 2-18-1, Konan,
Minato-ku, Tokyo, 108-0075 Japan
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The two-dimensional bar code is a manufacturing code.

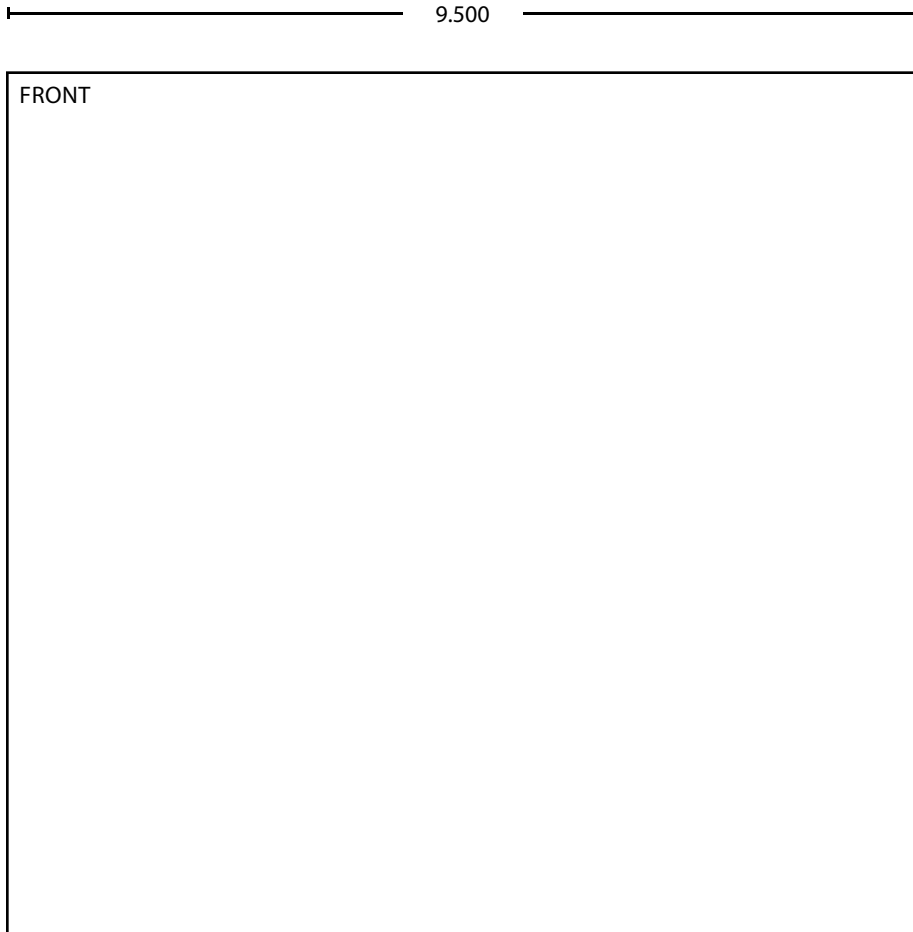
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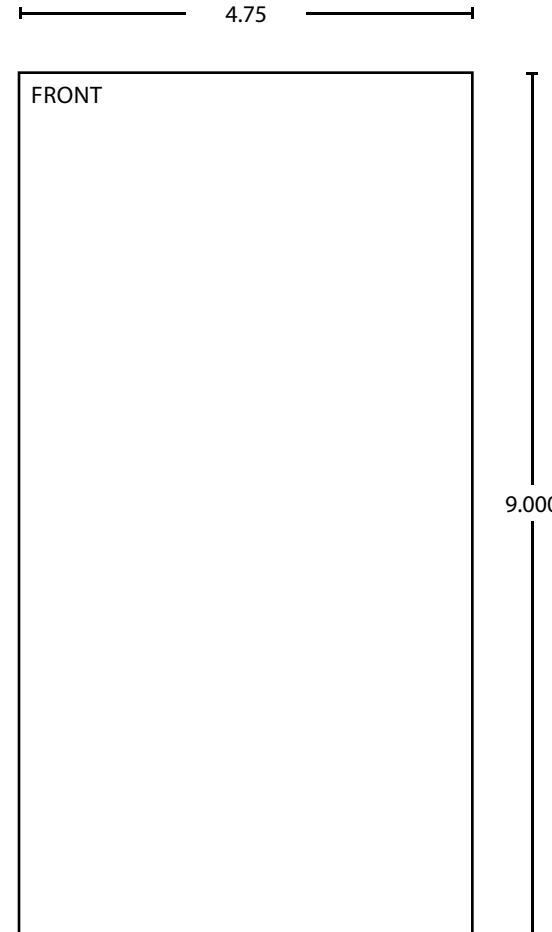
ELECTRIC RANGE

use & care

Introduction.	2	Before Setting Oven Controls.	20
Important Safety Instructions.	3	Setting Oven Controls	21
Cooking Recommendations.	10	Care and Cleaning	32
Before Setting Surface Controls	13	Before You Call	38
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BEGINNING SHEET



FOLDED SHEET

<p>Additional Notes:</p> <ol style="list-style-type: none"> 1. This is the next revision of 24060857. 2. Contact : Eliseo, Jose Luis <Jose.Eliseo@allegion.com> for more information.
--

Revision History						Revision Description: B > Revised Artwork. Changed 1 year warranty to a 3 year warranty.					
A	B	C	D	E	F						
050330	054550										
Material White Paper						Edited By		Approved By		EC Number	Release Date
						R. Byun		M. Sasso		054550	07-14-2014
<p>Notes</p> <ol style="list-style-type: none"> 1. printed two sides 2. printed black 3. tolerance $\pm .13$ 4. printed in country may vary 5. drawings not to scale 6. 48-page saddle-stitched booklet 						Title BE469 User Guide					
						Creation Date 04-28-14		Number P516-939			Revision B
						Created By M. Sasso		Activity 3899 Hancock Expwy Security, CO 80911		Ingersoll Rand Company Copyright © 2014	
						Software: InDesign CS6					

2

INTRODUCTION

Welcome to our family

Thank you for bringing Frigidaire into your home! We see your purchase as the beginning of a long relationship together.

This manual is your resource for the use and care of your product. Please read it before using your appliance. Keep it handy for quick reference. If something doesn't seem right, the troubleshooting section will help you with common issues.

FAQs, helpful tips and videos, cleaning products, and kitchen and home accessories are available at www.frigidaire.com.

We are here for you! Visit our website, chat with an agent, or call us if you need help. We may be able to help you avoid a service visit. If you do need service, we can get that started for you.

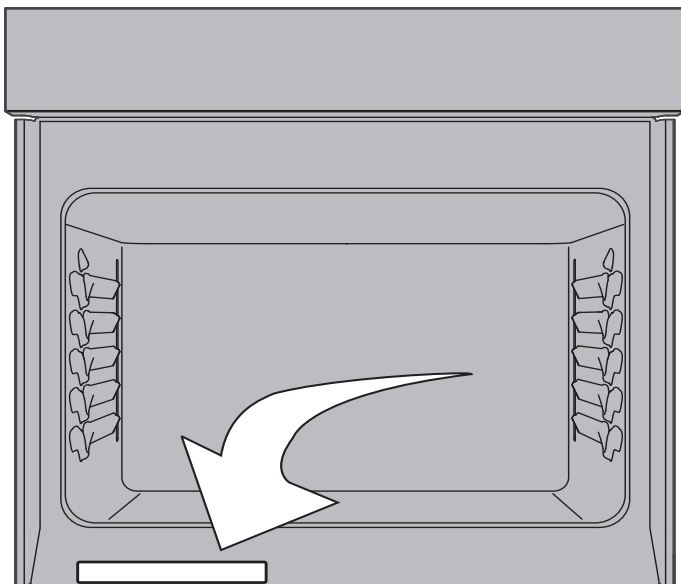
Let's make it official! Be sure to register your product.

Keep your product info here so it's easy to find.

Model Number: _____

Serial Number: _____

Purchase Date: _____



Serial Number Location



Installation Checklist

- Read all the safety instructions in the front of your Use & Care Manual.
- Remove all packaging materials from your appliance before cooking.
- Confirm that the electrical power to the appliance is turned on.
- Wipe out the inside of the oven cavity with a damp cloth.
- Apply a thin layer of cooking oil to the sides of the oven racks to keep them gliding smoothly.
- Set the clock. See (page 22) for instructions.
- Test all surface elements/burners to make sure they are working properly (page 17).
- Before cooking, set the oven to bake at 350°F (177°C) for 30 minutes (page 23). Some noise and odors are normal on the first cooking cycle.
- Remember to complete your product registration!


Read all instructions before using this appliance.

This manual contains important safety symbols and instructions. Please pay attention to these symbols and follow all instructions given.

Do not attempt to install or operate your appliance until you have read the safety precautions in this manual. Safety items throughout this manual are labeled with a WARNING or CAUTION statement based on the risk type.

Warnings and important instructions appearing in this guide are not meant to cover all possible conditions and situations that may occur. Common sense, caution, and care must be exercised with installing, maintaining, or operating your appliance.

DEFINITIONS

 This is the safety alert symbol. It is used to alert of potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

WARNING

Indicates a potentially hazardous situation which, if not avoided, may result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

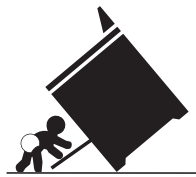
IMPORTANT

Indicates installation, operation or maintenance information which is important but not hazard-related.

NOTE

Indicates a short, informal reference – something written down to assist the memory or for future reference.

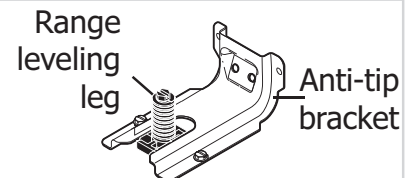
WARNING



Tip Over Hazard

- **A child or adult can tip the range and be killed.**
- **Verify the anti-tip device has been installed to floor or wall.**

- **Ensure the anti-tip device is re-engaged to floor or wall when the range is moved.**
- **Do not operate the range without the anti-tip device in place and engaged.**
- **Failure to follow these instructions can result in death or serious burns to children and adults.**



To check if the anti-tip bracket is installed properly, use both arms to grasp the rear edge of the range back. Carefully attempt to tilt range forward. When properly installed, the range should not tilt forward.

Refer to the anti-tip bracket installation instructions supplied with your range for proper installation.

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IMPORTANT SAFETY INSTRUCTIONS

IMPORTANT INSTRUCTIONS FOR UNPACKING AND INSTALLATION

IMPORTANT

Read and follow the below instructions and precautions for unpacking, installing, and servicing your appliance.

Remove all tape and packaging before using the appliance. Destroy the carton and plastic bags after unpacking the appliance. Never allow children to play with packaging material. Do not remove the wiring label and other literature attached to the appliance. Do not remove model/serial number plate.

Cold temperatures can damage the electronic control. When using this appliance for the first time, or when the appliance has not been used for an extended period of time, be sure the appliance has been in temperatures above 32°F (0°C) for at least 3 hours before turning on the power to the appliance.

All materials used in construction of cabinets, enclosures, and supports surrounding the product must have a temperature rating above 200°F (94°C).

Never modify or alter the construction of the appliance by removing the leveling legs, panels, wire covers, anti-tip brackets/screws, or any other part of the appliance.

Be sure to have an appropriate foam-type fire extinguisher available, visible, and easily accessible located near the appliance.

GROUNDING INSTRUCTIONS

WARNING

- Avoid fire hazard or electrical shock. Failure to follow this warning may cause serious injury, fire, or death.
- Avoid fire hazard or electrical shock. Do not use an adapter plug, use an extension cord, or remove grounding prong from the power cord. Failure to follow this warning may cause serious injury, fire, or death.

Proper Installation—Be sure your appliance is properly installed and grounded by a qualified technician. In the United States, install in accordance with the National Fuel Gas Code ANSI Z223.1/NPFA No. 54, latest edition and National Electrical Code NFPA No. 70 latest edition, and local electrical code requirements. In Canada, install in accordance with CAN/CGA B149.1 and CAN/CGA B149.2 and CSA Standard C22.1, Canadian Electrical code, Part 1-latest editions and local electrical code requirements. Install only per installation instructions provided in the literature package for this appliance.

For personal safety, this appliance must be properly grounded. For maximum safety, the power cord must be securely connected to an electrical outlet or junction box that is the correct voltage, is correctly polarized and properly grounded, and protected by a circuit breaker in accordance with local codes.

It is the personal responsibility of the consumer to have the appropriate outlet or junction box with the correct, properly grounded wall receptacle installed by a qualified electrician. It is the responsibility and obligation of the consumer to contact a qualified installer to assure that the electrical installation is adequate and is in conformance with all local codes and ordinances.

See the installation instructions packaged with this appliance for complete installation and grounding instructions.

IMPORTANT INSTRUCTIONS FOR USING THE APPLIANCE



WARNING

- Storage In or On Appliance—Flammable materials should not be stored in an oven or microwave, near surface burners or elements, or in the storage or warmer drawer (if equipped). This includes paper, plastic, and cloth items, such as cookbooks, plastic ware, and towels, as well as flammable liquids. Do not store explosives, such as aerosol cans, on or near the appliance.
- Do not leave children alone - Children should not be left alone or unattended in the area where appliance is in use. They should never be allowed to sit or stand on any part of the appliance, including the storage drawer, lower broiler drawer, warmer drawer, or lower double oven.



WARNING

- Do not store items of interest to children in the cabinets above the appliance or on the backguards of ranges. Children climbing on or near the appliance to reach items could be seriously injured.
- Do not allow children to climb or play around the appliance. The weight of a child on an open oven door may cause the appliance to tip, resulting in serious burns or other injury. An open drawer when hot may cause burns.
- Stepping, leaning, or sitting on the door or drawers of this appliance can result in serious injuries and also cause damage to the appliance.
- Never cover any slots, holes or passages in the oven bottom or cover and entire rack with materials such as aluminum foil. Aluminum foil linings may also trap heat, causing a fire hazard.
- Do not use oven or warmer drawer (if equipped) for storage.
- Never use your appliance as a space heater to heat or warm the room. Doing so may result in carbon monoxide poisoning and overheating of the appliance.

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IMPORTANT SAFETY INSTRUCTIONS

CAUTION

- When heating fat or grease, watch it closely. Grease may catch fire if it becomes too hot.
- Do not use water or flour on grease fires. Smother fire or flame or use dry chemical or foam-type extinguisher. Cover the fire with a pan lid or use baking soda.
- Use dry potholders. Moist or damp potholders on hot surfaces may result in burns from steam. Do not let potholders touch hot cooking areas. Do not use towels or other bulky cloths.
- Do not heat unopened food containers - Build-up of pressure may cause container to burst and result in injury.
- Wear proper apparel - Loose-fitting or hanging garments should never be worn while using the appliance. Do not let clothing or other flammable materials contact hot surfaces.
- Do not touch surface burners or elements, areas near these burners or elements, interior surfaces of the oven, or the warmer drawer (if equipped). Surface burners and elements may be hot even though they appear cool.
- Areas near surface burners and elements may become hot enough to cause burns. During and after use, do not touch, or let clothing or other flammable materials touch these areas until they are cool. These areas may include the cooktop, surfaces facing the cooktop, oven vent areas, oven door, and oven window.

CAUTION

- Do not attempt to operate the appliance during a power failure. If the power fails, always turn off the appliance. If the appliance is not turned off and the power resumes, electric surface elements may resume operation when power is restored. Once the power resumes, reset the clock and the oven function.

IMPORTANT INSTRUCTIONS FOR USING YOUR RADIANT COOKTOP

Know which knob or key controls each surface heating area. Place cookware with food on the cooking area before turning it on. Turn the cooking area off before removing the cookware.

Cookware handles should be turned inward and not extend over adjacent surface elements — To reduce the risk of burns, ignition of flammable materials, and spillage due to unintentional contact with the utensil, the handle of the cookware should be positioned so that it is turned inward, and does not extend over other cooking areas.

Use proper pan size - This appliance is equipped with one or more surface units of different sizes. Select cookware with flat bottoms that match the surface unit size. Using the proper cookware on the cooking area will improve efficiency.

Glazed cooking utensils— Only certain types of glass, glass/ceramic, ceramic, earthenware, or other glazed utensils are suitable for cooktop service without breaking due to the sudden change in temperature. Check the manufacturer's recommendations for cooktop use.

Improper cookware may break due to sudden changes in temperature. Check the cookware manufacturer's recommendations for cooktop use.

Never leave surface elements unattended. Boil-overs may cause smoking and greasy spills that may ignite. A pan that has boiled dry could be damaged and may damage the cooktop.

Do not use a searing grill meant for use with a broiler pan on the cooktop. The searing grill is not designed for use on the cooktop. Doing so may result in a fire.

When you are flaming foods under a ventilating hood, turn on the fan.

IMPORTANT INSTRUCTIONS FOR GLASS AND CERAMIC COOKTOPS

Do Not Clean or Operate a Broken Cooktop. If cooktop should break, cleaning solutions and spillovers may penetrate the broken cooktop and create a risk of electric shock. Contact a qualified technician immediately.

Clean cooktop glass with caution. If a wet sponge or cloth is used to wipe spills on a hot cooking area, be careful to avoid a steam burn. Some cleaners can produce harmful fumes if applied to a hot surface.

Avoid scratching the cooktop glass with sharp objects.

IMPORTANT INSTRUCTIONS FOR USING YOUR OVEN

Protective liners—Do not use aluminum foil, aftermarket oven liners, or any other materials or devices to line oven bottom, oven racks, or any other part of the appliance. Only use aluminum as recommended for baking, such as lining cookware or as a cover placed on food. Any other use of protective liners or aluminum foil may result in a risk of electric shock or fire or a short circuit.

Use care when opening oven door, lower oven door, or warmer drawer (some models). Stand to the side of the appliance when opening the door of a hot oven. Let hot air or steam escape before you remove or replace food in the oven.

Keep oven vent ducts unobstructed. Touching surfaces in this area when the oven is on may cause severe burns. Do not place plastic or heat-sensitive items on or near the oven vent. These items can melt or ignite.

Placement of oven racks - Always place oven racks in desired location while oven is cool. If rack must be moved while oven is hot, do not let potholder contact hot burner or element in oven. Use potholders and grasp the rack with both hands to reposition. Remove all cookware and utensils before moving the rack.

Do not use a broiler pan without its insert. Broiler pans and inserts allow dripping fat to drain away from the high heat of the broiler. Do not cover the broiler insert with aluminum foil; exposed fat and grease could ignite.

Do not cook food on the oven bottom. Always cook in proper cookware and always use the oven racks.

8

IMPORTANT SAFETY INSTRUCTIONS

IMPORTANT INSTRUCTIONS FOR CLEANING YOUR APPLIANCE

CAUTION

Before manually cleaning any part of the appliance, be sure all controls are turned off and the appliance is cool. Cleaning a hot appliance can cause burns.

Clean the appliance regularly to keep all parts free of grease that could catch fire. Do not allow grease to accumulate. Greasy deposits in the fan could catch fire.

Always follow the manufacturer's recommended directions for use of kitchen cleaners and aerosols. Be aware that excess residue from cleaners and aerosols may ignite causing damage and injury.

Clean ventilating hoods frequently - Grease should not be allowed to accumulate on hood or filter. Follow the manufacturer's instructions for cleaning vent hoods.

IMPORTANT INSTRUCTIONS FOR SELF CLEANING OVENS

CAUTION

Before using self clean, remove the broiler pan, any food, utensils, and cookware from the oven, storage drawer or warming drawer (if equipped). Remove oven racks unless otherwise instructed.

Do not clean the oven door gasket. The door gasket is essential for a good seal. Care should be taken not to rub, damage, or move the gasket.

Do not use commercial oven cleaner unless certified for use in a self-cleaning oven. Always follow the manufacturer's directions for use of cleaners.

Use the self clean cycle to clean only the parts listed in this manual.

Some birds are extremely sensitive to the fumes given off during the self clean cycle of any oven. Move birds to another well-ventilated room.

IMPORTANT INSTRUCTIONS FOR SERVICE AND MAINTENANCE

Do not repair or replace any part of the appliance unless specifically recommended in the manuals. All other servicing should be done only by a qualified technician. This reduces the risk of personal injury and damage to the appliance.

Always contact your dealer, distributor, service agent, or manufacturer about problems or conditions you do not understand.

Ask your dealer to recommend a qualified technician and an authorized repair service. Know how to disconnect the power to the appliance at the circuit breaker or fuse box in case of an emergency.

Remove the oven door from any unused oven if it is to be stored or discarded.

Do not touch a hot oven light bulb with a damp cloth. Doing so could cause the bulb to break. Handle halogen lights (if equipped) with paper towels or soft gloves. Disconnect the appliance or shut off the power to the appliance before removing and replacing the bulb.




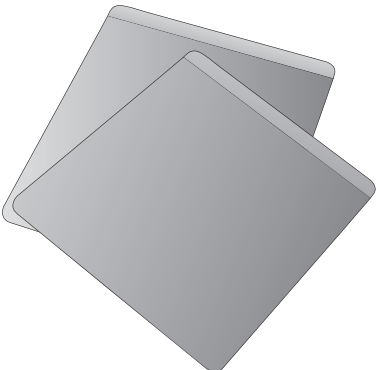
**WARNING**

California Residents: for cancer and reproductive harm information, visit www.P65Warnings.ca.gov

10 COOKING RECOMMENDATIONS

Bakeware

The material of bakeware affects how evenly and quickly it transfers heat from the pan to the food.

Material	Attributes	Recommendation
<p>Shiny metal bakeware</p> 	<p>Shiny, aluminum, and non-coated bakeware is the best for even heating. It is suitable for all baked goods.</p>	<p>Recommended cooking temperatures and times are based on shiny metal bakeware.</p>
<p>Dark metal bakeware</p> 	<p>Dark bakeware cooks hotter than shiny bakeware.</p>	<p>Reduce the cooking temperature by 25° F (13-14° C) when using dark bakeware.</p>
<p>Glass bakeware</p> 	<p>Glass bakeware cooks hotter than shiny bakeware. Glass is convenient, as the same piece of bakeware can be used for cooking, serving, and storing food.</p>	<p>Reduce the cooking temperature by 25° F (13-14° C) when using glass bakeware.</p>
<p>Insulated bakeware</p> 	<p>Insulated bakeware cooks cooler than shiny bakeware. Insulated bakeware is designed for baking in gas ovens.</p>	<p>Reduce the cooking temperature by 25° F (13-14° C) when using glass bakeware.</p>

Cooking Conditions

Conditions in your kitchen can affect the performance of your appliance when cooking food.

Condition	Attributes	Recommendation
Aging cookware	As pans age and become discolored, cooking times may need to be reduced slightly.	If food is too dark or overcooked, use the minimum cook time in the recipe or packaging. If food is too light or undercooked, use the middle to maximum cook time in the recipe or packaging.
High altitude	Air is drier and air pressure is lower. Water boils at a lower temperature, and liquids evaporate faster. Foods may take longer to bake. Doughs may rise faster.	Adjust cooking temperature, cooking time, or recipes as needed. Increase amount of liquid in baking recipes. Increase cook time on cooktop. Cover dishes to reduce evaporation. Increase bake time or oven temperature. Reduce amount of baking soda or baking powder in recipe. Reduce rising time or punch down dough and allow it to rise twice.

Cooking Results

Small adjustments may fix a problem with food not being as done as you like or more done than you like.

Result	Recommendation
Food too light	Use the middle to maximum cook time recommended on packaging or recipe.
Food too dark	Use the minimum cook time recommended on packaging or recipe.

Cooking Tips

Use these additional tips to get the best results from your appliance.

Situation	Recommendation
Baking	
Rack placement	Follow the instructions in “Setting Oven Controls” on starting on page 13. When using only one rack, place the rack so the food is in the center of the oven.
Preheat	Fully preheat the oven before baking items like cookies, cakes, biscuits and breads. Insert food immediately after the beep.
Checking food	Use the window and oven light when checking food. Opening the door may reduce baking performance.
Bake or Convection Bake	Convection bake is the best function to use for baking on multiple racks. For best performance, see “Convection Bake” on page 18.
Food placement	Allow at least 2 inches (5 cm) of space between bakeware for proper air circulation.

12 COOKING RECOMMENDATIONS

Material	Recommendation
Broiling / Roasting	
Broiling pan	<p>For best results when broiling, use a broil pan with a broil pan insert designed to drain the fat from the food, help avoid spatter, and reduce smoking. The broiler pan will catch grease spills, and the insert helps prevent grease splatters.</p> <p>If a broiler pan and insert are not supplied with this appliance, they may be purchased from Frigidaire.com.</p>
Convection Cooking	
Convection attributes	<p>Convection cooking uses a fan to circulate hot air around the oven and food. It browns food more evenly and reduces hot spots in the oven.</p> <p>Convection saves time when using multiple racks or cooking several food items at once.</p>
Convection bake	<p>Reduce cooking temperature by 25° F (13-14° C) from the recipe unless the recipe is written for convection baking.</p> <p>Preheat the oven for best results.</p>

About the Ceramic Glass Cooktop

The ceramic glass cooktop has heating elements below a smooth glass surface. The designs on the ceramic cooktop outline the areas of the surface elements underneath. Always match the pan size with the diameter of the element outline on the cooktop. Only flat-bottomed cookware should be used.

Prior to using your cooktop for the first time, apply a ceramic cooktop cleaning cream (available in most hardware, grocery and department stores) to the ceramic surface. Clean and buff with a clean paper towel. This will make cleaning easier when soiled from cooking. Cooktop cleaning creams leave a protective finish on the glass to help prevent scratches and abrasions.

The type and size of cookware, the number of surface elements in use, and their settings will all affect the amount of heat that will spread to areas beyond the surface elements. The areas surrounding the elements may become hot enough to cause burns.

IMPORTANT

- The cooktop should not be used as a cutting board or work surface.
- Dropping heavy or hard objects on the cooktop may crack it.
- Placing food directly on the smoothtop surface (without a cooking utensil) is not recommended, as difficult cleaning will result, and foods may smoke and cause potential fire hazard.
- Always lift cookware before moving on the ceramic glass cooktop. Any cookware that has a rough or dirty bottom can scratch the ceramic cooktop. Always start with clean cookware.

NOTE

- Radiant elements have a limiter that allows the element to cycle on and off, even at the HI setting.
- Be sure to read detailed instructions for coil cooktop cleaning in the “Care and Cleaning” section and “Before You Call” checklist section of this Use and Care Guide.

About the Radiant Surface Elements

The element temperature rises gradually and evenly. As the temperature rises, the element will glow red. To maintain the selected setting the element will cycle on and off. The heating element retains enough heat to provide a uniform and consistent heat during the off cycle.

For efficient cooking, turn the element off several minutes before cooking is complete. This will allow residual heat to complete the cooking process.

CAUTION

Surface elements may appear to have cooled after they have been turned off. The element surface may still be hot, and burns may occur if the element or surrounding area is touched before it has cooled to a safe temperature.

Do not place flammable items such as plastic salt and pepper shakers, spoon holders, or plastic wrapping on top of the range when it is in use. These items could melt or ignite. Potholders, towels, or wooden spoons could catch fire if placed too close to the surface elements.

Do not use aluminum foil to line surface drip bowls or reflector pans. Improper installation of these liners may result in risk of electric shock or fire.

IMPORTANT

Do not allow aluminum foil, or any material that can melt, to make contact with the cooking element. If these items melt on the cooktop, they will damage the cooktop.

14 BEFORE SETTING SURFACE CONTROLS

Using Proper Cookware

The size and type of cookware used will influence the heat setting needed for best cooking results. Be sure to follow the recommendations for using proper cookware as illustrated in “Figure 1: Testing cookware” and “Figure 2: Proper cookware”.

Check for flatness by rotating a ruler across the bottom of the cookware (see “Figure 1: Testing cookware”). Cookware should have flat bottoms that make good contact with the entire surface of the heating element.



Figure 1: Testing cookware

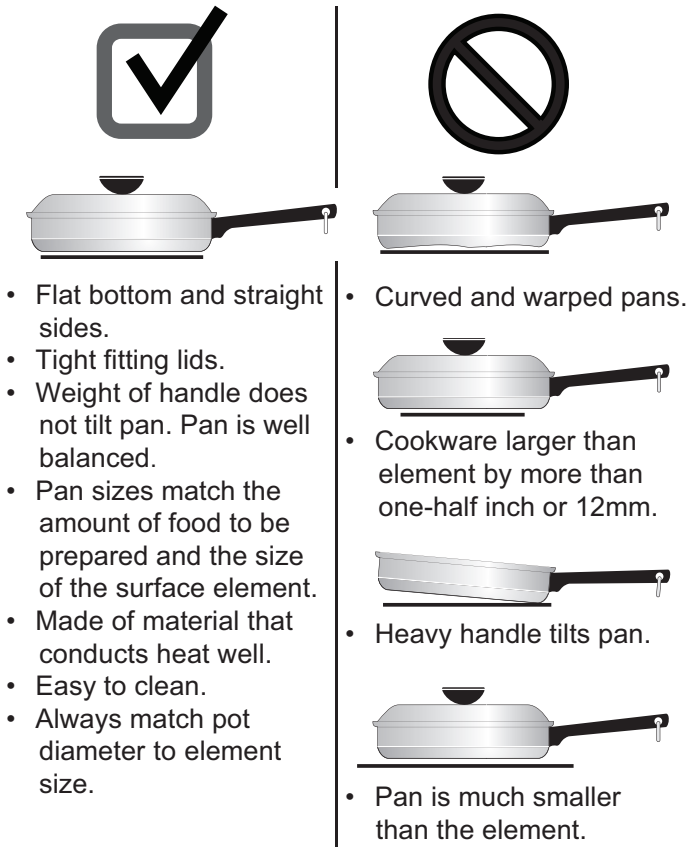


Figure 2: Proper cookware

Cookware Material Types

The cookware material determines how evenly and quickly heat is transferred from the surface element to the pan bottom. The most popular materials available are:

- Aluminum - Excellent heat conductor. Some types of food will cause it to darken (Anodized aluminum cookware resists staining and pitting).
- Copper - Excellent heat conductor but discolors easily (see Aluminum).
- Stainless - Slow heat conductor with uneven cooking results. Durable, easy to clean, and resists staining.
- Cast Iron - A slow heat conductor, but will retain heat very well. Cooks evenly once cooking temperature is reached.
- Porcelain-enamel on metal - Heating characteristics will vary depending on base material.
- Glass - Slow heat conductor.

IMPORTANT

Do not place empty aluminum, glass, or porcelain-enamel coated cookware on the element. The melting point of cookware made with these materials may be reached quickly, especially if left empty. If the cookware melts it will damage the cooktop. Follow all the cookware manufacturer's recommendations for use and care of cookware.

IMPORTANT

NEVER place or straddle a cooking utensil over two different surface cooking areas at the same time. Incorrect use may damage the cooktop.

Types of Ceramic Cooktop Elements

The circles on the ceramic glass cooktop outline the size and type of element underneath. The elements on your cooktop depend on the model.

- A single radiant element has one circle. Some models have a large Simmer to Boil element for large pots
- A dual radiant element (some models) has two circles. The dual radiant element may be set using only the smaller inner element or both inner and outer elements may be set to heat together for a larger surface.
- Dual elements allow more flexibility with the size of cookware.
- A keep warm element (some models) has one small circle. It is used to keep food warm after cooking. The keep warm element is not designed to cook food.

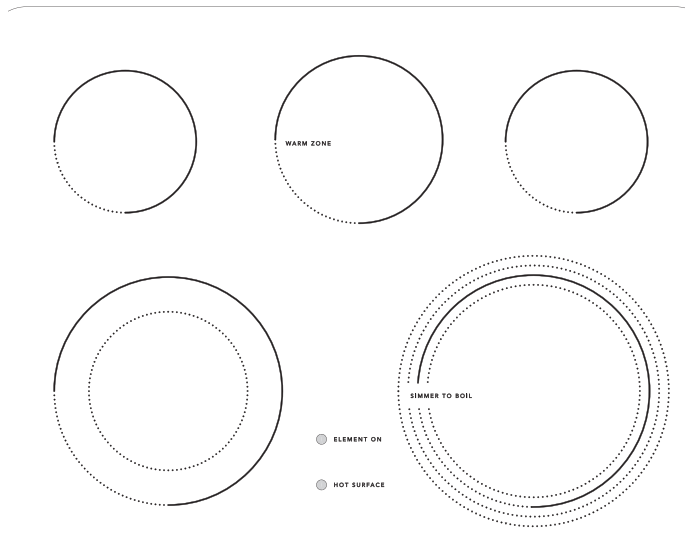


Figure 6: Surface elements

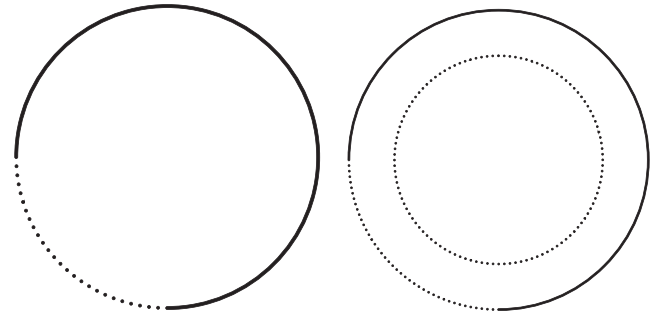


Figure 3: Single and double elements

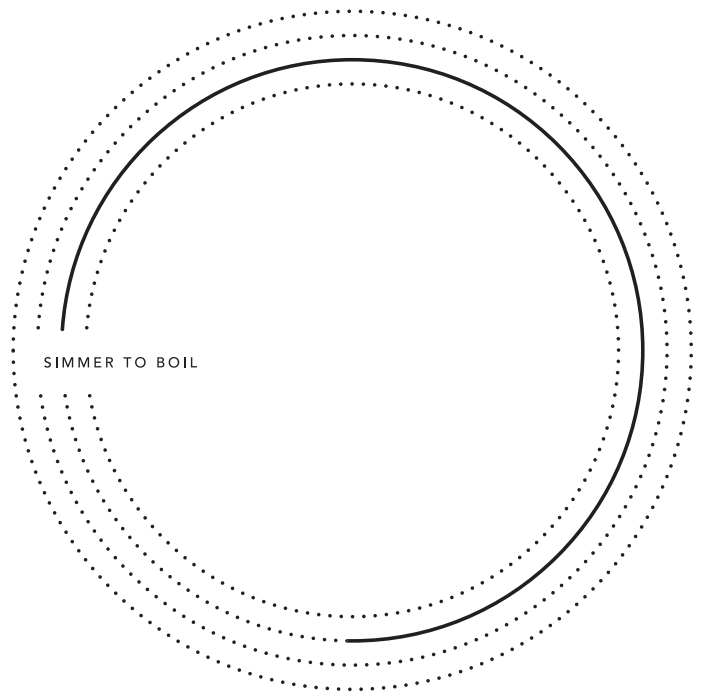


Figure 4: Large single element (some models)

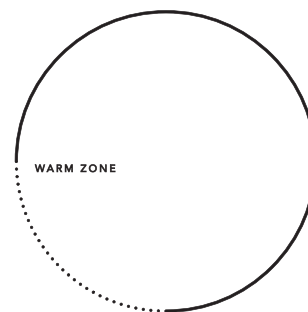


Figure 5: Warm zone

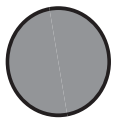
16

BEFORE SETTING SURFACE CONTROLS

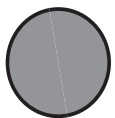
Element On and Hot Surface Indicator Lights

The ELEMENT ON indicator light will turn on when one or more elements are turned on. A quick glance at this indicator light when cooking is finished is an easy check to be sure all surface elements are turned off.

The HOT SURFACE indicator light will turn on when the burner is hot enough to cause burns and will remain on after the burner is turned off until the surface has cooled to a safe temperature.



ELEMENT ON



HOT SURFACE

Figure 7: Element On and Hot Surface indicators

Home Canning

Be sure to read and observe all the following points when home canning with your appliance. Check with the USDA (United States Department of Agriculture) Web site and be sure to read all the information they have available as well as follow their recommendations for home canning procedures.

- Use only a completely flat bottom canner with no ridges that radiate from the bottom center when home canning. Heat is spread more evenly when the bottom surface is flat. Use a straight-edge to check canner bottom.
- Make sure the diameter of the canner does not exceed 1 inch beyond the surface element markings or burner.
- It is recommended to use smaller diameter canners on electric coil and ceramic glass cooktops and to center canners on the burner grates.
- Start with hot tap water to bring water to boil more quickly.
- Use the highest heat setting when first bringing the water to a boil. Once boiling is achieved, reduce heat to lowest possible setting to maintain that boil.
- Use tested recipes and follow instructions carefully. Check with your local Cooperative Agricultural Extension Service or a manufacturer of glass jars for the latest canning information.
- It is best to can small amounts and light loads.

Do not leave water bath or pressure canners on high heat for an extended amount of time.

Single radiant surface elements (all models)

To operate single radiant elements (including Simmer to Boil elements):

1. Place correctly sized cookware on surface element.
2. Push in and turn the surface control knob in either direction (Figure 1) to the desired setting (refer to the “Suggested radiant surface element settings” in Table 1).
3. When cooking is complete, turn the radiant surface element OFF before removing the cookware.

Start most cooking operations on a higher setting and then turn to a lower setting to finish cooking. The surface control knobs do not have to be set exactly on a particular spot. Use the graphics provided as a guide and adjust the control knob as needed (see Figure 1).

A glowing red surface heating area extending beyond the bottom edge of the cookware indicates the cookware is too small for the surface heating area.

Suggested radiant surface element settings

The suggested settings found in Table 1 below are based on cooking with medium-weight aluminum pans with lids. Settings may vary when using other types of pans.

Settings	Type of Cooktop
High (HI - 9)	Start most foods, bring water to a boil, pan broiling
Medium High (7 - 8)	Continue a rapid boil, fry, deep fat fry
Medium (5 - 6)	Maintain a slow boil, thicken sauces and gravies or steam vegetables
Medium Low (2 - 4)	Keep foods cooking, poach, stew
Low (1)	Low temperature cooking
Low (LO)	Keep warm, melt

Table 1: Suggested settings for radiant elements

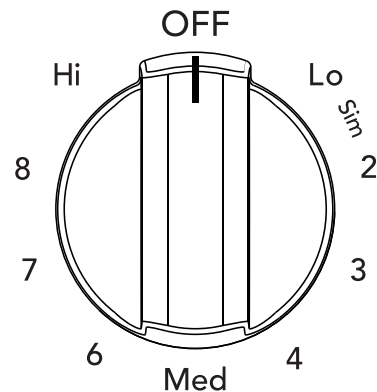


Figure 8: Surface control knob

CAUTION

Radiant surface elements may appear to have cooled after they have been turned off. The element may still be hot and burns may occur if the element is touched before it has cooled sufficiently.

Do not place flammable items such as plastic salt and pepper shakers, spoon holders, or plastic wrappings on top of the range when it is in use. These items could melt or ignite. Potholders, towels, or wooden spoons could catch fire if placed too close to the surface elements.



Do not use aluminum foil to line surface drip bowls or reflector pans. Improper installation of these liners may result in risk of electric shock or fire.

NOTES

- The size and type of utensil used and the amount and type of food being cooked will influence the setting needed for best cooking results.
- The Element ON indicator lights will glow when one or more elements are turned ON. A quick glance at these indicator lights when finished cooking is an easy check to be sure all control knobs are turned OFF. The Hot Surface indicator light will remain on AFTER the control knob is turned to the “OFF” position and will stay on until the heating surface area has cooled sufficiently.

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Dual radiant surface elements (some models)

Symbols on the backguard will help choose which portion of the dual radiant element to set. The  symbol indicates a setting for the inner element only. The  symbol indicates a setting for both inner and outer elements.

To operate a dual radiant element:

1. Place correctly sized cookware on the surface element.
2. Push in and turn the surface control knob clockwise to begin heating both the inner and outer elements. If only the inner element is needed for smaller cookware, push in and turn the knob counter-clockwise (see Figure 2).
3. When cooking is complete, turn the knob to OFF before removing the cookware.

Start most cooking operations on a higher setting and then turn to a lower setting to finish cooking. The surface control knobs do not have to be set exactly on a particular mark. Use the marks as a guide and adjust the control knob as needed.

A glowing red surface heating area extending beyond the bottom edge of the cookware indicates the cookware is too small for the surface heating area.

You may switch from either single or dual element setting at any time during cooking. See “Suggested radiant surface element settings” on page 9.

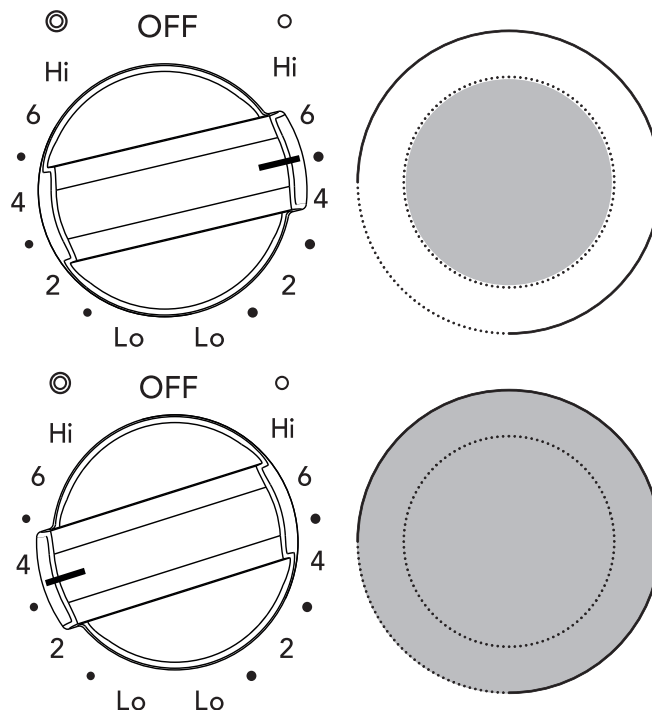


Figure 9: Dual element knob settings

CAUTION

- Radiant surface elements may appear to have cooled after they have been turned off. The element may still be hot and burns may occur if the element is touched before it has cooled sufficiently.
- Do not place flammable items such as plastic salt and pepper shakers, spoon holders, or plastic wrappings on top of the range when it is in use. These items could melt or ignite. Potholders, towels, or wooden spoons could catch fire if placed too close to the surface elements.
- Do not use aluminum foil to line surface drip bowls or reflector pans. Improper installation of these liners may result in risk of electric shock or fire.

IMPORTANT

Do not allow aluminum foil or ANY material that can melt to make contact with the ceramic glass cooktop. If these items melt on the cooktop, they will damage the ceramic cooktop.

NOTES

- The size and type of utensil used and the amount and type of food being cooked will influence the setting needed for best cooking results.
- The Element ON indicator lights will glow when one or more elements are turned ON. A quick glance at these indicator lights when finished cooking is an easy check to be sure all control knobs are turned OFF. The Hot Surface indicator light will remain on AFTER the control knob is turned to the “OFF” position and will stay on until the heating surface area has cooled sufficiently.

Warm Zone (some models)

Use the warm zone to keep cooked foods hot.

Always start with hot food. It is not recommended to heat cold food on the keep warm zone. All food placed on the warming zone should be covered with a lid to maintain quality.

For best results, when warming pastries or breads, the cover should have an opening to allow moisture to escape. Do not use plastic wrap to cover food. Plastic may melt onto the surface and be very difficult to clean. Use only dishware, utensils, and cookware recommended for oven and cooktop use on the keep warm zone.

To activate the Warm Zone:

Press the Warm Zone button on the control panel.

**CAUTION**

- Unlike the surface elements, the keep warm zone will not glow red when it is hot. To avoid burns always use potholders or oven mitts when removing food from the cooktop, including the keep warm zone, as cookware and plates will be hot.
- Radiant surface elements may appear to have cooled after they have been turned off. The glass surface may still be hot and burns may occur if the glass surface is touched before it has cooled sufficiently.
- Do not place flammable items such as plastic salt and pepper shakers, spoon holders, or plastic wrappings on the cooktop when it is in use. These items could melt or ignite. Potholders, towels, or wooden spoons could catch fire if placed too close to the surface elements.

**IMPORTANT**

Do not allow aluminum foil or ANY material that can melt to make contact with the ceramic glass cooktop. If these items melt on the cooktop, they will damage the ceramic cooktop.

20 BEFORE SETTING OVEN CONTROLS

Oven Vent Location

The oven is vented as shown below. When the oven is on, warm air is released through the vent. This venting is necessary for proper air circulation in the oven and good baking results. Do not block oven vent. Never close off the openings with aluminium foil or any other material. Steam or moisture may appear near the oven vent. This is normal.

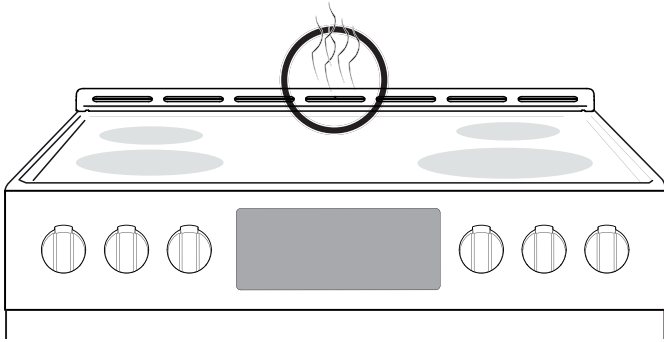


Figure 11: Oven vent

WARNING

Protective Liners — Do not use aluminum foil or any other material or liners to line the oven bottom, walls, racks or any other part of the range. Doing so will alter the heat distribution, produce poor baking results, and possibly cause permanent damage to the oven interior. Improper installation of these liners may result in risk of electric shock or fire. During self clean, temperatures in the oven will be hot enough to melt foil.

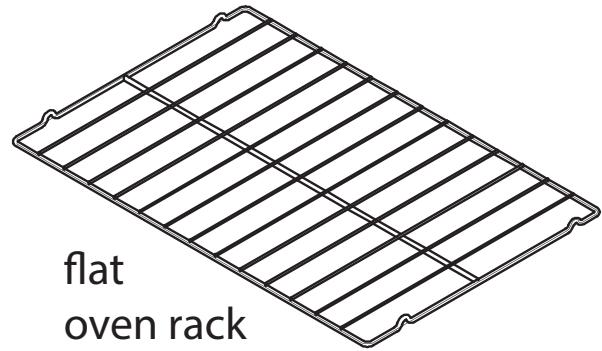
CAUTION

Always use pot holders or oven mitts when using the oven. When cooking, the oven interior, oven exterior, oven racks, and cooktop will become very hot which can cause burns.

Remove all oven racks before starting a self clean cycle. If oven racks are left inside the oven during a cleaning cycle, the slide ability of the oven racks may be damaged and all of the oven racks will lose their shiny finish.

To prevent possible damage to the oven, do not attempt to close the oven door until all the oven racks are fully positioned back inside the oven cavity.

Types of Oven Rack



flat
oven rack

Figure 10: Oven rack types

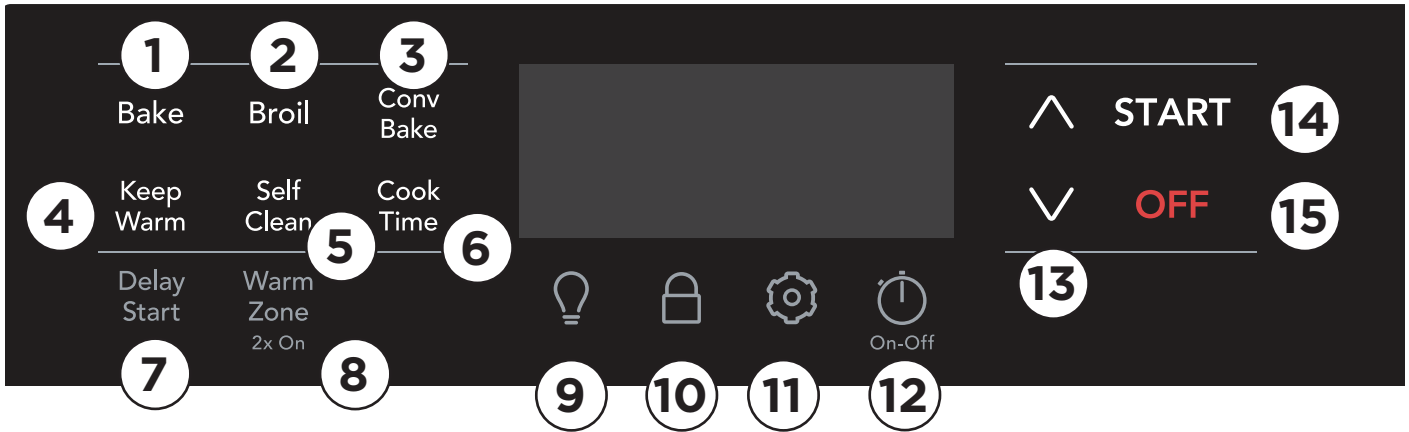
Flat oven racks may be used for most cooking needs and may be placed in most oven rack positions.


Removing, Replacing, and Arranging Flat or Offset Oven Racks

Always arrange the oven racks when the oven is cool.

To **remove** - Pull the oven rack straight forward until it reaches the stop position. Lift up front of oven rack slightly and slide out.

To **replace** - Place the oven rack on the rack guides on both sides of oven walls. Tilt the front of oven rack upward slightly and slide the oven rack back into place. Be sure oven racks are level before using.



1. **Bake** is for delicate foods that need heat to rise and move gently in the oven.
2. **Broil** is for broiling and grilling foods under direct, high heat.
3. **Conv Bake** circulates the oven heat continuously for baking.
4. **Keep Warm** Use to keep cooked foods at serving temperature in the oven.
5. **Self Clean** starts a self-cleaning cycle.
6. **Cook Time** sets the oven to run for a period of time and then turn off.
7. **Delay Start** sets the oven to start after a specified period of time.
8. **Warm Zone** turns the surface warming zone on or off.
9. **Oven Light** turns the interior light on and off at a touch and turns on automatically when oven door is open.
10. **Lockout** deactivates the control panel to prevent accidental key presses.
11. **Settings**  is used to set user preferences for various control functions including:
 - **CLoC:** set the time on the clock.
 - **Hour:** set clock to 12 or 24 hour mode.
 - **Aud:** set the volume of control keys or to operate in silent mode.
 - **F-C:** display temperatures in Fahrenheit or Celcius.
 - **rSEt:** reset all user preferences to original factory settings.
 - **uPo:** .adjust the oven temperature settings.
 - **E-SA:** .turn the 12-hour energy savings feature on or off.

12. **Timer On-Off** is used to set or cancel the minute timer.
13. **Up/Down Arrows** used to scroll to temperature and time settings.
14. **START** starts cooking functions and sets the clock.
15. **OFF** turns off all oven functions.

Table 2: Oven Modes

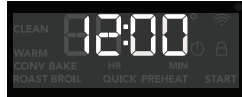
Feature	Mode	Min.Temp/ Time	Max Temp/ Time
Bake		170°F (77°C)	550°F (288°C)
Broil		LO	HI
Conv Bake		170°F (77°C)	550°F (288°C)
Keep Warm		170°F (77°C)	200°F (93°C)
Clock	12 Hr.	1:00 Hr./Min.	12:59 Hr./Min.
	24 Hr.	0:00 Min	23:59 Hr./Min.
Timer On-Off		0:01 Min.	11:59 Hr./Min.

Note: An entry acceptance tone (1beep) will sound each time a key is touched (the oven lock key is delayed 3 seconds). An entry error tone (3 short beeps) will sound if the entry of the temperature or time is below the minimum or above the maximum settings for the feature.

22 SETTING OVEN CONTROLS


Setting the Clock

It is recommended to always set the clock for the correct time of day before using the appliance.



Note: When the appliance is first plugged in or when the power supply to the appliance has been interrupted, the display will flash 12:00; in this case, skip to Step 4 of the instructions below.

To set the clock:


1. Press .
2. Press the **Up** or **Down** arrow until “CLoC” appears in the display.
3. Press **START**.
4. Press the **Up** or **Down** arrow until the correct time appears in the display. You can press and hold the **Up** or **Down** arrow to change the time faster.
5. Press **START**.

NOTE: The clock cannot be changed when the oven is set for cooking or self clean is active.

Setting 12 Hour or 24 Hour display mode (Hour)

The clock display mode allows you to select 12 hr or 24 hr modes. The factory pre-set clock display mode is 12 hours.

To set 12 hr or 24 hr display mode:

1. Press .
2. Press the **Up** or **Down** arrow until “Hour” appears in the display.
3. Press **START**.
4. Press **UP or Down arrow** key to toggle between 12 hr and 24 hr setting.




5. Press **START** to accept the desired clock setting.

Display will return to the settings menu. After a few seconds, it will return to the time of day.

Setting a silent control panel (Aud)

When selecting a function, an audible tone is heard each time a key is pressed. If desired, the control can be programmed for silent operation.

To set the controls for silent operation:

1. Press .
1. Press the **Up** or **Down** arrow until “Aud” appears in the display, then press **Start**.



2. Press the **Up** or **Down** arrow to toggle between “oFF” and “on”.



3. Press **START** to accept when the desired setting is displayed.

Display will return to the settings menu. After a few seconds, it will return to the time of day.

Temperature display (F-C)

The electronic oven control is set to operate in Fahrenheit (°F) at the factory. You can change it to operate in Celsius (°C). The oven may be programmed for any temperature from 170°F to 550°F (77°C to 287°C).

To change the temperature to Celsius (°C) or from °C to °F:

1. Press .
2. Press Press the **Up** or **Down** arrow until until F-C appears.



3. Press **START**.
4. Press **Up and Down** arrows to toggle between F and C.



5. Press **START** to accept your choice.

Display will return to the settings menu. After a few seconds, it will return to the time of day.


Adjust Oven Temperature (UPO)

Your appliance has been factory calibrated and tested to ensure an accurate baking temperature. For the first few uses, follow your recipe times and temperature recommendations carefully. If you think the oven is cooking too hot or too cool for your recipe times, you can adjust the control so the oven cooks hotter or cooler than the temperature displayed.

Important: Do not use oven thermometers such as those found in grocery stores to check the temperature settings inside your oven. These oven thermometers may vary as much as 20 to 40 degrees from actual temperatures.

The oven temperature may be increased as much as +35°F (+19°C) or decreased -35°F (-19°C) from the factory calibrated settings.

To increase or decrease the oven temperature by 20°F:

1. Press .
2. Press the **Up** or **Down** arrow until “UPO” appears in the display.
3. Press **START**
4. Press the **Up** or **Down** arrow until the desired amount of temperature adjustment is shown.

The oven temperature may be increased as much as +35°F or decreased -35°F from the factory calibrated settings.

The oven temperature adjustment may be made if your oven control is set to display temperatures in °C (Celsius). Minimum and maximum settings for Celsius range from plus +19°C to minus -19°C.

5. Press **START** to accept change.

Important note:


- Oven temperature adjustments will not change the Broil, Self Clean, or Keep Warm temperatures.

Restore Factory Settings (rSet)

Your appliance was set with predetermined (default) oven control settings. Over time, users may have made changes to these settings. The following options may have been modified since the appliance was new.

- 12 or 24 hr display mode
- Continuous bake or 12-hour energy savings mode
- Silent or audible controls
- Oven temperature display (Fahrenheit or Celsius)
- Oven temperature adjustments (UPO)


To restore oven control to factory default settings:

1. Press .
2. Press the **Up** or **Down** arrow until “rSet” appears in the display.
3. Press and hold **START** for three seconds. The control has been reset with the default settings.

Continuous bake setting or 12-hour energy saving feature (E-SA)

The oven control has a built-in 12-hour energy saving feature that will shut off the oven if the oven is left on for more than 12 hours. The oven control can be programmed to override this feature for continuous baking.

To change the continuous bake setting:

1. Press .
2. Press the **Up** or **Down** arrow until “E-SA” appears in the display.
3. Press **START**.
4. Press the **Up** or **Down** arrow to toggle between “12Hr” and “Cont.”
5. Press **START** to accept when the desired setting is displayed.

24 SETTING OVEN CONTROLS

Setting the minute timer

The timer can be set for any amount of time from 1 minute to 11 hours and 59 minutes.



The minute timer can be used alone or while using any of the other oven features. If another feature is active when the minute timer is active, the minute timer will show in the display. To view information about other active features, press the key for that feature.

Example: Setting timer for 15 minutes.

1. Press **Timer on-off** key:



●-●ff

2. Press **Up or Down** arrows until the desired time appears in the display. You can press and hold the **Up or Down** arrow to change the time faster.



3. Press **START**. The timer will begin to count-down. When the set time ends, the display will show **End**.



To turn the timer off at any time, press the **Timer on-off** key.



●-●ff

NOTE: The timer will beep three times and will continue to beep three times every minute until **Timer on-off** is pressed. The minute timer will not start or stop the cooking process.

Operating oven light



The interior oven light will automatically turn on when the oven door is opened.

Press the oven light key on the control panel to turn the interior oven light on and off whenever the oven door is closed.

NOTE: For best baking results, do not leave oven light on while baking.

The interior oven light is located at the upper left rear wall of the oven interior. To change the interior oven light, see “Changing the oven light” in the Care & cleaning section.

Oven Lock



The control can be programmed to lockout the oven control keys and lock the oven door.

To activate the lockout feature:

1. Press and hold the **lock key** for 3 seconds.
2. The door lock mechanism will lock the door in about 15 seconds. Do not attempt to open door while the mechanism is active.

To cancel the lockout feature:

1. Press and hold the **lock key** for 3 seconds.
2. The door lock mechanism will unlock the door in about 15 seconds. Do not attempt to open door while the mechanism is active.
3. When the lock icon no longer displays, the oven control keypad will be available for use.

NOTE: If a control key is pressed when Oven Lock is active, the control will triple beep indicating the key action is not available when the Oven Lock feature is active.

Setting Bake

Bake cooks with heat that rises from the oven bottom. The heat and air circulate naturally in the oven. A reminder tone will sound indicating when the set bake temperature is reached and to place the food in the oven. The convection fan will turn on in preheat and then cycle on and off as needed during baking.

Bake may be set for any oven temperature between 170°F (77°C) to 550°F (288°C)

CAUTION

Always use pot holders or oven mitts when using the oven. When cooking the oven interior, oven racks, and cooktop will become very hot which can cause burns.

Baking tips

- Fully preheat the oven before baking items like cookies, cakes, biscuits and breads.
- Use the convection bake function for best results when baking cookies on multiple racks.
- Bake is the best function to use for baking cakes.
- For best results when baking layer cakes using two oven racks, place racks in positions 2 and 5 and place pans as shown in Figure 27.
- When using any single rack for baking cookies, cakes, biscuits, or muffins use rack position 3.
- Allow at least 2 inches (5 cm) of space between bakeware for proper air circulation.
- Dark or dull bakeware absorbs more heat than shiny bakeware, resulting in dark or over-browned foods. It may be necessary to reduce oven temperature or cook time to prevent over-browning of some foods.
- Dark pans are recommended for pies; shiny pans are recommended for cakes, cookies, and muffins.
- Do not open oven door often. Opening the door will reduce the temperature in the oven and may increase cook time.
- Do not leave oven light on while baking.

IMPORTANT

The oven will bake no longer than 12 hours. If you wish to bake for a longer period, see “Changing between continuous bake setting or 12 hour energy saving” on page 21 for detailed information.

To set Bake for (default) oven temperature of 350°F:

1. Press **Bake**. 350° will appear in the display.



2. Press **START**.

To cancel Bake at any time, press **OFF**.

To change the oven temperature to 425°F when the oven is baking:

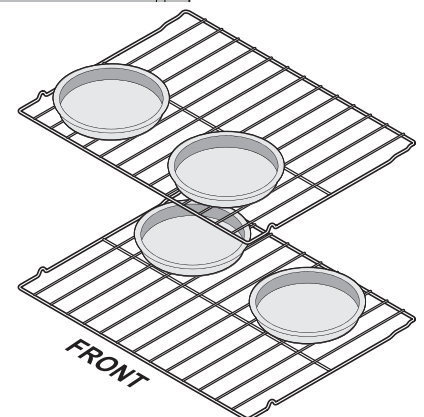
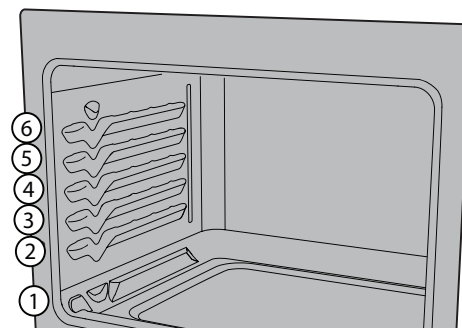
1. Press **Up arrow** to scroll to new temperature of **425** and release arrow key.



2. Press **START**.

NOTE: If **START** is not pressed the temperature will revert to the previous setting.

To cancel Bake at any time, press **OFF**.



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Convection Bake

Convection Bake uses a fan to circulate the oven's heat uniformly around the oven. This improved heat distribution allows for even cooking and browning results. Heated air flows around the food from all sides. The convection fan will turn on in preheat and remain on during baking.

Convection bake may be set for any oven temperature between 170°F (77°C) and 550°F (288°C).

Benefits of convection cooking include:

- Multiple rack baking.
- Foods may cook faster, saving time and energy.

Baking tips

- Fully preheat the oven before baking items like cookies, cakes, biscuits and breads.
- When baking cakes using two oven racks place bakeware in positions 2 and 5 and place bakeware as shown in Figure 29.
- When using any single rack for baking cookies, cakes, biscuits or muffins, use rack position 3.
- Unless the recipe is written for convection cooking, use Conv Convert to reduce oven temperature from the recipe's recommended oven temperature.
- Dark or dull bakeware absorbs more heat than shiny bakeware, resulting in dark or over-browned foods. It may be necessary to reduce oven temperature or cook time to prevent over-browning of some foods.
- Dark pans are recommended for pies; shiny pans are recommended for cakes, cookies, and muffins.
- Do not open oven door often. Opening the door will reduce the temperature in the oven and may increase cook time.
- Do not leave oven light on while baking.

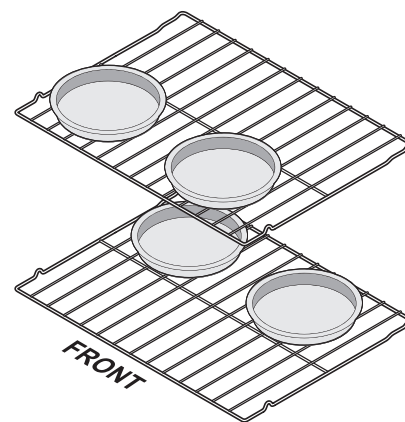
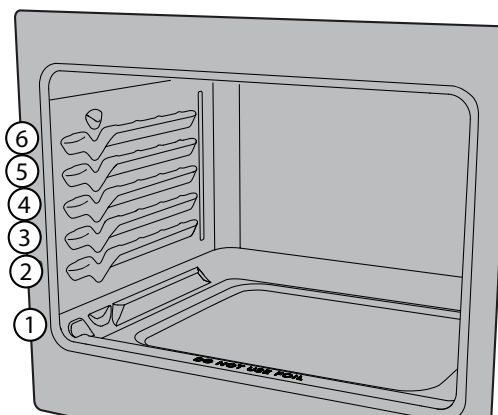
To set convection bake with a default oven set temperature of 325°F:

1. Press **Conv Bake**.
2. Conv Bake and 325° will appear in the display.



3. Press **START**. The convection fan will turn on and stay on during the cooking process.

To cancel convection bake at any time, press **OFF**.



CAUTION

Always use pot holders or oven mitts when using the oven. When cooking the oven interior, oven racks, and cooktop will become very hot which can cause burns.

Setting Broil

Use the broil function to cook foods that require direct exposure to radiant heat for optimum browning results. Broiling may produce smoke.

If smoke is excessive, place food further away from the flames.



WARNING

Should an oven fire occur, leave the oven door closed and turn off the oven. If the fire continues, use a fire extinguisher. Do not put water or flour on the fire. Flour may be explosive and water can cause a grease fire to spread and cause personal injury.



CAUTION

Always use pot holders or oven mitts when using the oven. When cooking, the oven interior, oven racks, and cooktop will become very hot which can cause burns.



IMPORTANT

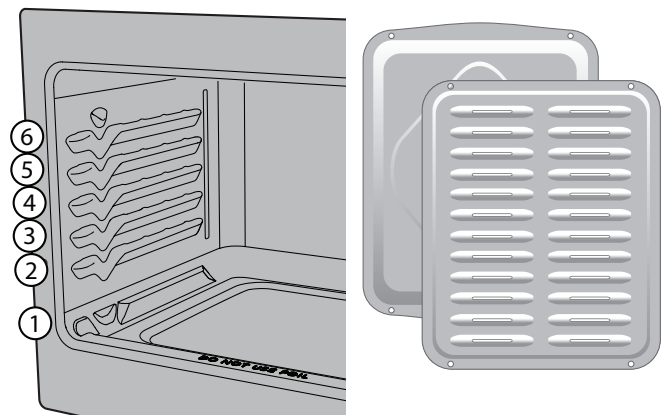
Broiler pans and inserts allow the grease to drain away from the high heat of the broiler. Do not use the pan without the insert. Do not cover the insert with foil – the exposed grease could ignite.

OPEN DOOR BROIL SHUTOFF: If the oven door is left open in Broil, the element will turn off after 30 seconds. The element will turn back on after the door is closed, and the Broil function continues.

To set broil with the default broil temperature of 550°F:

1. Arrange the oven racks when cool.
2. Position bakeware in oven.
3. Press **Broil**. “HI” will show in the display.
4. Press **Up or Down** arrows to select **HI** or **Lo**.
5. Press **START**.
6. For optimum browning results, preheat oven for 2 minutes before adding food. Broil with oven door **closed**.
7. Broil on one side until food is browned; turn and broil other side until done to your satisfaction.
8. When finished broiling, press **OFF**.

To cancel broil at any time, press OFF.



NOTE

If a broiler pan and insert are not supplied with this appliance, they may be purchased from www.frigidaire.com

28 SETTING OVEN CONTROLS

Important notes:

- Always arrange oven racks when the oven is cool.
- Broil with oven door closed. If broiling with door open, an alarm will sound alerting you to close the door. If left open, the Broil function will be canceled.
- For best results when broiling, use a broil pan with broil pan insert designed to drain the fat from the food and help avoid spatter and reduce smoking.
- When broiling, always pull the oven rack out to the stop position before turning or removing food.
- If a broiler pan and insert are not supplied with this appliance they may be purchased from www.frigidaire.com.

Table 3: Broil recommendations

Food	Rack Position	Temperature	Cook time minutes		Internal Temperature	Doneness
			1st side	2nd side		
Steak 1" thick	6	HI	5	4	140°F (60°C)	Rare*
Steak 1" thick	5 or 6	HI	6	5	145°F (63°C)	Medium
Steak 1" thick	5 or 6	HI	7	6	170°F (77°C)	Well
Pork Chops 3/4" thick	5	LO	12	10	145°F (63°C)	Well
Chicken bone-in	4	LO	20	10	165°F (74°C)	Well
Chicken boneless	5	LO	8	6	165°F (74°C)	Well
Fish	5	HI	as directed		145°F (63°C)	Well
Shrimp	4	HI			145°F (63°C)	Well
Hamburger 1" thick	4	HI	4	4	145°F (63°C)	Rare*
Hamburger 1" thick	4	HI	6	5	160 °F (71°C)	Medium
Hamburger 1" thick	4	HI	7	6	170°F (77°C)	Well

* The U.S. Department of Agriculture states, "Rare fresh beef is popular, but you should know that cooking it to only 140°F (60°C) means some food poisoning organisms may survive." (Source: Safe Food Book, Your Kitchen Guide) The lowest temperature recommended by the USDA is 145°F (63°C) for medium rare fresh beef. For well done 170°F (77°C).

NOTE: Broiling is direct heat cooking and will produce some smoke. If smoke is excessive, place food further away from element. Always watch foods carefully to prevent burning.

Self Clean

Self Clean cleans with very high temperatures (well above normal cooking temperatures), eliminating soils completely or reducing them to very fine powdered ashes you can wipe away afterwards with a damp cloth.

A self clean cycle runs for 3 hours.

Before starting self clean read all following caution and important statements before starting a self clean cycle

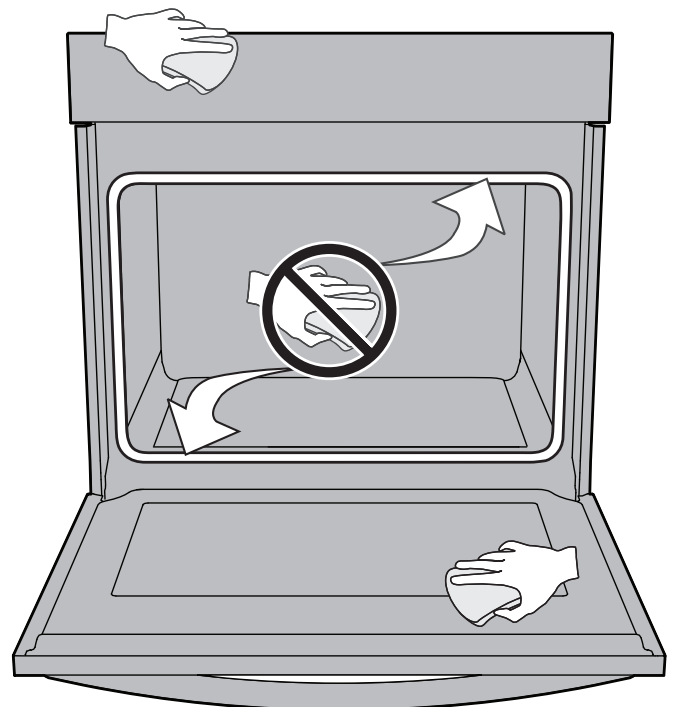
CAUTION

- Do not leave small children unattended near appliance. During self clean cycle, the outside of the oven can become very hot and cause burns if touched.
- Do not line the oven walls, racks, oven bottom, or any part of the range with aluminum foil. This will cause permanent damage to the oven interior and destroy heat distribution, and will melt to the oven interior.
- Do not force the oven door open. This will damage the automatic door locking system. Use caution when opening the oven door after the self clean cycle ends. The oven may still be very hot and cause burns. To avoid possible burns, stand to side of oven when opening door to allow steam or hot air to escape.
- The health of some birds is extremely sensitive to fumes given off during the self clean cycle of any range. Move birds to a well ventilated room.

Important notes:

- Completely remove all oven racks and any accessories from oven cavity to avoid damage to oven racks. If the oven racks are not removed they may discolor.
- Remove all items from the oven and cooktop including cookware, utensils, and any aluminum foil. Aluminum foil will not withstand high temperatures from a self clean cycle and will melt.

- Do not spray oven cleaners or oven protective coatings in or around any part of the oven interior. Clean any soil from the oven frame, the door liner outside the oven door gasket, and the small area at the front center of the oven bottom (Figure 35). These areas heat sufficiently to burn soil on. Clean using soap and water prior to starting Self Clean.
- Remove any excessive spills. Any spills on the oven bottom should be wiped up and removed before starting a self clean cycle. To clean use hot, soapy water and a cloth. Large spills can cause heavy smoke or fire when subjected to high temperatures.
- Do not allow food spills with high sugar or acid content (such as milk, tomatoes, sauerkraut, fruit juices, or pie fillings) to remain on the surface as they may leave a dull spot even after cleaning.
- Do not clean the oven door gasket. The woven material in the gasket is essential for a good seal. Care should be taken not to rub, damage, or remove the oven door gasket. Doing so could cause damage to the door gasket and compromise the performance of the oven.



30 SETTING OVEN CONTROLS

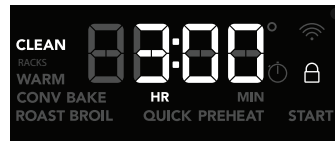
- The kitchen area should be well ventilated using an open window, ventilation fan, or exhaust hood during the first self clean cycle. This will help eliminate the normal odors.
- Do not attempt to open the oven door when the OVEN LOCK indicator light is flashing. Allow about 15 seconds for the motorized door latch mechanism to completely lock or unlock the oven door.
- When the clean time finishes, the oven door will remain locked until the range has cooled sufficiently. In addition to the clean time that was programmed, you must allow about 1 additional hour for the oven to cool before you will be able to open the oven door.

Setting Self Clean

To set self clean:

Be sure the oven is empty and all oven racks are removed. Remove all items from the oven. Be sure oven door is completely closed.

1. Press **Self Clean**. The warning to remove **RACKS** will flash in the display to remind you that oven racks should be removed before a self clean. The default 3 hour clean time will appear in the display.



2. Press **START** to activate self clean.
3. The **RACKS** warning will end and Self Clean will start. The motor door lock will begin locking the oven door. Do not open the oven door while the lock motor is running or when any locking indicators or displays are showing. The oven door is completely locked in about 15 seconds.
 - Once the oven door has locked, **CLEAN** will appear in the display indicating self clean has started.
 - Do not force the oven door open when self-clean is active. This can damage the automatic door-locking system.
 - Use caution when opening the door after self-clean cycle is complete; the oven may still be very hot.
4. When self clean is finished: **CLEAN** message will turn off, and **Hot** will appear in display window.



5. Once the oven has cooled down (about 1 hour) and **Hot** is no longer displayed, the oven door may be opened.

CAUTION: To avoid possible burns, use care when opening the oven door after the self-cleaning cycle. Stand to the side of the oven when opening the door to allow hot steam and air to escape.

When the oven interior has completely cooled, wipe away any residue or powdered ash with a damp cloth or paper towel.

Cook Time

Use Cook Time to set the amount of time needed for most oven functions. The oven will turn on immediately (or after a specified delay) and stop automatically after the set cook time ends.

To set Cook Time:

1. Press **Cook Time**. The display will show a time of 0:00 (0 hours and 00 minutes).
2. Press **Up or Down** arrows until the desired time for cooking shows in the display. You can press and hold the **Up** or **Down** arrow to change the time faster.
3. Press **START**. The timer will start counting down..
4. When the time runs out, the display will show "End" and the oven will turn off.

To turn off the oven before the time runs out, press **OFF**.

Delay Start

Delay Start allows a delayed starting time only for the Bake function. Prior to setting a delay start, be sure the time of day is set correctly. The maximum delay for a Delay Start is one hour.

To set Cook Time:

1. Choose the Bake and set the temperature.
2. Set a Cook Time if desired.
3. Press **Delay Start**. The display will show a time of 0:00 (0 hours and 00 minutes).
4. Press **Up or Down** arrows until the desired time delay shows in the display. You can press and hold the **Up** or **Down** arrow to change the time faster.
5. Press **START**. The timer will start counting down.
6. When the time runs out, the chosen cooking function will start. If a Cook Time was set, the remaining cook time will show in the display.

To stop the Delay Start timer at any time, press **OFF**.

Keep Warm

Keep Warm should only be used with foods that are fully cooked and at serving temperatures. Keep Warm will keep foods warm and ready for serving at 170° F (77°C). If needed, arrange oven racks and place cooked food in oven.

To set Keep Warm:

1. Press **Keep Warm**. (If no other keys are touched within 25 seconds the request for Warm will clear.)



2. Press **START**. Keep Warm will automatically turn on and remain on for 3 hours or until cancelled.

To turn off Keep Warm at any time, press **OFF**.

32 CARE AND CLEANING

Remove spills and any heavy soiling as soon as possible. Regular cleaning will reduce the difficulty of major cleaning later.

CAUTION

Before cleaning any part of the appliance, be sure all controls are turned off and the appliance is cool.

If ammonia or appliance cleaners are used, they must be removed and the appliance must be thoroughly rinsed before operating. Follow manufacturer's instructions and provide adequate ventilation.

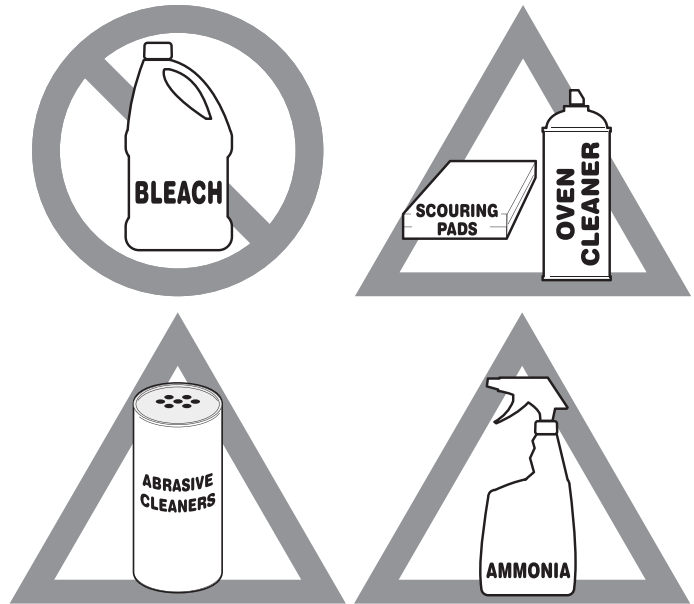


Figure 12: Use cleaners with caution

Surface or Area	Cleaning Recommendation
Aluminum and vinyl	Using a soft cloth, clean with mild dish detergent and water. Rinse with clean water, dry and polish with a soft, clean cloth.
Painted and plastic control knobs Painted body parts Painted decorative trims	Using a soft cloth, clean with mild dish detergent and water or a 50/50 solution of vinegar and water. Rinse with clean water, dry and polish with a soft, clean cloth. Glass cleaners may be used, but do not apply directly to surface; spray onto cloth and wipe.
Control panel	Using a soft cloth, clean with mild dish detergent and water or a 50/50 solution of vinegar and water. Do not spray liquids directly on the oven control and display area. Do not use large amounts of water on the control panel - excess water on the control area may cause damage to the appliance. Do not use other liquid cleaners, abrasive cleaners, scouring pads, or paper towels - they will damage the finish.
Control knobs	Using a soft cloth, clean with mild dish detergent and water or a 50/50 solution of vinegar and water. To remove control knobs: turn to the OFF position, grasp firmly, and pull off the shaft. To replace knobs after cleaning, line up the OFF markings and push the knobs into place.
Stainless Steel	Using a soft cloth, clean with mild dish detergent and water or a 50/50 solution of vinegar and water. Rinse with clean water, dry with a soft clean cloth. Do not use cleaners containing abrasives, chlorides, chlorine, or ammonia.
Smudge Proof™ Stainless Steel Black Stainless Steel	Using a soft cloth, clean with mild dish detergent and water or a 50/50 solution of vinegar and water. Rinse with clean water, dry with a soft clean cloth. Do not use appliance cleaner, stainless steel cleaner, or cleaner containing abrasives, chlorides, chlorine, or ammonia. These cleaners may damage the finish.

Surface or Area	Cleaning Recommendation
Porcelain-enameled broiler pan and insert Porcelain door liner Porcelain body parts	Rinse with clean water and a damp cloth. Scrub gently with a soapy, non-abrasive scouring pad to remove most spots. Rinse with a 50/50 solution of clean water and ammonia. If necessary, cover difficult spots with an ammonia-soaked paper towel for 30 to 40 minutes. Rinse and wipe dry with a clean cloth. Remove all cleaners or future heating could damage the porcelain. Do not allow food spills with a high sugar or acid content (milk, tomatoes, sauerkraut, fruit juices or pie filling) to remain on porcelain surfaces. These spills may cause a dull spot even after cleaning.
Manual clean oven interior	The oven interior is porcelain coated and safe to clean using oven cleaners. Always follow manufacturer's instructions for cleaners. After cleaning, remove any oven cleaner or the porcelain may become damaged during future heating. Do not spray oven cleaner on any electrical controls or switches. Do not spray or allow oven cleaner to build up on the oven temperature sensing probe. Do not spray cleaner on oven door trim, door gasket, plastic drawer glides, handles or any exterior surfaces of the appliance.
Self-cleaning oven interior	Before setting a self-clean cycle, clean soils from the oven frame, areas outside the oven door gasket, and the small area at the front center of the oven bottom. See "Self Clean" on page 23.
Oven door	Use mild dish detergent and water or a 50/50 solution of vinegar and water to clean the top, sides, and front of the oven door. Rinse well. Glass cleaner may be used on the outside glass of the door. Ceramic smoothtop cleaner or polish may be used on the interior door glass. Do not immerse the door in water. Do not spray or allow water or cleaners to enter the door vents. Do not use oven cleaners, cleaning powders, or any harsh abrasive cleaning materials on the outside of the oven door. Do not clean the oven door gasket. The oven door gasket is made of a woven material which is essential for a good seal. Do not rub, damage, or remove this gasket.
Ceramic cooktop	See "Cooktop Cleaning" on page 34.

34 CARE AND CLEANING

Cooktop Maintenance

Consistent and proper cleaning is essential to maintaining your ceramic glass cooktop.

Prior to using your cooktop for the first time, apply a ceramic cooktop cleaning cream (available in most hardware, grocery, and department stores) to the ceramic surface. Clean and buff with a clean paper towel. This will make cleaning easier when soiled from cooking. Cooktop cleaning creams leave a protective finish on the glass to help prevent scratches and abrasions.

Sliding pans on the cooktop can cause metal markings on the cooktop surface. These marks should be removed immediately after the cooktop has cooled using cooktop cleaning cream. Metal marks can become permanent if not removed prior to future use.

Cookware (cast iron, metal, ceramic, or glass) with rough bottoms can mark or scratch the cooktop surface.

Do not:

- Slide anything metal or glass across the cooktop.
- Use cookware with dirt or dirt build up on the bottom; always use clean cookware.
- Use your cooktop as a cutting board or work surface in the kitchen.
- Cook foods directly on the cooktop surface without a pan.
- Drop heavy or hard objects on the ceramic glass cooktop; they may cause it to crack.

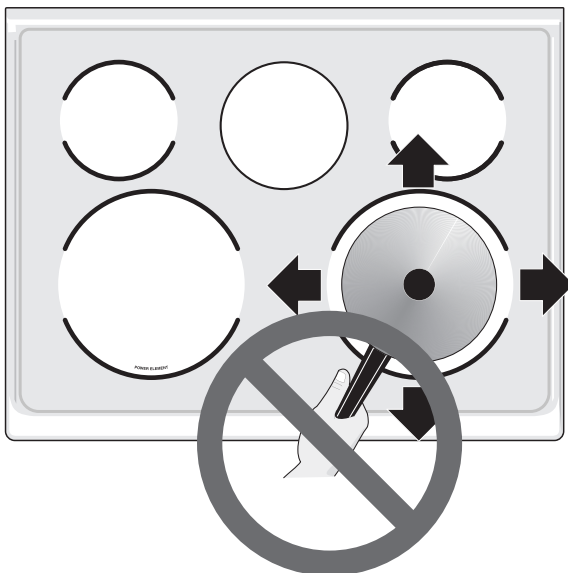


Figure 13: Cooktop care

Cooktop Cleaning

CAUTION

Before cleaning the cooktop, be sure the controls are turned to OFF and the cooktop is cool. The glass surface could be hot from contact with hot cookware, and burns may occur if the glass surface is touched before it has cooled sufficiently.

WARNING

Do not use a cooktop cleaner on a hot cooktop. The fumes can be hazardous to your health, and can chemically damage the ceramic-glass surface.

For light to moderate soil:

For light to moderate soil: Apply a few drops of cooktop cleaning cream directly to the cooktop. Use a clean paper towel to clean the entire cooktop surface. Make sure the cooktop is cleaned thoroughly, leaving no residue. Do not use the towel you use to clean the cooktop for any other purpose.

For heavy, burned on soil:

Apply a few drops of cooktop cleaning cream directly to the soiled area. Rub the soiled area using a non-abrasive cleaning tool, applying pressure as needed. Do not use the pad you use to clean the cooktop for any other purpose.

If soils remain, carefully scrape soils with a metal razor blade scraper held at a 30 degree angle to the surface. Finish cleaning with cooktop cleaning cream.

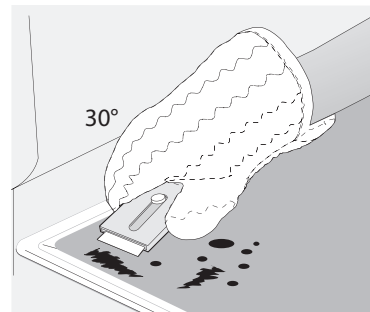


Figure 14: Cooktop cleaning

IMPORTANT

Damage to the ceramic glass cooktop may occur if you use an abrasive type cleaning pad. Only use cleaning products that have been specifically designed for ceramic glass cooktops.

General Cleaning

Refer to the table at the beginning of this chapter for more information about cleaning specific parts of the oven.

Follow these cleaning precautions:

- Allow the oven to cool before cleaning.
- Wear rubber gloves when cleaning the appliance manually.

Remove soils using hot, soapy water. Do not allow food spills with a high sugar or acid content (such as milk, tomatoes, sauerkraut, fruit juices or pie filling) to remain on the surface as they may cause a dull spot even after cleaning. Remove spillovers and heavy soiling as soon as possible. Regular cleaning will reduce the effort required for major cleaning later.



CAUTION

Before manually cleaning any part of the oven, be sure all controls are turned off and the oven is cool. The oven may be hot and can cause burns.

Remove all racks and accessories from the oven before cleaning.

Ammonia must be rinsed before operating the oven. Provide adequate ventilation.

Cleaning Porcelain Enamel Oven

The oven interior is porcelain on steel, it is safe to clean using oven cleaners.

To remove heavy soil:

1. Allow a dish of ammonia to sit in the oven overnight or for several hours with the oven door closed. Clean softened dirt spots using hot, soapy water. Rinse well with water and a clean cloth.
2. If soil remains, use a nonabrasive scouring pad or a nonabrasive cleaner. If necessary, use an oven cleaner following manufacturer's instructions. Do not mix ammonia with other cleaners.
3. Clean any soil from the oven frame, the door liner outside the oven door gasket and the small area at the front center of the oven bottom. Clean with hot, soapy water. Rinse well using clean water and a cloth.

36 CARE AND CLEANING

Aluminum Foil, Aluminum Utensils, and Oven Liners



WARNING

Never cover any slots, holes, or passages in the oven bottom or cover an entire oven rack with materials such as aluminum foil. Doing so blocks air flow through the oven and may cause carbon monoxide poisoning. Aluminum foil linings may trap heat, causing a fire hazard.

- Protective liners—Do not use aluminum foil to line the oven bottom. The high heat of the oven can melt these materials to the oven cavity and ruin the oven. These types of materials can also reduce the effectiveness of the air circulation in the oven and produce poor baking results. Only use aluminum foil as recommended in this manual. Improper installation of these liners may result in risk of electric shock or fire.
- Aluminum utensils - The melting point of aluminum is much lower than that of other metals. Care must be taken when aluminum pots or pans are used.
- Oven racks - Do not use aluminum foil to cover the oven racks. Using a liner in the oven restricts the heat and air flow needed to obtain the best possible cooking results for any oven.

Replacing the Oven Light



CAUTION

Be sure the oven is unplugged and all parts are cool before replacing the oven light.

The interior oven light is located at the rear of the oven cavity and is covered by a glass shield. The glass shield must be in place whenever the oven is in use.

To replace the oven interior light bulb:

1. Turn electrical power off at the main source or unplug the appliance.
2. Remove interior oven light shield by turning a quarter turn counter-clockwise.
3. Replace bulb with a new T-4 type Halogen 25 watt appliance bulb.



NOTE

Wear a cotton glove or use a paper towel when installing a new bulb. Do not touch the new bulb with your fingers when replacing. This will shorten the life of the bulb.

4. Replace glass oven light shield by rotating clockwise.
5. Turn power back on again at the main source (or plug the appliance back in).
6. Be sure to reset the time of day on the clock.

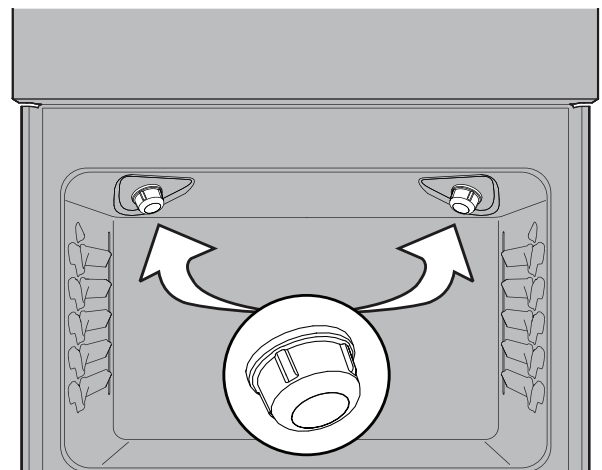


Figure 16: Oven Halogen light

Removing and Replacing the Oven Door



CAUTION

The door is heavy. For safe, temporary storage, lay the door flat with the inside of the door facing down.



IMPORTANT

Special door care instructions - For safe, temporary storage, lay the door flat with the inside of the door facing down.

Most oven doors contain glass that can break. Do not hit the glass with pots, pans, or any other object. Scratching, hitting, jarring, or stressing the glass may weaken its structure, causing an increased risk of breakage at a later time. Do not close the oven door until all of the oven racks are fully in place.

To remove the oven door:

1. Open oven door completely, horizontal with floor (Figure 17).
2. Pull up the lock located on each hinge support toward front of the oven until the lock stops. You may have to apply a little upward pressure on the lock to pull it up ().
3. Grasp the door by the sides, and close the door until the door frame makes contact with the unlocked hinges ().
4. Pull the bottom of the door toward you while rotating the top of the door toward the appliance to completely disengage the hinge levers (Figure 20).

To replace the oven door:

1. Firmly grasp both sides of oven door along the door sides. Do not use the oven door handle (Figure 20).
2. Hold the oven door at the same angle as the removal position (Figure 19) Carefully insert the hinge levers into the oven frame until you feel the hinge levers are seated into the hinge notches. The hinge arms must be fully seated into the hinge notches before the oven door can be fully opened.
3. Fully open the oven door, horizontal with floor (Figure 17).
4. Push the door hinge locks up toward and into the oven frame on both left and right oven door hinges to the locked position (Figure 18).
5. Close the oven door.

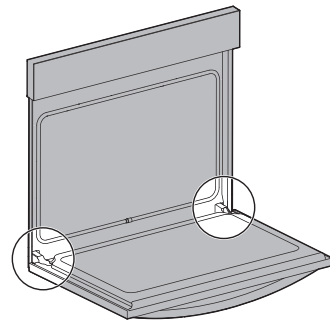


Figure 17: Door hinge location

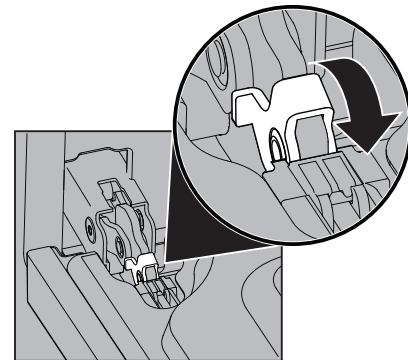


Figure 18: Door hinge lock

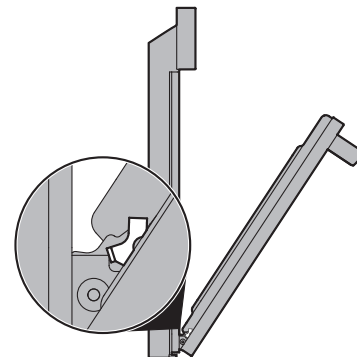


Figure 19: Removal position

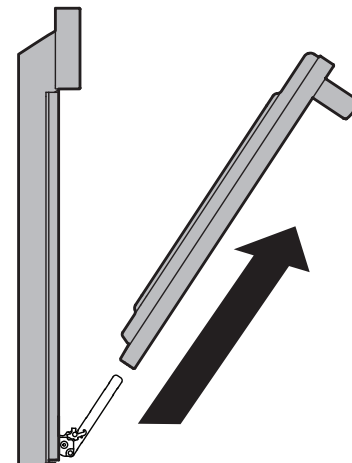







Figure 20: Remove door

38 BEFORE YOU CALL

Oven Baking

For best cooking results, preheat the oven before baking cookies, breads, cakes, pies, pastries, etc. There is no need to preheat the oven for roasting meat or baking casseroles. The cooking times and temperatures needed to bake a product may vary slightly from your previously owned appliance.

Baking Problems and Solutions		
Baking Problems	Causes	Corrections
Cookies and biscuits burn on the bottom. 	Cookies and biscuits put into oven before oven is preheated.	Allow oven to preheat to desired temperature before placing food in oven. Choose pan sizes that will permit at least 2" of air space
Cakes too dark on top or bottom 	Cakes put in oven before oven is preheated. Rack position too high or too low. Oven too hot.	Allow oven to preheat to the selected temperature before placing food in the oven. Use proper rack position for baking needs. Set oven temperature 25°F (13°C) lower than recommended.
Cakes not done in center 	Oven too hot. Incorrect pan size. Pan not centered in oven. Glass cookware slow heat conductor.	Set oven temperature 25°F (13°C) lower than recommended. Use pan size suggested in recipe. Use proper rack position and place pan so there are at least 2" (5.1 cm) of space on all sides of pan. Reduce temperature and increase cook time or use shiny bakeware.
Cakes not level. 	Oven not level. Pan too close to oven wall or rack overcrowded. Pan warped. Oven light left on while baking.	Place a marked glass measuring cup filled with water on the center of the oven rack. If the water level is uneven, refer to the installation instructions for leveling the oven. Use proper rack position and place pan so there are at least 2" (5.1 cm) of space on all sides of pan. Do not use pans that are dented or warped. Do not leave the oven light on while baking.
Foods not done when cooking time is over. 	Oven too cool. Oven overcrowded. Oven door opened too frequently.	Set oven temperature 25°F (13°C) higher than suggested and bake for the recommended time. Be sure to remove all pans from the oven except the ones to be used for baking. Open oven door only after the shortest recommended baking time.

Let us help you troubleshoot your concern! This section will help you with common issues. If you need us, visit our website, chat with an agent, or call us. We may be able to help you avoid a service visit. If you do need service, we can get that started for you!

1-800-374-4432 (United States)
Frigidaire.com

1-800-265-8352 (Canada)
Frigidaire.ca

Problem	Cause / Solution
Entire appliance does not operate	Appliance not connected. Make sure power cord is plugged properly into outlet. Check your fuse box or breaker box to make sure the circuit is active. Electrical power outage. Check house lights to be sure. Call your local electric company for service outage information.

Oven Problems	
Problem	Cause / Solution
Poor baking results.	Many factors affect baking results. Use proper oven rack position. Center food in the oven and space pans to allow air to circulate. Preheat the oven to the set temperature before placing food in the oven. Try adjusting the recipe's recommended temperature or baking time. See "Adjust Oven Temperature (UPO)" on page 23 if you feel the oven is too hot or too cool.
Flames inside oven or smoking from oven vent.	Excessive spills in oven. Grease or food spilled onto the oven bottom or oven cavity. Wipe up excessive spills before starting the oven. If flames or excessive smoke are present when using broil, see "Setting Broil" on page 27.
Oven smokes excessively when broiling.	Incorrect setting. Follow the "Setting Broil" on page 27. Meat too close to the broil element or burner. Reposition the broil pan to provide proper clearance between the meat and broil element or burner. Remove excess fat from meat. Cut remaining fatty edges to prevent curling, but do not cut into lean. Grease build up on oven surfaces. Regular cleaning is necessary when broiling frequently. Grease or food splatters will cause excessive smoking.
Oven control panel beeps and displays any F or E code error.	Oven control has detected a fault or error condition. To clear the error, press the OFF key on the control panel. Once the error code is cleared, try the bake or broil function. If the F or E code error repeats, turn off the power to appliance, wait 5 minutes, and then repower the appliance. Set the clock with correct time of day. Try the bake or broil function again. If the fault recurs, press the OFF key to clear.
Oven portion of appliance does not operate.	Be sure the regulator gas valve is turned to ON. See installation instructions. The time of day is not set. The clock must be set in order to operate the oven. See "Setting the Clock" on page 22. Be sure the oven controls are set properly for the desired function. See "Setting Oven Controls" on page 21 and review instructions for the desired cooking function in this manual or see "Entire appliance does not operate." in this checklist.
Convection fan does not rotate.	Oven door is open. The convection fan will turn off if the oven door is opened when convection is active. Close the oven door. On gas models, the convection fan will begin to rotate about 6 minutes into the preheating process.

40 BEFORE YOU CALL

Cooktop Problems	
Problem	Cause / Solution
Surface element is too hot or not hot enough.	Incorrect surface control setting. Adjust power level setting.
Surface element does not heat or does not heat evenly.	Be sure the correct surface control knob is turned on for the element needed. Cookware is light weight or warped. Use only flat, evenly balanced, medium or heavyweight cookware. Flat pans heat better than warped pans. Cookware materials and weight of the material affect heating. Heavy and medium-weight pans heat evenly. Because lightweight pans heat unevenly, foods may burn easily.
Areas of discoloration with metallic sheen on cooktop surface.	Mineral deposits from water and food. Remove them using cooktop cleaning creme applied to the ceramic surface. Buff with a non-abrasive cloth or sponge.
Scratches or abrasions on cooktop surface.	Coarse particles such as salt or hardened soils between cooktop and utensils can cause scratches. Be sure the cooktop surface and bottoms of utensils are clean before use. Small scratches do not affect cooking and will become less visible with time. Cleaning materials not recommended for ceramic-glass cooktop have been used. Apply cooktop cleaning creme to the ceramic surface. Buff with a non-abrasive cloth or sponge. Cookware with a rough bottom was used. Use smooth, flat-bottomed cookware.
Metal marks on the cooktop.	Sliding or scraping of metal utensils on cooktop surface. Do not slide metal utensils on the cooktop surface. Apply cooktop cleaning creme to the ceramic surface. Buff with a non-abrasive cloth or sponge. For more information, see "Cooktop Maintenance" on page 34
Brown streaks or specks on cooktop surface.	Boil overs are cooked onto the surface. When cooktop is cool, use a razor blade scraper to remove soil. For more information see "Cooktop Maintenance" on page 34.

Other Problems	
Problem	Cause / Solution
Appliance is not level.	<p>Be sure the floor is level, strong, and stable enough to adequately support the range.</p> <p>If the floor is sagging or sloping, contact a carpenter to correct the situation.</p> <p>Poor installation. Place the oven rack in the center of the oven. Place a level on the oven rack. Adjust the leveling legs at the base of the appliance until the rack is level.</p> <p>Kitchen cabinet alignment may make range appear not level. Be sure cabinets are square and have sufficient room for appliance clearance.</p>
Cannot move appliance easily. Appliance must be accessible for service.	<p>Cabinets not square or are built in too tightly. Contact the builder or installer to make the appliance accessible.</p> <p>Carpet interferes with appliance. Provide sufficient space so the appliance can be lifted over carpet. Installation over carpet is not advised. See the installation instructions for guidelines specific to your appliance.</p>
Oven light does not work.	Be sure the oven light is secure in the socket. See "Replacing the Oven Light" on page 26.

42 WARRANTY

Your appliance is covered by a one year limited warranty. For one year from your original date of purchase, Electrolux will pay all costs for repairing or replacing any parts of this appliance that prove to be defective in materials or workmanship when such appliance is installed, used and maintained in accordance with the provided instructions.

Exclusions

This warranty does not cover the following:

1. Products with original serial numbers that have been removed, altered or cannot be readily determined.
2. Product that has been transferred from its original owner to another party or removed outside the USA or Canada.
3. Rust on the interior or exterior of the unit.
4. Products purchased "as-is" are not covered by this warranty.
5. Food loss due to any refrigerator or freezer failures.
6. Products used in a commercial setting.
7. Service calls which do not involve malfunction or defects in materials or workmanship, or for appliances not in ordinary household use or used other than in accordance with the provided instructions.
8. Service calls to correct the installation of your appliance or to instruct you how to use your appliance.
9. Expenses for making the appliance accessible for servicing, such as removal of trim, cupboards, shelves, etc., which are not a part of the appliance when it is shipped from the factory.
10. Service calls to repair or replace appliance light bulbs, air filters, water filters, other consumables, or knobs, handles, or other cosmetic parts.
11. Surcharges including, but not limited to, any after hour, weekend, or holiday service calls, tolls, ferry trip charges, or mileage expense for service calls to remote areas, including the state of Alaska.
12. Damages to the finish of appliance or home incurred during installation, including but not limited to floors, cabinets, walls, etc.
13. Damages caused by: services performed by unauthorized service companies; use of parts other than genuine Electrolux parts or parts obtained from persons other than authorized service companies; or external causes such as abuse, misuse, inadequate power supply, accidents, fires, or acts of God.

DISCLAIMER OF IMPLIED WARRANTIES; LIMITATION OF REMEDIES

CUSTOMER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY SHALL BE PRODUCT REPAIR OR REPLACEMENT AS PROVIDED HEREIN. CLAIMS BASED ON IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR OR THE SHORTEST PERIOD ALLOWED BY LAW, BUT NOT LESS THAN ONE YEAR. ELECTROLUX SHALL NOT BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES SUCH AS PROPERTY DAMAGE AND INCIDENTAL EXPENSES RESULTING FROM ANY BREACH OF THIS WRITTEN LIMITED WARRANTY OR ANY IMPLIED WARRANTY. SOME STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR LIMITATIONS ON THE DURATION OF IMPLIED WARRANTIES, SO THESE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WRITTEN WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

If You Need Service

Keep your receipt, delivery slip, or some other appropriate payment record to establish the warranty period should service be required. If service is performed, it is in your best interest to obtain and keep all receipts. Service under this warranty must be obtained by contacting Electrolux at the addresses or phone numbers below.

This warranty only applies in the USA and Canada. In the USA, your appliance is warranted by Electrolux Major Appliances North America, a division of Electrolux Home Products, Inc. In Canada, your appliance is warranted by Electrolux Canada Corp. Electrolux authorizes no person to change or add to any obligations under this warranty. Obligations for service and parts under this warranty must be performed by Electrolux or an authorized service company. Product features or specifications as described or illustrated are subject to change without notice.

USA
1-800-374-4432
Frigidaire
10200 David Taylor Drive
Charlotte, NC 28262

FRIGIDAIRE

Canada
1.800.265.8352
Electrolux Canada Corp.
5855 Terry Fox Way
Mississauga, Ontario, Canada
L5V 3E4

FRIGIDAIRE®

welcome home

Our home is your home. Visit us if you need help with any of these things:



owner support



accessories



service

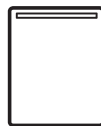


registration

(See your registration card for more information.)

Frigidaire.com
1-800-374-4432

Frigidaire.ca
1-800-265-8352



Dishwasher

use & care

Introduction.....	2	Operating Instructions	8
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2

INTRODUCTION

Welcome to our family

Thank you for bringing Frigidaire into your home! We see your purchase as the beginning of a long relationship together.

This manual is your resource for the use and care of your product. Please read it before using your appliance. Keep it handy for quick reference. If something doesn't seem right, the troubleshooting section will help you with common issues.

FAQs, helpful tips and videos, cleaning products, and kitchen and home accessories are available at www.frigidaire.com.

We are here for you! Visit our website, chat with an agent, or call us if you need help. We may be able to help you avoid a service visit. If you do need service, we can get that started for you.

Let's make it official! Be sure to register your product.

Keep your product info here so it's easy to find.

Model Number _____

Serial Number _____

Purchase Date _____

NOTE

Very Important Information - Read Before Operating Your Dishwasher!

Normal Operating Sounds

This dishwasher does not sound like most dishwashers - IT'S QUIETER.

Your Precision Direct Wash System dishwasher uses energy efficient motors for the wash and drain portions of the cycle you select. Each cycle has a series of water fills and drains for washing and rinsing dishes. As each cycle begins, you may-or may not- hear the drain motor.

The next sound you will hear is the splashing water as it enters the tub. Then the lower arm rotates and circulates water. This is followed by a pause and a slightly different sound as the upper arms spray water. If you listen closely, you will hear the change in sound as the wash action switches from one arm to the other.

PLEASE BE ADVISED: If you compare this dishwasher to previous models, you may be surprised at what you DON'T hear.

NOTE

Why Energy Efficient Units run long cycles: Several factors are important to washing dishware. The energy use of the dishwasher was reduced by applying more of the factors that don't use so much energy and less of the ones that use more. As a result, you will see that the wash cycles take longer.

NOTE

The filters will need to be cleaned to maximize wash performance during the life of your dishwasher. See "Recommended Frequency to Clean Your Filters" for a cleaning schedule.



WARNING

When using your dishwasher, follow basic precautions, including the following:

For your Safety

- Use your dishwasher only as instructed in this Use and Care Manual.
- This Manual does not cover every possible condition and situation that may occur. Use common sense and caution when installing, operating and maintaining any appliance.
- NSF certified residential dishwashers are not intended for licensed food establishments.
- **DISHWASHER MUST BE ELECTRICALLY GROUNDED.** Read the Installation Instructions for details.
- This dishwasher is designed to operate on regular house current (120V, 60Hz). Use a circuit equipped with a 15 ampere fuse or circuit breaker. Use a 20 ampere fuse if dishwasher is connected with a food disposer.
- Do not operate dishwasher unless all enclosure panels are in their proper place.
- To avoid entrapment and/or suffocation, remove door or door latch mechanism from any dishwasher that is discarded or not in use.
- Keep young children and infants away from dishwasher when it is operating.
- Do not let children abuse, sit, stand or play on door or racks of a dishwasher.
- Use only detergents and rinse agents recommended for use in a dishwasher.
- Store dishwasher detergent and rinse agents out of the reach of children.
- Do not wash plastic items unless marked: "Dishwasher Safe" or equivalent. Check with manufacturer for recommendations, if not marked. Items that are not marked dishwasher safe may melt and create a potential fire hazard.
- Disconnect electrical power to dishwasher before servicing.
- If the dishwasher drains into a food disposer, make sure disposer is completely empty before running dishwasher.
- Repairs should be done by a qualified technician.
- Do not tamper with controls.
- Do not touch the heating element during or immediately after wash has completed.
- Use care unloading the dishwasher when the Sanitize option has been selected. Contents may be hot to the touch immediately after the end of cycle.
- Water vapor from the vent may be hot to the touch when the Sanitize option has been selected. Use care and do not let small children play around or touch the vent area of the dishwasher.
- When loading items to be washed:
 - Locate sharp items and knives so that they are not likely to damage the door seal or tub.
 - Load sharp items and knives with the handles up to reduce the risk of cut-type injuries.
- Under certain conditions, hydrogen gas may be produced in a hot water system that has not been used for 2 weeks or more. **HYDROGEN GAS IS EXPLOSIVE.** If hot water system has not been used for such a period, before using dishwasher, turn on for several minutes. This will release any accumulated hydrogen gas. **HYDROGEN GAS IS FLAMMABLE.** Do not smoke or use an open flame during this time.
- Do not store or use combustible materials, gasoline or other flammable vapors and liquids in the vicinity of this or any other appliance.

4

IMPORTANT SAFETY INFORMATION



WARNING


To reduce the risk of fire, electrical shock or injury when using your dishwasher, follow the previous basic precautions .



WARNING

Please read all instructions before using this appliance.

Safety Definitions

 This is the safety alert symbol. It is used to alert of potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.



DANGER

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



WARNING

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



CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.



IMPORTANT

IMPORTANT indicates installation, operation or maintenance information which is important but not hazard-related.

Child Safety

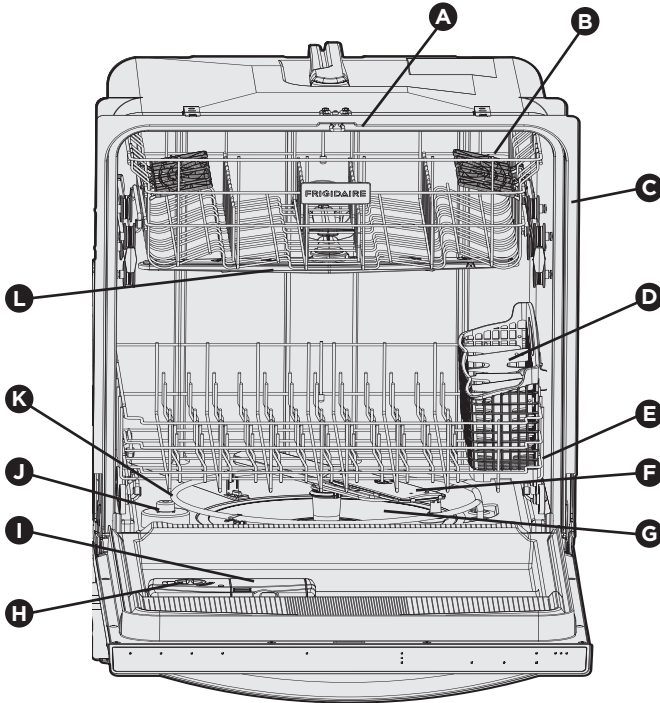
Destroy or recycle the carton, plastic bags, and any exterior wrapping material immediately after the dishwasher is unpacked. Children should never use these items to play. Cartons covered with rugs, bedspreads, plastic sheets or stretch wrap may become airtight chambers, and can quickly cause suffocation.

Safety Instructions

- DO NOT store or use gasoline, or other flammable liquids in the vicinity of this or any other appliance. Read product labels for warnings regarding flammability and other hazards.
- Remove all staples from the carton. Staples can cause severe cuts, and also destroy finishes if they come in contact with other appliances or furniture.

SAVE THESE INSTRUCTIONS

Your dishwasher cleans by spraying a mixture of hot water and detergent through the spray arms against soiled surfaces. First, the dishwasher drains for a few seconds to remove soils dropped while loading, then fills with water covering the filter area. Water is then pumped through the spray arms. Soil particles go through and across the filter and down the drain as the water is pumped out. This series of steps are repeated as needed. The number of water fills varies with the cycle being used.



Features may vary according to model

A	Nozzle or spray arm
B	Top Rack
C	Serial Label (located on right side of door)
D	Silverware Basket
E	Lower Rack
F	Lower Spray Arm

G	Glass trap
H	Rinse Aid
I	Detergent Dispenser
J	Overfill Protector
K	Heating Element
L	Middle Spray Arm

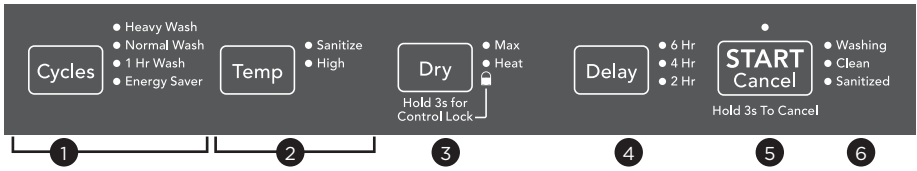


IMPORTANT

Accessories are available for your appliance and may be purchased at Frigidaire.com or by calling 1-800-374-4432 (Frigidaire.ca or 1-800-265-8352 in Canada) or from an authorized seller.

6

CONTROLS AND SETTINGS



NOTE

Your dishwasher uses a DishSense™ Technology to understand how much food is on the dishes and then adjusts the cycle accordingly.



CAUTION

Property Damage Hazard

Before starting dishwasher be sure that the water is connected and turned on. Failure to do so may cause damage to the pump seal and result in water leakage.



NOTE

The dishwasher is programmed to remember your last cycle so you do not have to reset each time. To start the dishwasher using the same cycle and options selected on the previous wash, just press the START/CANCEL pad.

Recommended Cycle for typical use:

The Normal Wash cycle with its factory default options of normal temperature and heated dry together provide the best all around performance. This cycle selection is recommended for everyday use and is suitable for a large range of both dish load sizes and food quantities remaining on those dishes.



NOTE

Not all cycles and options available on all models.

Option Selections

1

Wash Cycle Selections:

Cycle times are approximate and will vary with options selected. Hot water is necessary to activate dishwasher detergent and melt fatty food soils. An automatic sensor will check the incoming water temperature and, if it is not hot enough, the cycle will be lengthened for automatic water heating in the main wash and final rinse of all cycles. This happens even when the Heavy wash option has not been selected. When Heavy wash is selected, an even higher temperature will be reached to handle heavier soil loads.

The DishSense™ Technology checks the soil level on your dishes in the Heavy Wash, and Normal Wash cycles. Depending on soil level, the sensor will determine if additional water fills are needed to clean the dishes or if water fills can be deleted. Cycle time and water usage will vary based on the amount of soil on the dishes. Cycle time will also vary based on the options selected and the incoming water temperature.

2

Temp

The programmed cycles default to the Normal wash cycle option. Press the Temp pad to choose Sanitize or High.

Sanitize Option

To sanitize your dishes and glassware, select Sanitize option. When selected, the light will come on and remain on until end of cycle. The water temperature in the final rinse will be raised to 155°F (68°C) and will maintain that temperature for 9 minutes. This option is available in Heavy and Normal wash cycles. Only these sanitization cycles have been designed to meet NSF requirements.

The cycle time will be extended until the proper water temperature is reached. Washing action will continue during the water heating delay. For best results, the incoming water temperature should be at least 120°F (49°C).

The sanitize criteria may not be satisfied if there is an interruption of the cycle, power failure or if the incoming water temperature is below 120°F (49°C).

Press the Temp pad a second time to turn off the Sanitize option. The light beside the Sanitize pad will turn off.

High Temp Option

When the High Temp option is selected, the dishwasher heats water in the main wash to approximately 155°F (68°C).

This increase in water temperature helps the dishwasher detergent remove food grease and soil from dishes more effectively and aids in improved drying performance. When the High temp wash option is selected, the High temp indicator will come on and remain on until the end of the cycle. To turn off the High temp wash option, press the Temp pad to select a different temperature option.

3 Max Dry

When the Max Dry option is selected, the dishwasher extends drying time by approximately 20 minutes. The Max Dry option can be used with all cycles except Energy Saver. For best drying performance, also apply an increased wash temperature by selecting High Temp or even better, the Sanitize option.

The energy required to use the Max Dry option costs pennies per cycle. You may choose not to select the Max Dry option; however you may have items in your dish load that will not be completely dry at the end of the cycle.

Heat Dry

The Heat Dry option in combination with rinse aid will enhance drying performance. The energy required to use the Heat Dry option costs pennies per cycle; however you will have items in your dish load that will not be completely dry at the end of the cycle.

Select the Normal Wash cycle and High Temp wash option along with a Rinse Aid agent for improved drying performance.

4 Delay Time

The Delay option allows you to automatically delay starting your dishwasher from 2-4-6 hours.

To activate delay option, press the pad once for a 2 hour delay, twice for 4 hours and three times for 6 hours. A light will come on indicating the delay start hours and will remain on until cycle starts.

Press the START/CANCEL pad to start the delay option. If the delay option is interrupted, the START/CANCEL pad will have to be pressed again to return to delay option.

To cancel the DELAY option and to begin the selected cycle before the delay period is over, press and hold START/CANCEL pad for 3 seconds.

5 Start/Cancel Button

When cycle and options are selected, LEDs of selected cycle and options are illuminated. The status window displays the cycle time.

To start the cycle, press START/CANCEL pad and close the dishwasher door immediately.

You can cancel a cycle anytime during the cycle. Press and hold the START/CANCEL pad for 3 seconds. The light beside the cycle and option selected will go out, the START/CANCEL light will remain illuminated, the dishwasher will start a 90 second drain. At the end of the drain, select the next desired cycle.

6 Status Indicator Lights

The Washing light comes on at the beginning of the cycle and remains on until the end of the main wash.

The Clean light will come on at the end of cycle and remain on until the door is opened.

When the Sanitize option is selected, the Sanitized light will glow when the Sanitize cycle is finished. If the dishwasher did not properly sanitize the dishes, the light will not come on. This can happen if the cycle is interrupted. The light will remain on until the door is opened.

8

OPERATING INSTRUCTIONS

Operating Instructions

Getting Started

1. Load Dishwasher (**See Dish Preparation**).
2. Add detergent (**See Filling the Detergent Dispenser**).
3. Add Rinse Aid, if needed (**See Rinse Aid**).
4. Select desired CYCLE (**See Cycle and Option Chart**). The cycle indicator light glows when selected.
5. Select desired OPTION (**See Option Selections**). *Option Light glows when selected.*
6. Run hot water faucet nearest dishwasher until water is at or near 120° for optimal performance (**See Water Temperature**). Turn water off.
7. To start, press START/CANCEL pad.
8. Close door to latch.



NOTE

If the dishwasher door is opened while the unit is running, the START/CANCEL pad must be pressed and the door shut immediately to return the unit to the selected cycle and option, this must happen within 10 minutes for the unit to continue the cycle.

Opening the door during cycle

If you open the door while a cycle is running or delay is counting down, the dishwasher will stop running.

The LEDs of selected cycle and options are illuminated, the status window displays the remaining cycle time. The LED above START pad will blink to press start.

To resume, press START pad and close the dishwasher door immediately.

The status window displays 'Close' after the START pad is pressed.

A tone will sound indicating that the dishwasher will begin running from the point of interruption after the door is closed.

If the dishwasher door is kept open for too long, or the door is closed without pressing START pad, the running cycle or delay countdown will be canceled.

Child Lock Controls

To prevent children from accidentally changing the dishwasher cycle or starting the dishwasher, lock the dishwasher controls by pressing and holding the Dry pad for 3 seconds while the door is open. An indicator light on the lock graphic pad will illuminate when the controls are locked and no new selections can be made until the lock is released. To unlock the controls, press the Dry pad, again for 3 seconds until the indicator light goes out.

To Cancel a Cycle

You can cancel a cycle anytime during the cycle. Press and hold the START/CANCEL pad for 3 seconds. The light beside the cycle and option selected will go out, and the START/CANCEL light will remain illuminated, the dishwasher will start a 90 second drain. At the end of the drain, select the next desired cycle.



- * Select the Normal Wash and High Temp options along with a Rinse Aid agent for improved drying performance.

Cycle and Option Chart

Cycle and intended use	Selectable Options Temperature; Drying	Water per Cycle (approx.)	Duration* (approx.)
Heavy Wash Recommended for pots, pans, casseroles and dinnerware having light to heavily soiled loads.	Sanitize, Max Dry, Heat Dry	6 - 8.2 gal. 23 - 31 L.	2.5 - 3.75 Hours
Normal Wash* Recommended for lightly to heavily soiled loads.	Sanitize, High Temp*, Max Dry, Heat Dry	2.9 - 6.7 gal. 11 - 25 L.	2 - 2.75 Hours
1 Hr Wash Recommended for lightly soiled loads only.	Heat Dry	5.4 gal. 20 L.	1 Hour
Energy Saver A cycle used to reduce dishwasher energy consumption.	Heat Dry	3.2 - 4.5 gal. 12 - 17 L.	2 - 2.5 Hours

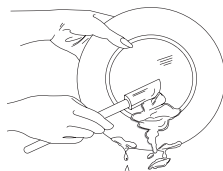
*Does not include drying time.

Dish Preparation

Scrape away large pieces of food, bones, pits, toothpicks, etc.

The continuously filtered wash fluid will remove remaining food

particles. Burned-on foods should be loosened before loading. Empty liquids from glasses and cups.



Foods such as mustard, mayonnaise, vinegar, lemon juice and tomato based products may cause discoloration of stainless steel and plastics if allowed to sit for a long period of time. Unless the dishwasher is to be operated at once, it is best to pre-rinse or use the rinse only cycle to rinse off these food soils.

- Load racks so that large items do not prevent the detergent dispenser from opening.
- Check manufacturer's recommendations before washing items in question.
- If the dishwasher drains into a Food Disposer, **be sure disposer is completely empty before starting dishwasher.**

Loading the Top Rack

Features and appearance of racks and silverware basket may vary from your model.

The upper rack is designed for flexibility in loading a wide variety of items including cups, glasses, stemware, small plates, bowls, etc.

Load glasses in top rack only. Damage may occur if placed in bottom rack.

Load plastic items in top rack only. Melting may occur if placed in bottom rack.

Load items with open ends facing down for better cleaning and draining.

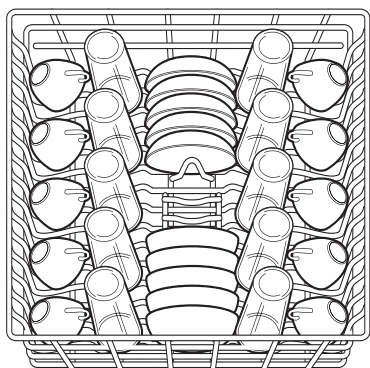
Damage may occur if delicate items touch each other during dishwasher operation.

Long-handled knives and utensils can be placed in top rack.

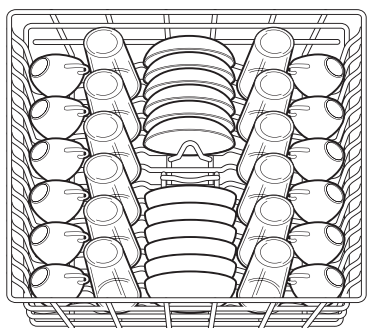
Be sure nothing protrudes through the bottom of the rack to block rotation of middle spray arm.

10

OPERATING INSTRUCTIONS



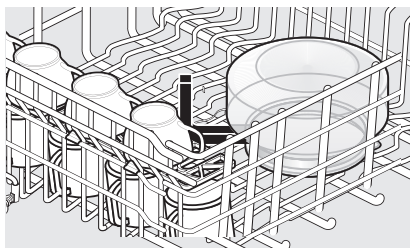
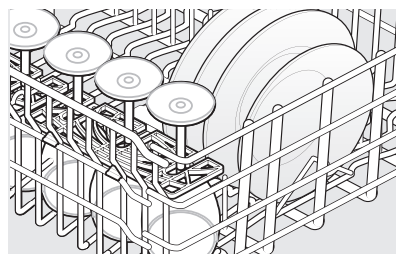
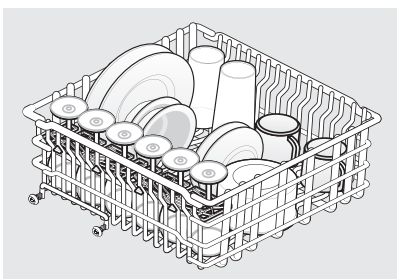
10 place settings standard loading pattern



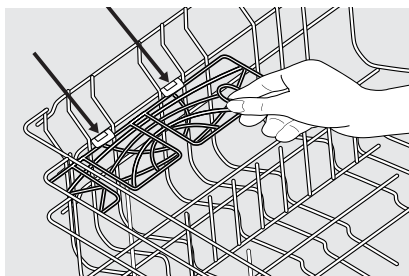
12 place settings standard loading pattern

Upper Rack

The upper rack can be used to wash a wide assortment of items when you don't have a full load. Also, when the upper rack fills up with glasses and the lower rack is still empty, you don't have to wait anymore for clean glasses.



Some models have a fold-down cup shelf or a cup shelf/stemware holder. They can be used to load two levels of cups, juice glasses, and other short items. Stagger items on upper level so that water can reach all inside surfaces. Fold up to load tall glasses.



Place the clips of the cup shelf over the horizontal rack wires and push down to attach the cup shelf onto the second wire of the upper rack.

NOTE

Stemware holder/cup shelf not available on all models.

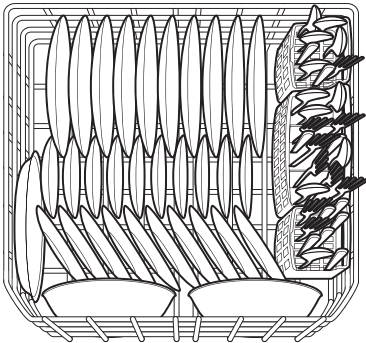
Loading the Bottom Rack

Features and appearance of racks and silverware basket may vary from your model.

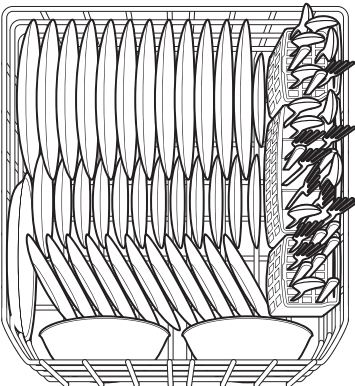
The lower rack is best for plates, saucers, bowls, and cookware. Large items should be placed along the edge so they do not block the spray arm rotation. For best results, place bowls, casseroles, and sauce pans with soiled surface facing down or toward the center. Tilt slightly for better drainage.

Make sure tall items do not block spray arm rotation.

Be sure pan handles do not protrude through the bottom of the rack and block the spray arm rotation.



10 place settings standard loading pattern.



12 place settings standard loading pattern.

Loading the Silverware Basket



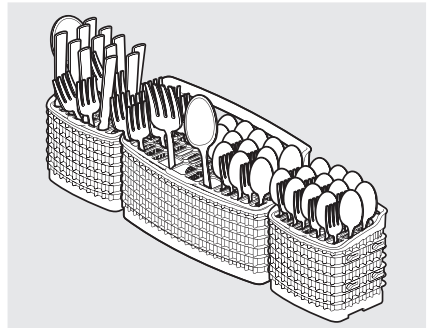
CAUTION

Load sharp items (knives, skewers, etc.) pointing down.

Failure to do so may result in injury.

Features and appearance of racks and silverware basket may vary from your model.

Load the silverware basket while it is in the bottom rack or take the basket out for loading on a counter or table.

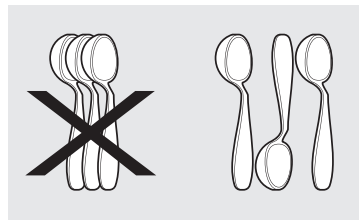


Use suggested loading patterns, as shown, to increase washability of the silverware.

Be sure nothing protrudes through bottom of basket or rack to block the spray arm.

Do not mix silver and stainless to avoid damaging the silver finish.

When covers are up, mix items in each section of the basket with some pointing up and some down to avoid nesting. Water spray cannot reach nested items.



Adding a Dish

To add or remove items after wash cycle starts:

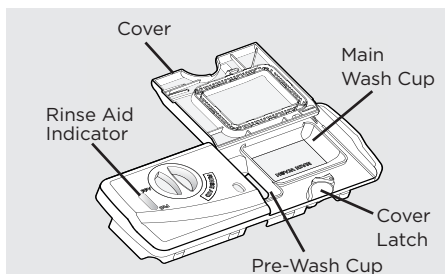
- Unlatch door and wait a few seconds until wash action stops before opening.
- Add the item and wait a few seconds to allow cold air to slowly expand inside dishwasher.
- Close door firmly to latch and press the START/CANCEL pad to resume.



CAUTION

The use of industrial grade detergent can damage the heating coil and other parts of the dishwasher leading to damage to the unit and surrounding property. Use only household grade automatic dishwasher detergents.

- Add detergent just before starting cycle.
- Store detergent in a cool, dry location. Moist or caked detergent may not dissolve properly.



If the cover is closed on the Main Wash Cup open by pressing the Cover Latch.

Filling the Detergent Dispenser

The detergent dispenser has two detergent cups. The smaller one is for addition to the pre-wash and the larger is for release to the main wash.

- Use only fresh automatic dishwashing detergent. Other detergents may cause oversudsing.
- When using automatic dishwashing detergent tabs, place one tab in main wash cup and close.

How much Detergent to use

The amount of detergent to use depends on the water hardness. Water hardness is measured in grains per gallon. Using too little detergent can result in poor cleaning and hard water filming or spotting. Using too much detergent in soft water can cause etching to some glassware which is surface damage that appears like a film but cannot be wiped off. Your local water company, water softener company or county extension agent can tell you the water hardness in your area.

Detergent Usage Chart

Cycle	Soft Water (0-3 grains)	Medium Hard Water (4-8 grains)	Hard Water (9-12 grains)	Very Hard Water (Over 12 grains)
Heavy Wash or Normal Wash	2 teaspoons (each cup: 1/4 full)	5 teaspoons (each cup: fill to line above "Regular")	8 teaspoons (each cup: completely full)	Each Cup: Completely Full (water softener recommended)
1 Hr. Wash	2 teaspoons (Main Wash cup-1/4 full)	5 teaspoons (each cup: fill to line above "Regular")	8 teaspoons (Main Wash cup: completely full)	Main Wash Cup: Completely Full (water softener recommended)
Energy Saver	2 teaspoons (each cup: 1/4 full)	5 teaspoons (each cup: fill to line above "Regular")	8 teaspoons (each cup: completely full)	Each Cup: Completely Full (water softener recommended)

As a rule, use 1 teaspoon for each grain above 12. For very hard water, detergent alone may not be enough and then a water softener is recommended to improve water quality and dishwashing performance. However, when - using automatic dishwashing detergent tablets or packets simply place one in the main wash cup.

Rinse Aid

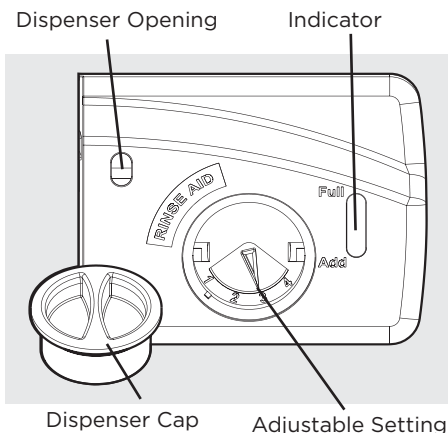
Rinse aid greatly improves drying, reduces water spots, filming, and lubricates wash arm bearing for proper rotation. With it water “sheets” off dishes rather than forming water droplets that cling and leave spots.

A dispenser, located next to the detergent cup, automatically releases a measured amount of rinse aid during the last rinse. If spotting and poor drying are problems, increase the amount of rinse aid dispensed by rotating the dial to a higher number. The dial is located under the dispenser cap. The indicator will be dark when full and will show clear when it is time to refill.

To add liquid rinse aid, turn dispense cap 1/4 turn counterclockwise and lift out. Pour in rinse aid until liquid touches the indicated fill level. Replace cap.

Do not overfill since this can cause oversudsing. Wipe up any spills with a damp cloth.

The dispenser holds enough for 35 to 140 washes, depending on setting.



Water Pressure

The hot water line to dishwasher must provide water pressure between 20 and 120 psi.

Low Water pressure may occur when laundry or showers are in operation. If you experience poor wash performance you may need to wait until water use is reduced before starting dishwasher.

Water Temperature

Hot water is needed for best dishwashing and drying results. Water entering dishwasher should be at least 120°F (49°C) to give satisfactory results.

To check water temperature entering dishwasher:

- Turn on hot water faucet nearest dishwasher for several minutes to clear cool water from pipes.
- Hold a candy or meat thermometer in the water stream to check the temperature.
- If temperature is below 120°F (49°C), have a qualified person raise the hot water heater thermostat setting.



IMPORTANT

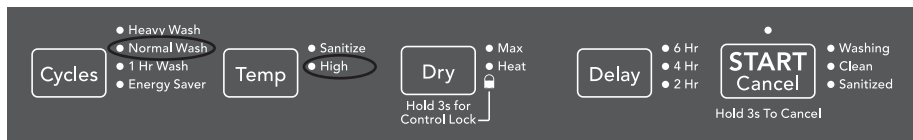
Before starting a cycle, run hot water to clear cool water from pipe.



NOTE

The use of industrial grade detergent can damage the heating coil and other parts of the dishwasher leading to damage to the unit and surrounding property. Use only household grade automatic dishwasher detergents.

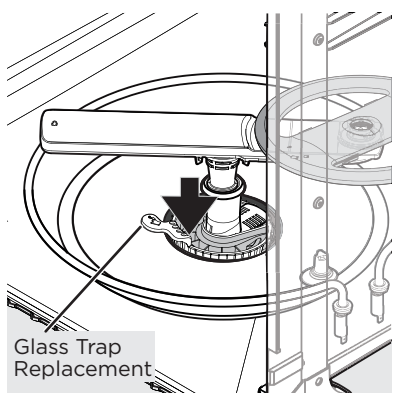
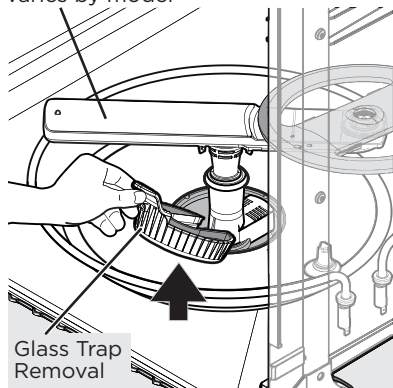
Drying Tip



* Select the Normal Wash and High Temp options along with a Rinse Aid agent for improved drying performance.

14 CARE AND CLEANING

Spray Arm
varies by model



To empty the glass trap:

1. Pull the glass trap handle up and out toward you to remove.
2. Empty any debris collected in the glass trap.
3. Once empty, slide the glass trap back into the same location as when removed, then push down to lock back into position. See image above.

NOTE

Hard water may cause lime deposit buildup on the interior of the dishwasher. For cleaning instructions see "Removing Spots and film" section.



WARNING



Burn Hazard

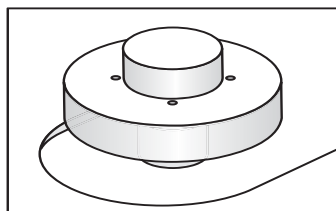
Allow heating element to cool before cleaning the interior.

Failure to do so can result in burns.

Outer Door - Clean outer door with warm soapy water and a dishcloth or sponge. Rinse with clean water and a dry cloth. Do not use harsh cleaners. Inside - The inside of the dishwasher and filter are self-cleaning with normal use. If needed, clean around the tub gasket area with a damp cloth. The filter is self-cleaning. A glass trap located in the center of the filter is designed to collect pieces of broken glass, straws, bones and pits.

Overfill Protector- keeps dishwasher from overflowing and is located in the left front corner of the tub.

- Clean occasionally with household cleaner containing vinegar or bleach to dissolve any buildup.
- Overfill Protector should move up and down freely about one inch. If it does not move, lift and clean underneath.



Cleaning the Interior

Use **Frigidaire ReadyClean® Dishwasher Cleaner Tablets** (Item # 10FFPRDT01) to clean and freshen the interior of the dishwasher. Place one tablet in the bottom of the empty dishwasher tub (not the dispenser), run a rinse cycle, leave washer door closed for at least 6 hours, then resume normal use. One tablet used monthly is recommended for best results.

Care of Drain Air Gap

If a drain air gap was installed for your built-in dishwasher, check to make sure it is clean so the dishwasher will drain properly. A drain air gap is usually mounted on countertop and can be inspected by removing the cover. This is not part of your dishwasher and is not covered by warranty.



CAUTION

Property Damage Hazard

Freezing temperatures may cause water lines to rupture. Be sure all supply lines to and circulating lines within dishwasher are protected.

Failure to do so could result in property damage.



NOTE

See Installation Instructions for more details on disconnecting and restoring service to your dishwasher.

Winterizing

A dishwasher left in an unheated place should be protected from freezing. Have a qualified person do the following:

To Disconnect Service:

1. Turn off electrical power to the dishwasher at the supply source by removing fuses or tripping circuit breaker.
2. Shut off water supply.
3. Place a pan under the inlet valve. Disconnect water line from inlet valve and drain into pan.
4. Disconnect drain line from pump and drain water into pan.

To Restore Service:

1. Direct water line discharge into a pan and open the valve to flush the line.
2. Reconnect the water, drain, and electrical power supply.
3. Turn on water and electrical power supply.
4. Fill both detergent cups and run dishwasher through a HEAVY WASH cycle.
5. Check connections to make sure they do not leak.

16 TROUBLESHOOTING

Before You Call

Review this list before calling for service. It may save you both time and expense. This list includes common experiences that are not the result of defective workmanship or material in your dishwasher.

Food Soils Left on Dishes

- Choose another cycle for longer washing time.
- Check rack loading section for proper loading-avoid nesting items.
- Home water pressure may be too low-should be 20 to 120 pounds per square inch (psi).
- Check incoming water temperature. It should be about 120°F (49°C). **(See Factors Affecting Performance).**
- Check water hardness. For extremely hard water, it may be necessary to install a water softener. **(See Detergent Chart).**
- Use Fresh Detergent.
- Make sure items are not blocking the spray arms, preventing them from rotating.
- Do not overload the dishwasher **(See Preparing and Loading Dishes).**
- Check to verify that the glass trap is maintained and installed properly **(See Care and Cleaning).**

Dishes not Dry

- If you have not selected Max or Heat Dry, and no LEDs are illuminated for these Options, then the heater has been de-activated during the drying phase of the selected Wash Cycle. This is known as Air Dry. Air Dry slightly lowers the energy usage but increases the likelihood that the dishware will not be completely dried.
- Selecting Heat Dry, High Temp or Sanitize Temp options will improve drying performance.
- Make sure the rinse aid dispenser is filled.
- Increase the discharge setting of rinse aid. **(See Rinse Aid).**
- Check the incoming water temperature. Be sure it is at least 120°F (49°C).
- Check for proper loading-avoid nesting items.

- Cups with a concave bottom will collect water. Load them at the far left and right of the upper rack so they will be held in a tilted position.

Drying Tip

- Select the Normal Wash and High Temp option along with a Rinse Aid agent for improved drying performance.
- Containers, bowls, pots/pans, and any dishware with concave surfaces that can collect water should be placed in the rack facing or angled down so that water is able to drain even from the lowest point.
- Plastic items may need to be towel dried.

Glassware/Flatware Spotted or Cloudy

- Check water hardness. For extremely hard water, it may be necessary to install a water softener. **(See Detergent Chart).**
- Water temperature may be low. Avoid extremely low or high temperatures. **(See Factors Affecting Performance).**
- Avoid overloading and improper loading. **(See Preparing and Loading Dishes).**
- Use fresh detergent. Old detergent is ineffective.
- Make sure rinse aid dispenser is filled.
- Check to see that proper amount of detergent is being used for cycle selected. **(See Detergent Dispenser).**
- Home water pressure may be too low-it should be 20 to 120 pounds per square inch (psi).

Dishware Chipped

- Load with care and do not overload. **(See Preparing and Loading Dishes).**
 - Place delicate items in top rack.
 - Place glasses securely against pins and not over pins.
 - Load items so they are secure and don't jar loose when moving racks in and out. Move racks in and out slowly.
 - Make sure tall glasses and stemware will clear top of tub when rack is pushed in.
 - Fine antique china and crystal should be hand-washed.
-

Vapor at Vent

- Spilled rinse aid can cause foam and lead to overflowing. Wipe up any spills with a damp cloth.

Dishware Stained or Discolored

- Tea and coffee can stain cups. Remove the stains by hand washing in a solution of 1/2 cup (120 ml) bleach and one quart (1L) of warm water. Rinse thoroughly.
- Iron deposits in water can cause a yellow or brown film. A special filter installed in the water supply line will correct this problem. **(See Removing Spots and Film).**
- Aluminum utensils can leave gray/black marks when they rub against other items. Load Properly.
- Certain high acid foods can cause discoloration of stainless steel and plastics if allowed to sit for a long period. Rinse by hand if not operating dishwasher at once.
- Mixing stainless steel and silver utensils in silverware basket can cause pitting of the stainless steel blades. Avoid mixing stainless steel and silver.

Water in Bottom of Tub

- Water left in the tub bottom after the cycle is complete is not normal. If water remains in the bottom of the tub, the dishwasher may not be draining properly. **(See Dishwasher Does not Drain Properly).**

Cycle Takes a Long Time

- The cycle may have been automatically lengthened to reach key temperatures due to some factor such as a cool water supply or a large load of dishes.
- Delay option may have been selected.
- Choose lower temperature options to shorten the cycle.
- Cycles that are soil-sensing adjust automatically to assure a good wash - heavier soils will elicit a longer cycle response..

Etching

- Using too much detergent especially in soft or softened water causes damage that looks like a film but cannot be removed.
- Adjust the amount of detergent based on the water hardness. **(Check Detergent Chart).**
- Lower the water temperature by selecting one of the lower temperature options.

Detergent Left in Cups

- Detergent may be old. Discard and use fresh detergent.
- Be sure the dish load doesn't block spray from entering the detergent cup.
- Check to see if cycle has been completed.
- Make sure items do not prevent the detergent dispenser from opening.

Dishwasher Leaks

- Check that the door gasket is pressed into its mounting channel, reaches to the bottom of the tub and does not extend beyond the end rib so as to interfere with door closure.
- Spilled rinse aide can cause foam and lead to overflowing. Wipe up any spills with a damp cloth.
- Check to see that the dishwasher is level. **(See Installation Instructions).**
- Avoid oversudsing by using the correct amount of detergent designed for automatic dishwashers.
- Check to see that dishwasher is level. **(See Installation Instructions).**

Normal Sounds You Will Hear

- Normal sounds include water fill, water spray, draining and motor sounds.
- There is a noticeable change in sound when the wash action switches between the lower and middle spray arm. This is normal since each spray arm has its own sound.
- It is normal for the dishwasher to pause (no sound) when the wash action is switching between the lower and middle spray arms.

18 TROUBLESHOOTING

Dishwasher Won't Run

- Check to see if circuit breaker is tripped or if a fuse is blown.
- Make sure water supply is turned on.
- Check to see if cycle is set correctly. **(See Operating Instructions).**
- Is dishwasher set for Delay Option?
- Make sure START/CANCEL pad is pressed after cycle has been selected.
- Make sure door is closed and latched.

Dishwasher Won't Fill

- Assure the water supply is turned on.
- Check that the overflow protector moves up and down freely. **(See Overflow Protector section).**

Dishwasher Does Not Drain Properly

- If unit is hooked up to a food waste disposer, make sure the disposer is empty.
- Assure the knockout plug has been removed from inside the food waste disposer inlet.
- Assure the drain hose isn't kinked.
- Make sure cycle is complete, not in a pause.
- Assure the glass trap is maintained and installed properly assuring no clogs **(See Care and Cleaning).**

Dishwasher has an Odor

- Soiled dishes left in dishwasher too long can create an odor. Pre-rinse the dishes prior to loading.
- There will be a "new" smell when first installed. This is normal.
- Check to see if unit is draining properly. **(See Dishwasher Does Not Drain Properly).**

Stains on Tub Interior

- Washing large amounts of dishware with tomato based soil can cause a pink/orange appearance. This will not affect performance and will gradually fade over time. Pre-rinsing will reduce the chance of staining. Using no heat dry option will lessen staining.

Opening the door during cycle

- If the dishwasher door is opened while the unit is running, the START/CANCEL pad must be pressed and the door shut immediately to return the unit to the selected cycle and option, this must happen within 10 minutes for the unit to continue the cycle.

Removing Spots and Film

Hard water can cause lime deposit buildup on the interior of the dishwasher. Dishes and glasses may also get spots and film for a number of reasons. **(See Glassware/Flatware Spotted or Cloudy section).** To remove buildup, and film, clean using the following instructions:

1. Load clean dishes and glasses in normal manner. Do not load any metal utensils or silverware.
2. Do not add detergent.
3. Select the Normal Wash cycle. Close the door. Press START/CANCEL pad.
4. Allow dishwasher to run until it starts the second water fill (approximately 8 minutes).
5. Open the door, pour 2 cups of white vinegar into the bottom of dishwasher.
6. Close the door and allow cycle to finish.

Your appliance is covered by a one year limited warranty. For one year from your original date of purchase, Electrolux will repair or replace any parts of this appliance that prove to be defective in materials or workmanship when such appliance is installed, used, and maintained in accordance with the provided instructions. The stainless tub and door liner of your appliance are covered by a lifetime limited warranty. During the lifetime of the appliance, Electrolux will provide a replacement stainless tub or door liner that fails to contain water due to a defect in materials or workmanship if the appliance is installed, used, and maintained in accordance with the provided instructions. In addition, the dishwasher racks and the electronic control module of your appliance are covered by a two through five year limited warranty. During the 2nd through 5th years from your original date of purchase, Electrolux will provide a replacement dishwasher rack or electronic control module for your appliance which has proven to be defective in materials or workmanship when such appliance is installed, used, and maintained in accordance with the provided instructions.

Exclusions:

This Warranty does not cover the following:

1. Products with original serial numbers that have been removed, altered or cannot be readily determined.
2. Product that has been transferred from its original owner to another party or removed outside the USA or Canada.
3. Rust on the interior or exterior of the unit.
4. Products purchased "as-is" are not covered by this warranty.
5. Food loss due to any refrigerator or freezer failures.
6. Products used in commercial setting.
7. Service Calls which do not involve malfunction or defects in materials or workmanship, or for appliances not in ordinary household use or used other than in accordance with the provided instructions.
8. Service Calls to correct the installation of your appliance or to instruct you how to use your appliance.
9. Expenses for making the appliance accessible for servicing, such as removal of trim, cupboards, shelves, etc., which are not part of the appliance when it is shipped from the factory.
10. Service calls to repair or replace appliance light bulbs, air filters, water filters, other consumables, or knobs, handles, or other cosmetic parts.
11. Labor or in-home service costs during the additional limited warranty periods beyond the first year from your original date of purchase.
12. Pickup and delivery costs; your appliance is designed to be repaired in the home.
13. Surcharges including, but not limited to, any after hour, weekend, or holiday service calls, tolls, ferry trip charges, or mileage expense for service calls to remote areas, including the state of Alaska.
14. Damages to the finish of appliance or home incurred during transportation or installation, including but not limited to floors, cabinets, walls, etc.
15. Damages caused by: services performed by unauthorized service companies; use of parts other than genuine Electrolux parts or parts obtained from persons other than authorized service companies; or external causes such as abuse, misuse, inadequate power supply, accidents, fires, or acts of God.

DISCLAIMER OF IMPLIED WARRANTIES; LIMITATION OF REMEDIES

CUSTOMER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY SHALL BE REPAIR OR REPLACEMENT AS PROVIDED HEREIN. CLAIMS BASED ON IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR OR THE SHORTEST PERIOD ALLOWED BY LAW, BUT NOT LESS THAN ONE YEAR. ELECTROLUX SHALL NOT BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES SUCH AS PROPERTY DAMAGE AND INCIDENTAL EXPENSES RESULTING FROM ANY BREACH OF THIS WRITTEN LIMITED WARRANTY OR ANY IMPLIED WARRANTY. SOME STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR LIMITATIONS ON THE DURATION OF IMPLIED WARRANTIES, SO THESE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WRITTEN WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

If You Need Service

Keep your receipt, delivery slip, or some other appropriate payment record to establish the warranty period should service be required. If service is performed, it is in your best interest to obtain and keep all receipts. Service under this warranty must be obtained by contacting Electrolux at the address or phone numbers below.

This warranty only applies in the USA, Puerto Rico and Canada. In the USA and Puerto Rico, your appliance is warranted by Electrolux Major Appliances North America, a division of Electrolux Home Products, Inc. In Canada, your appliance is warranted by Electrolux Canada Corp. Electrolux authorizes no person to change or add to any obligations under this warranty. Obligations for service and parts under this warranty must be performed by Electrolux or an authorized service company. Product features or specifications as described or illustrated are subject to change without notice.

USA
1-800-374-4432
 Frigidaire
 10200 David Taylor Drive
 Charlotte, NC 28262



Electrolux

Canada
1.800.265.8352
 Electrolux Canada Corp.
 5855 Terry Fox Way
 Mississauga, Ontario, Canada
 L5V 3E4

FRIGIDAIRE®

welcome **home.**

Our home is your home. Visit us if you need help with any of these things:



owner support



accessories



service



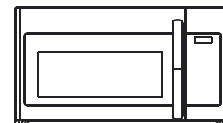
registration

(See your registration card for more information.)

Frigidaire.com
1-800-374-4432

Frigidaire.ca
1-800-265-8352

FRIGIDAIRE



Microwave Oven

use & care

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A06823435 (September 2023)

Frigidaire.ca Canada 1-800-265-8352

Frigidaire.com USA 1-800-374-4432

2

INTRODUCTION

Welcome to our *family*

Thank you for bringing Frigidaire into your home! We see your purchase as the beginning of a long relationship together.

This manual is your resource for the use and care of your product. Please read it before using your appliance. Keep it handy for quick reference. If something doesn't seem right, the troubleshooting section will help you with common issues.

FAQs, helpful tips and videos, cleaning products, and kitchen and home accessories are available at www.frigidaire.com.

We are here for you! Visit our website, chat with an agent, or call us if you need help. We may be able to help you avoid a service visit. If you do need service, we can get that started for you.

Let's make it official! Be sure to register your product.

Keep your product info here so it's easy to find.

Model Number: _____

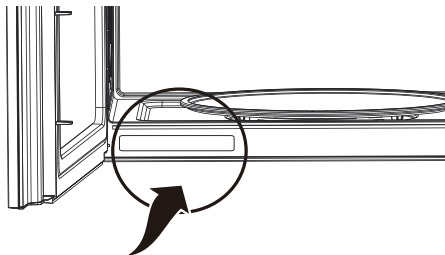
Serial Number: _____

Purchase Date: _____

Let's make it official! Be sure to register your product.

Visit us at Frigidaire.com/register

Or use your mobile device to scan the QR code.



Serial Number Location

PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

Do not attempt to operate this oven with the door open since open door operation can result in harmful exposure to microwave energy. It is important not to defeat or tamper with the safety interlocks.

Do not place any object between the oven front face and the door or allow soil or cleaner residue to accumulate on sealing surfaces.

WARNING

To reduce the risk of burns, electric shock, fire, injury to persons or exposure to excessive microwave energy:

Do not operate the oven if it is damaged. It is particularly important that the oven door close properly and that there is no damage to the:

- (1) DOOR (bent)
- (2) HINGES AND LATCHES (broken or loosened)
- (3) DOOR SEALS AND SEALING SURFACES.

The oven should not be adjusted or repaired by anyone except properly qualified service personnel.

This device complies with part 18 of the FCC Rules. (Only for USA)

RADIO INTERFERENCE

- Operation of the microwave oven may cause interference to your radio, TV or similar equipment.
- When there is interference, it may be reduced or eliminated by taking the following measures:
 - Clean door and sealing surface of the oven.
 - Reorient the receiving antenna of radio or television.
 - Relocate the microwave oven with respect to the receiver.
 - Move the microwave oven away from the receiver.
 - Plug the microwave oven into a different outlet so that microwave oven and receiver are on different branch circuits.

UTENSILS

CAUTION

- Personal Injury Hazard

- Tightly-closed utensils could explode. Closed containers should be opened and plastic pouches should be pierced before cooking.
- See the instructions on "Materials you can use in microwave oven or to be avoided in microwave oven."

There may be certain non-metallic utensils that are not safe to use for microwaving. If in doubt, you can test the utensil in question following the procedure below.

Utensil Test:

- Fill a microwave-safe container with 1 cup of cold water (250ml) along with the utensil in question.
- Cook on maximum power for 1 minute.
- Carefully feel the utensil. If the empty utensil is warm, do not use it for microwave cooking.
- Do not exceed 1 minute cooking time.

SAVE THESE INSTRUCTIONS

4 **IMPORTANT SAFETY INSTRUCTIONS**


Read all instructions before using this appliance.

This manual contains important safety symbols and instructions. Please pay attention to these symbols and follow all instructions given.

Do not attempt to install or operate your appliance until you have read the safety precautions in this manual. Safety items throughout this manual are labeled with a WARNING or CAUTION statement based on the risk type.

Warnings and important instructions appearing in this guide are not meant to cover all possible conditions and situations that may occur. Common sense, caution, and care must be exercised with installing, maintaining, or operating your appliance.

DEFINITIONS

 This is the safety alert symbol. It is used to alert of potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

WARNING

Indicates a potentially hazardous situation which, if not avoided, may result in death or serious injury.

CAUTION

Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury.

NOTE

Indicates a short, informal reference - something written down to assist the memory or for future reference.

IMPORTANT

Indicates installation, operation or maintenance information which is important but not hazard-related.

NOTE

ELECTRICAL REQUIREMENTS

Product rating is 120 volts AC, 60 Hertz, 1.5 kilowatts and 13.5 amps. This product must be connected to a separate and dedicated supply circuit of the proper voltage and frequency. Wire size must conform to the requirements of the National Electrical Code or the prevailing local code for this kilowatt rating. The power supply cord and plug should be brought to a separate and dedicated 15- to 20-ampere branch circuit single grounded outlet. The outlet box should be located in the cabinet above the microwave oven. The outlet box and supply circuit should be installed by a qualified electrician and conform to the National Electrical Code or the prevailing local code.

IMPORTANT

1. If you have any questions about the grounding or electrical instructions, consult a qualified electrician or service person.
2. Neither Electrolux nor the dealer can accept any liability for damage to the microwave oven or personal injury resulting from failure to observe the correct electrical connection procedures.

SAVE THESE INSTRUCTIONS

When using electrical appliances basic safety precautions should be followed, including the following:

WARNING

To reduce the risk of burns, electric shock, fire, injury to persons or exposure to excessive microwave energy:

- Read all instructions before using the appliance.
- Read and follow the specific: "PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY" found on page 3.
- This appliance must be grounded. Connect only to properly grounded outlet. See "GROUNDING INSTRUCTIONS" found on page 6.
- Install or locate this appliance only in accordance with the provided installation instructions.
- Some products such as whole eggs and sealed containers - for example, closed glass jars - are able to explode and should not be heated in this oven.
- Use this appliance only for its intended use as described in the manual. Do not use corrosive chemicals or vapors in this appliance. This type of oven is specifically designed to heat, cook or dry food. It is not designed for industrial or laboratory use.
- **HOT CONTENTS CAN CAUSE SEVERE BURNS. DO NOT ALLOW CHILDREN TO USE THE MICROWAVE.** Use caution when removing hot items.
- Do not operate this appliance if it has a damaged cord or plug, if it is not working properly, or if it has been damaged or dropped.
- This appliance should be serviced only by qualified service personnel. Contact nearest authorized service facility for examination, repair, or adjustment.
- Do not cover or block any openings on the appliance.
- Do not store this appliance outdoors. Do not use this product near water - for example, near a kitchen sink, in a wet basement, near a swimming pool, or similar location.
- Do not immerse cord or plug in water.
- Keep cord away from heated surface.
- Do not let cord hang over edge of table or counter. When cleaning surfaces of door and oven that comes together on closing the door, use only mild, nonabrasive soaps, or detergent applied with a sponge or soft cloth.
- To reduce the risk of fire in the oven cavity:
 - Do not overcook food. Carefully attend appliance when paper, plastic, or other combustible materials are placed inside the oven to facilitate cooking.
 - Remove wire twist-ties from paper or plastic bag before when placing bag in oven.
 - If material inside of the oven ignite, keep oven door closed, turn oven off, and disconnect the power cord, or shut off power at the fuse or circuit breaker panel.
 - Do not use the cavity for storage purposes. Do not leave paper products, cooking utensils, or food in the cavity when not in use.
- Liquids, such as water, coffee, or tea are able to be overheated beyond the boiling point without appearing to be boiling. Visible bubbling or boiling when the container is removed from the microwave oven is not always present. **THIS COULD RESULT IN VERY HOT LIQUID SUDDENLY BOILING OVER WHEN THE CONTAINER IS DISTURBED OR A UTENSIL IS INSERTED INTO THE LIQUID.** To reduce the risk of injury to persons:
 - Do not overheat the liquid.
 - Stir the liquid both before and halfway through heating it.
 - Do not use straight-sided containers with narrow necks.
 - After heating, allow the container to stand in the microwave oven for a short time before removing the container.
 - Use extreme care when inserting a spoon or other utensil into the container.
 - Oversized food or oversized metal utensils should not be inserted in a microwave oven as they may create a fire or risk of electric shock. Do not clean with metal scouring pads. Pieces can burn off the pad and touch electrical parts involving a risk of electric shock.
 - Do not store any materials, other than manufacturer's recommended accessories, in this oven when not in use.
 - Do not cover racks or any other part of the oven with metal foil. This will cause over- heating of the oven.
 - Clean Ventilation Hoods Frequently -Grease should not be allowed to accumulate on hood or filter.
 - When flaming foods under the hood, turn the fan on.
 - Use care when cleaning the vent-hood filter. Corrosive cleaning agents, such as lye-based oven cleaners, may damage the filter.
 - Suitable for use above both gas and electric cooking equipment.

SAVE THESE INSTRUCTIONS

6 **IMPORTANT SAFETY INSTRUCTIONS**

GROUNDING INSTRUCTIONS

This appliance must be grounded. In the event of an electrical short circuit, grounding reduces the risk of electric shock by providing an escape wire for the electric current. This appliance is equipped with a cord having a grounding wire with a grounding plug. The plug must be plugged into an outlet that is properly installed and grounded.

WARNING

Improper use of the grounding can result in a risk of electric shock.

Consult a qualified electrician or serviceman if the grounding instructions are not completely understood, or if doubt exists as to whether the appliance is properly grounded. If it is necessary to use an extension cord, use only a 3-wire extension cord that has a 3-blade grounded plug, and 3-slot receptacle that will accept the plug on the appliance. The marked rating of the extension cord shall be equal to or greater than the electrical rating of the appliance.

IMPORTANT

1. If you have any questions about the grounding or electrical instructions, consult a qualified electrician or service person.
2. Neither Electrolux nor the dealer can accept any liability for damage to the microwave oven or personal injury resulting from failure to observe the correct electrical connection procedures.

DANGER

Electric Shock Hazard

Touching some of the internal components can cause serious personal injury or death. Do not disassemble this appliance.

WARNING

Electric Shock Hazard

Improper use of the grounding can result in electric shock. Do not plug into an outlet until appliance is properly installed and grounded.

- A short power supply cord is provided to reduce the risks resulting from becoming entangled in or tripping over a longer cord.
- Longer cord sets or extension cords are available and may be used if care is exercised in their use.
- If a long cord or extension cord is used:
 - The marked electrical rating of the cord set or extension cord should be at least as great as the electrical rating of the appliance.
 - The extension cord must be a grounding-type 3-wire cord.
 - The longer cord should be arranged so that it will not drape over the counter top or tabletop where it can be pulled on by children or tripped over unintentionally.

SAVE THESE INSTRUCTIONS

Materials you can use in microwave oven

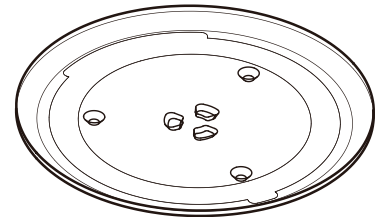
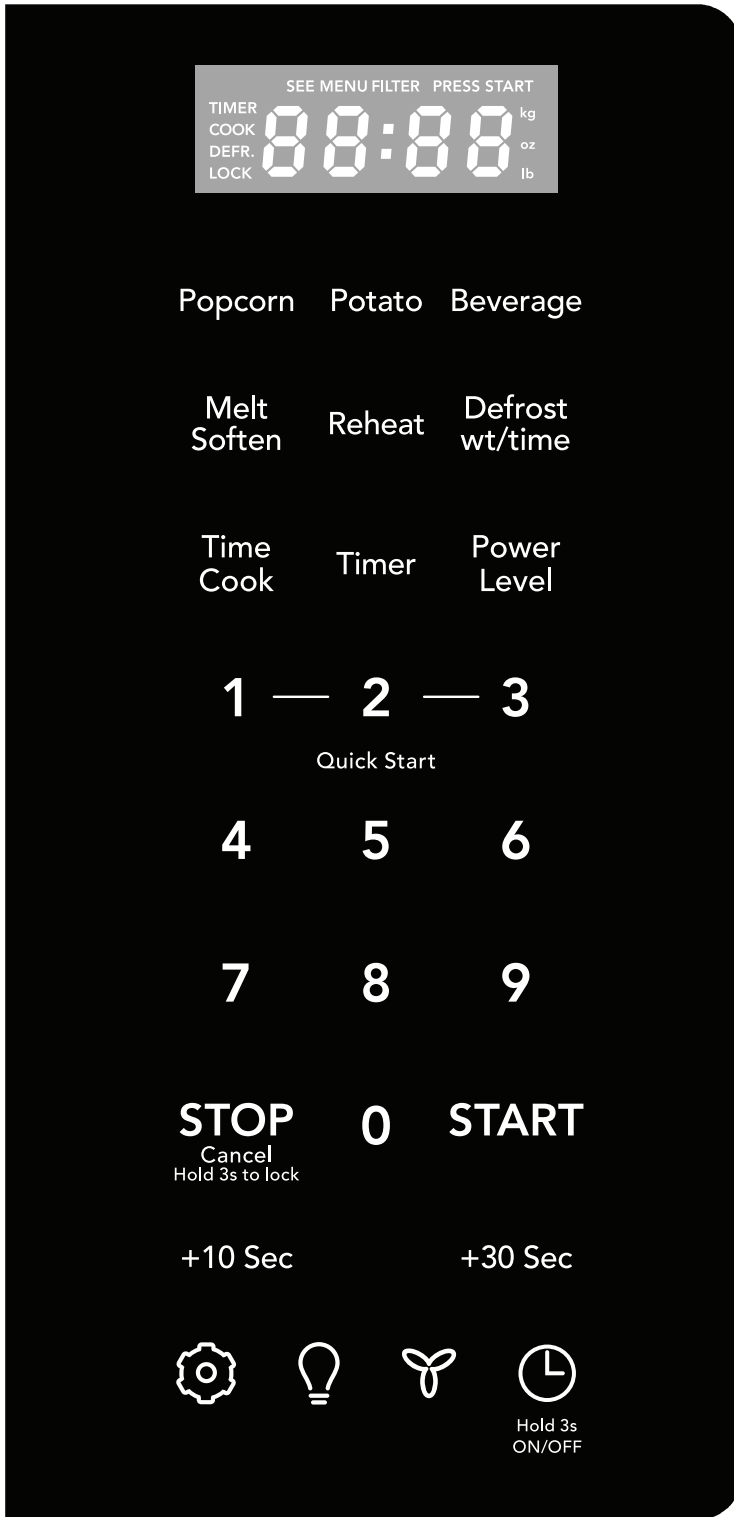
Browning dish	Follow manufacturer instructions. The bottom of browning dish must be at least 3/16 inch (5mm) above the turntable. Incorrect usage may cause the turntable to break.
Dinnerware	Microwave-safe only. Follow manufacturer's instructions. Do not use cracked or chipped dishes.
Glass jars	Always remove lid. Use only to heat food until just warm. Most glass jars are not heat resistant and may break.
Glassware	Heat-resistant oven glassware only. Make sure there is no metallic trim. Do not use cracked or chipped dishes.
Oven cooking bags	Follow manufacturer instructions. Do not close with metal tie. Make slits to allow steam to escape.
Paper plates and cups	Use for short term cooking/warming only. Do not leave oven unattended while cooking.
Paper towels	Use to cover food for reheating and absorbing fat. Use with supervision for a short-term cooking only.
Parchment paper	Use as a cover to prevent splattering or a wrap for steaming.
Plastic	Microwave-safe only. Follow the manufacturer instructions. Should be labeled "Microwave Safe". Some plastic containers soften, as the food inside gets hot. "Boiling bags" and tightly closed plastic bags should be slit, pierced or vented as directed by package.
Plastic wrap	Microwave-safe only. Use to cover food during cooking to retain moisture. Do not allow plastic wrap to touch food.
Thermometers	Microwave-safe only (meat and candy thermometers).
Wax paper	Use as a cover to prevent splattering and retain moisture.

Materials to be avoided in microwave oven

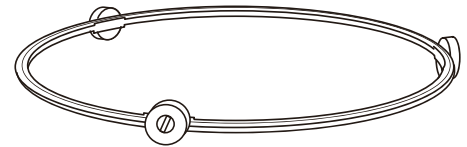
Aluminum tray	May cause arcing. Transfer food into microwave-safe dish.
Food carton with metal handle	May cause arcing. Transfer food into microwave-safe dish.
Metal or metal-trimmed utensils	Metal shields the food from microwave energy. Metal trim may cause arcing.
Metal twist ties	May cause arcing and could cause a fire in the oven.
Paper bags	May cause a fire in the oven.
Plastic foam	Plastic foam may melt or contaminate the liquid inside when exposed to high temperature.
Wood	Wood will dry out when used in the microwave oven and may split or crack.

8

NAMES OF OVEN PARTS AND ACCESSORIES








Glass turntable



Turntable Ring Assembly



SETTINGS

- The microwave oven has settings that allow you to customize the operation for your convenience. Below is the table showing the various settings. Press the  key multiple times to scroll to the desired setting function.

Key press	Option
1.  OP-1	Sound Lo/nor/Hi/off
2.  OP-2	Weight (lbs/kg)
3.  OP-3	on yes/off yes/reset yes/reset no
4.  OP-4	Demo Mode (on/off)



SETTING THE CLOCK

Example: setting clock display for 9:00:


- Press  pad once. 
- Enter time using number pads. **9 0 0**
- Press START pad. **START**

SETTING THE CLOCK ON/OFF

Clock Display OFF.

- Press  and hold pad. 
- Time will display, after 3s, **oFF** will display.

Clock display ON default.

- Hold Clock button 3s, display is on. 
- When display is on, tap (short press) will display time for 3 sec. **on**

SETTING THE TIMER

Example: setting timer for 5 minutes:

- Press Timer pad once. **Timer**
- Enter desired time using number pads. **5 0 0**
- Press Timer pad. **Timer**

Timer count down does not stop even if the door is opened. To stop/cancel the timer, press the Timer key once. When the timer has reached the end of set time, you will hear beep alerts indicating the timer has run out.

NOTE

The display will return to default after 15 minutes if a cooking cycle is stopped and not restarted.

EXHAUST HIGH / LOW / OFF

The exhaust ventilation removes steam and other cooking vapors from the cooking surface of the range below the microwave oven.

To operate the exhaust vent, Press the Exhaust High/Low/Off pad once for the highest speed setting. Press the pad again to choose the Low speed setting and a 3rd time to turn the exhaust ventilation off.



NOTE

If the temperature gets too hot around the microwave oven, the fan in the exhaust vent hood will automatically turn on at the LOW setting to cool the oven. The fan will automatically turn off when the internal parts are cool. When this occurs, the vent cannot be turned off.

SURFACE LIGHT ON / OFF

Press the Surface Light On/Off pad once to turn on the surface light. Press the pad again to turn the light off.



10 OPERATION

CONTROL LOCK

You may lock the control panel to prevent the microwave from being accidentally started or used by children.

The control lock feature is very useful when cleaning the control panel. The lock will prevent accidental programming when wiping the control panel clean.

Example: to set the control lock ON:

Press and hold the Stop/Cancel pad for more than 3 seconds. The Lock icon will appear in the display window along with 1 beep.

STOP
Cancel
Hold 3s to lock

Example: to change the control lock from ON to OFF:

Press and hold the Stop/Cancel pad for more than 3 seconds. The Lock icon will disappear in the display window.

STOP
Cancel
Hold 3s to lock

USING READY SET

1 2 3

Microwave heating or cooking may be quickly set at 100% power level for 1, 2 or 3 minutes. Use the number keys 1, 2 or 3 to choose the desired minutes of cook time (this option will only work using the 1, 2 or 3 numeric pads):

Example: to quickly heat for 2 minutes at 100% power:

Press number pads 2 for desired minutes of cook time.

2

NOTE

the Ready Set function cannot be set when using the Defrost (by weight) feature.

NOTE

"Food" will be displayed if a quick start cooking cycle is not selected within 5 minutes of placing food in the microwave. You must open then close the door again to clear "Food" from the display.

HEATING WITH HIGH POWER LEVEL

Example: to heat for 5 minutes at 100% power:

1. Press Time Cook pad.

Time
Cook

2. Use the number pads to enter desired heating time (cook time may be set up to 99 minutes and 99 seconds).

5 0 0

3. Press START pad.

START

When heating has finished you will hear beeps and "End" will display.

HEATING WITH LOWER POWER LEVELS

Using the highest power level to heat foods with does not always give the best results when some types of food need slower cooking, such as roasts, baked goods or custards. Your oven has nine other power levels you may choose.

Example: to heat for 4 minutes at 70% power:

1. Press Time Cook.

Time
Cook

2. Use the number pads to enter desired heating time (cook time may be set up to 99 minutes and 99 seconds).

4 0 0

3. Press Power Level pad once for power level 10 (100% power).

Power
Level

4. Use the number key to change the power level to 7. P-70 appears in the display (70 % power).

7

5. Press START pad.

START

When heating has finished you will hear beeps and "End" will display.

HEATING WITH MULTIPLE COOKING STAGES

For best results, some microwave recipes call for different power levels or different lengths of time for cooking. Your microwave may be set to change from one stage to another automatically (2 stages maximum).

Example: to cook food for 3 minutes at 80% power and then 50% power for 6 minutes 30 seconds:

- | | |
|--|--------------|
| 1. Press TimeCook. | Time Cook |
| 2. Use the number pads to enter heating time for the 1st stage (cook time may be set up to 99 minutes and 99 seconds). | 3 0 0 |
| 3. Press Power Level pad once. | Power Level |
| 4. Use the number keys to enter power level for the 1st stage. P-80 appears in the display (80 % power). | 8 |
| 5. Press Time Cook pad for 2nd stage. | Time Cook |
| 6. Use the number pads to enter heating time for the 2nd stage (cook time may be set up to 99 minutes and 99 seconds). | 6 3 0 |
| 7. Press Power Level pad for 2nd stage. | Power Level |
| 8. Use the number key to enter power level for the 2nd stage. P-50 appears in the display (50 % power). | 5 |
| 9. press START pad. | START |

When heating has finished you will hear beeps and "End" will display.

NOTE

When heating has finished you will hear beeps and "End" will display.

USING THE STOP/CANCEL KEY

This feature will let you quickly stop or cancel the cooking process.

Press the Stop/Cancel pad to:

STOP
Cancel
Hold 3s to Lock

- Erase if you have entered wrong information.
- Cancel timer setting process.
- Press pad once to pause the oven temporarily during cooking. (Press START pad again to resume cooking.)
- Return the time of day (clock) to the display after cooking cycle is completed.
- Cancel a program during cooking, press twice.

START

USING THE +10 SEC /+ 30 SEC KEY

This feature will let you quickly start or add 10 or 30 seconds

Press the +10 sec/+30 sec pad to: +10 Sec / +30 Sec

- Start programmed cooking.
- Start cooking for 10 seconds/30 seconds at 100% power level.
- Extend cooking time in multiples of 10 seconds/30 seconds each time this pad is pressed during microwave cooking.

Example: to add 1 minute of cook time during 100% microwave cooking :

Press +30 pad twice.

+30 Sec

NOTE

"Food" will be displayed if a quick start cooking cycle or + 10 Sec/+30 Sec key is pressed more than 5 minutes after the door of microwave oven is closed. You must open then close the door again to clear "Food" from the display.

12 OPERATION

SETTING DEFROST (BY WEIGHT)

Example: to defrost 1lb. of food with the default power level and cook time determined automatically:

1. Press Defrost wt/time pad once. 0.0 will appear in the display. Defrost wt/time
2. Use the numeric pads to input weight of food to defrost in pounds (10 = 1.0lb.) You may enter any weight from 0.1 to 6.0lbs. **1 0**
3. Press START pad. **START**

When defrosting has finished you will hear beeps and "End" will display.

NOTE

The weight amount must be a valid entry for this feature to start. A valid weight entry is 0.1 to 6.0 pounds.

SETTING DEFROST (BY TIME)

Example: to defrost food with the default 30% power level for 5 minutes:

1. Press Defrost wt/time pad twice. 0.00 will appear in the display. Defrost wt/time
2. Use the number pads to enter desired defrost time (defrost time may be set up to 99 minutes and 99 seconds). **5 0 0**
3. Press START pad. **START**

When heating has finished you will hear beeps and "End" will display.

NOTE

Power levels cannot be changed for both defrost (by weight) or defrost (by time) because the defrost performance will be adversely affected.

SPECIAL NOTES FOR DEFROSTING BY TIME

- After pressing START key, the display will count down remaining defrost time. The oven will beep during the defrost cycle. At this time open the door and turn the food if needed and remove any portions that have already thawed. Press the START key to resume the defrost cycle.
- When heating has finished you will hear beeps.

DEFROSTING TIPS

- When using the defrost weight feature, the weight entered should always be pounds (valid entries are from 0.1 to 6.0 pounds).
- Use both defrost weight and defrost time features for raw food items only. Defrosting gives best results when food to be thawed is a minimum of 0°F (taken directly from a true freezer). If the food has been stored in a refrigerator-freezer that does not maintain a temperature of 5° F or below, always program a lower food weight or lower cook time to prevent cooking the food.
- If the frozen food is stored outside the freezer for up to 20 minutes, enter a reduced cook time or weight.
- The shape of the package will alter the defrosting time. Shallow rectangular food packets defrost more quickly than a deep frozen block of food.
- Separate pieces as they begin to defrost. Separated frozen pieces of food defrost better.
- Shield warm areas of food with small pieces of foil if they start to become warm.
- You may use small pieces of aluminum foil to shield food items like chicken wings, leg tips and fish tails, but do not allow the foil to touch the oven cavity walls when defrosting.

DEFROSTING SUGGESTIONS FOR MEATS

For best results, please read these suggestions when defrosting meats.

Meat	Normal amount	Suggestions
Roast beef or pork	2.5 to 6 lbs. (40 to 96 oz.)	Start with the food placed fat side down. After each stage, turnth the food over and shield any warm portions wi narrow strips of aluminum foil. Let stand, covered for 15-30 minutes.
Steaks, chops or fish	0.5 to 3 lbs (8 to 48 oz.)	After each stage, rearrange the food. If there are any warm or thawed portions of food, shield them with narrow flat pieces of aluminum foil. Remove any pieces of food that are nearly defrosted. Let stand, covered for about 5 to 10 minutes.
Ground meat	0.5 to 3 lbs (8 to 48 oz.).	After each stage, remove any pieces of food that are nearly defrosted. Let stand, covered with foil for 5 to 10 minutes.
Whole chicken	2.5 to 6 lbs. (40 to 96 oz.)	Remove giblets before freezing poultry. Start defrosting with the breast side down. After the 1st stage, turn the chicken over and shield any warm portions with narrow strips of aluminum foil. After the 2nd stage, again shield any warm portions with narrow strips of aluminum foil. Let stand, covered, for 30 to 60 minutes in the refrigerator.
Chicken pieces	0.5 to 3 lbs. (8 to 48 oz.)	After each stage, rearrange or remove any pieces of food that are nearly defrosted. Let stand for 10-20 minutes.

REHEAT

The reheat feature provides 3 quick preset settings based on serving size to reheat food for your cooking convenience.

Example: to reheat 24 ounces of food.

1. Press Reheat pad 3 times (see reheat category table) to reheat 24oz. of food. 24oz will appear in the display. **Reheat**

2. Press START pad. **START**

Reheat Category	Press	Display
8 ounces of food	once	8 oz
16 ounces of food	twice	16 oz
24 ounces of food	3 times	24 oz

MELT/ SOFTEN

The oven uses low power to melt and soften items. See the following table.

Example: to melt 8 oz. of Cream Cheese.

1. Press Melt/Soften pad 4 times to reheat 8oz. of food. So-4 will appear in the display **Melt Soften** (see Melt/Soften category table).

2. Then press 2 number pad, weight will appear in the display .

3. Press START pad. **START**

14 OPERATION

MELT / SOFTEN CATEGORY

PRESS	DIS PLAY	CATE GORY	AMOUNT	KEY
Melt Soften x 1	So-1	BUTTER	1 stick 2 sticks	1 2
Melt Soften x 2	So-2	CHOCO LATE	2 oz. 4 oz. 8 oz.	1 2 3
Melt Soften x 3	So-3	ICE CREAM	1 Pint 1.5 Quart	1 2
Melt Soften x 4	So-4	CREAM CHEESE	3 oz. 8 oz.	1 2

SUGGESTED POWER LEVELS FOR COOKING

The 10 power levels available with this microwave will help you to adjust to the power output best suited for the food type you are preparing. As with any food preparation in the microwave, it is best to follow the microwave instructions that are printed on food packaging.

The table below provides suggested power levels for various types of food that you can be prepare in the microwave.

Power level	Microwave output	Use to prepare when:
10 High	100 %	<ul style="list-style-type: none"> Boiling water. Cooking ground beef. Making candy. Cooking fresh fruits & vegetables Cooking fish & poultry. Preheating browning dish. Reheating beverages. Cooking bacon slices.
9	90%	<ul style="list-style-type: none"> Reheating meat slices quickly. Saute onions, celery & green peppers.

8	80 %	<ul style="list-style-type: none"> All reheating. Cooking scrambled eggs.
7	70 %	<ul style="list-style-type: none"> Cooking breads & cereal products. Cooking cheese dishes & veal. Cakes, muffins, brownies & cupcakes.
6	60 %	<ul style="list-style-type: none"> Cooking pasta.
5	50 %	<ul style="list-style-type: none"> Cooking meats & whole poultry. Cooking custard. Cooking spare ribs, rib roast & sirloin roast.
4	40 %	<ul style="list-style-type: none"> Cooking less tender cuts of meat. Reheating frozen packaged foods.
3	30 %	<ul style="list-style-type: none"> Thawing meat, poultry & seafood. Cooking small quantities of food. Finish cooking casseroles, stew & some sauces.
2	20 %	<ul style="list-style-type: none"> Softening butter & cream cheese. Heating small amounts of food.
1	10 %	<ul style="list-style-type: none"> Softening ice cream. Raise yeast dough.

SUGGESTIONS FOR GETTING THE BEST RESULTS

To help you achieve the best possible results from your microwave oven, read the following suggestions below;

- **Storage temperature**

Foods taken from the freezer or refrigerator take longer to cook than the same foods would at room temperature.

- Size**
 Small pieces of food cook faster than large ones. Pieces similar in size and shape will cook more evenly when cooked together. For more even results, reduce the power levels when cooking large pieces of food.
- Natural moisture**
 Very moist foods cook more evenly because microwave energy heats water molecules very efficiently.
- Stirring**
 Stir foods such as casseroles and vegetable from the outside to the center to distribute the heat more evenly. This will allow the food to cook faster. Constant stirring is not necessary.
- Turn over items**
 Turn over foods such as pork chops, roasts or whole cauliflower halfway through the cook time. This will help to expose all sides equally to microwave energy.
- Food placement**
 Place delicate areas of food items, such as asparagus tips, toward the center of the turntable tray.
- Food arrangement**
 Arrange unevenly shaped foods, such as chicken pieces or salmon, with the thicker or meatier parts toward the outside of the turntable tray.
- Let the food stand**
 After removing the food from the microwave, cover the food with foil or a casserole lid and let it stand to finish cooking. This will help the food finish in the center and avoids overcooking the out edges, The length of stand time depends on the density and surface area of the food items.
- Wrapping in paper towels or waxed paper**
 Sandwiches and many other food types containing pre-baked bread should be wrapped prior to placing in the microwave to help prevent the food items from drying out while heating.

POPCORN

CAUTION

DO NOT leave microwave oven unattended while popping corn.

The popcorn feature lets you pop 3 different commercially packaged microwave popcorn sized bags. Use the table below to determine the setting to use.

Amount	Press popcorn pad
3.3 oz. (default setting)	once
3.0 oz.	2 times
1.75 oz.	3 times

Example: to pop a 3.0 oz. bag of popcorn automatically.

- Press Popcorn pad 2 times. Popcorn
- Press START pad.
The microwave will beep when finished. **START**

POTATO

The potato feature cooks 1, 2, 3 or 4 (cooking times based on 8 to 36 oz.) potatoes automatically. Use the table below to determine the setting to use.

Amount	Press potato pad
1 potato (default setting)	once
2 potatoes	2 times
3 potatoes	3 times
4 potatoes	4 times

Example: to heat 1 cup of a beverage.

- Press Potato pad once. Potato
- Press START pad.
The microwave will beep when finished. **START**

16 OPERATION

NOTE

- Before cooking, pierce potatoes with fork several times.
- After cooking, let potatoes stand for 5 minutes.

BEVERAGE

The beverage feature heats 1 or 2 cups of beverage. Use the table below to determine the setting to use.

Amount	Press beverage pad
1 cup (about 8 oz.)	once (default setting)
2 cups (about 16 oz.)	2 times

Example: to heat 1 cup of a beverage.

1. Press Beverage pad once. Beverage
2. Press START pad. **START**

The microwave will beep when finished.

CONVENIENCE COOKING SUGGESTIONS

Convenience category	Amount	Suggestions
Popcorn	1.75,3.0, 3.3 oz. 1 pkg.	Cook a single “microwave-only” bag of popcorn at a time. Use caution when removing and opening the hot popcorn bag from the oven. Let microwave oven cool down at least 5 minutes before using again.

Potato	1,2,3,4 potatoes 8,16, 24,36 oz	Pierce each potato several times using a fork. Place on turntable in spoke-like fashion. After cooking, let stand for 3-5 minutes. Let oven cool for at least 5. minutes before using again. Use the START pad to increase cook time for larger potatoes.
Beverage	1,2 cups (8 oz, 16 oz)	Use a microwave-safe measuring cup or mug; do not cover. Place the beverage in the microwave. After heating, stir well. Let oven cool for at least 5 minutes before using again. Beverages heated with the beverage category may be very hot. Remove the container with care.



SETTING THE SOUND

Turning Sound Low/nor/Hi/Off

Audible signals are available to guide you when setting and using your oven.

- will sound each time you touch a pad.
- Two tones signal the end of a Kitchen Timer count down.
- Two tones signal the end of a cooking cycle.

Example: setting audible signal off:



1. Press  pad one. 
2. op-1 will display and the START needs to be pressed to select. **START**
3. Lo/ nor/ HI /oFF auto scrolls every 2 seconds through each selection.
- 4 Press START pad to confirm when the LED shows oFF. **START**

NOTE

When the cooking cycle is completed END will be displayed and the audible signal will sound if the sound is turned on.

SETTING WEIGHT IB/KG

Example: setting weight between pounds & kilograms:



1. Press  pad 2 times . 
2. op-2 will display and the START needs to be pressed to select. **START**
3. lb/kg auto scrolls every 2 seconds through each selection.
4. Press START pad to confirm your selection. **START**

NOTE

If the display shows kg, pressing the START button will select the oven controls to kg.

SETTING THE FILTER

Example: setting the filter on:

1. Press  pad 3 times . 
2. op-3 will display and the START needs to be pressed to select. **START**
3. on yes/oFF yes/rest yes/rest no auto scrolls every 2 seconds through each selection.



On yes	Filter indicator light on by default for recirculation. The filter indicator light will track the vent fan on time.
Off yes	Turn off the filter indicator light when vented to outside. The filter indicator light will not track the vent fan on time.
Rest yes	Reset Filter Indicator The filter indicator light on the display will track the vent fan on time. When it is time to change the charcoal filter the indicator light on the display will come on. Once the charcoal filter is changed, use reset yes to turn filter indicator off and begin new time for charcoal filter replacement.
Rest no	Will not reset the time for filter indicator light.

4. Press START pad to confirm the LED shows on. **START**

SETTING DEMO MODE

Example: setting the demo mode on:

Suppose you want to enter Demo mode. When Demo mode is ON programming functions will work in a rapid countdown mode with no cooking power.

1. Press  pad 4 times . 
2. op-4 will display and the START needs to be pressed to select. **START**
3. on/oFF auto scrolls every 2 seconds through each selection.
4. Press START pad to confirm when the display shows on. **START**

NOTE

If the display shows oFF, pressing the START button will select the demo mode off.

18 MAINTENANCE

Troubleshooting

Check your problem by using the chart below and try the solutions for each problem. If the microwave oven still does not work properly, contact the nearest authorized service center.

TROUBLE	POSSIBLE CAUSE	POSSIBLE REMEDY
Oven will not start	<ul style="list-style-type: none">• Electrical cord for oven is not plugged in.• Door is open.• Wrong operation is set.	<ul style="list-style-type: none">• Plug into the outlet.• Close the door and try again.• Check instructions.
Arcing or sparking	<ul style="list-style-type: none">• Materials to be avoided in microwave oven were used.• The oven is operated when empty.• Spilled food remains in the cavity.	<ul style="list-style-type: none">• Use microwave-safe cookware only.• Do not operate with oven empty.• Clean cavity with wet towel.
Unevenly cooked foods	<ul style="list-style-type: none">• Materials to be avoided in microwave oven were used.• Food is not defrosted completely.• Cooking time, power level is not suitable.• Food is not turned or stirred.	<ul style="list-style-type: none">• Use microwave-safe cookware only.• Completely defrost food.• Use correct cooking time, power level.• Turn or stir food.
Overcooked foods	<ul style="list-style-type: none">• Cooking time, power level is not suitable.	<ul style="list-style-type: none">• Use correct cooking time, power level.
Undercooked foods	<ul style="list-style-type: none">• Materials to be avoided in microwave oven were used.• Food is not defrosted completely.• Oven ventilation ports are restricted.• Cooking time, power level is not suitable.	<ul style="list-style-type: none">• Use microwave-safe cookware only.• Completely defrost food.• Check to see that oven ventilation ports are not restricted.• Use correct cooking time, power level.
Improper defrosting	<ul style="list-style-type: none">• Materials to be avoided in microwave oven were used.• Cooking time, power level is not suitable.• Food is not turned or stirred.	<ul style="list-style-type: none">• Use microwave-safe cookware only.• Use correct cooking time, power level.• Turn or stir food.

Disconnect the power cord or leave the door open to deactivate the oven during cleaning. Disconnect the power cord before replacing filters and lights.

EXTERIOR

The outside surface is precoated steel and plastic. Clean the outside with mild soap and water; rinse and dry with a soft cloth. Do not use any type of household or abrasive cleaner.

DOOR

Wipe the window on both sides with a soft cloth to remove any spills or splatters. Metal parts will be easier to maintain if wiped frequently with a soft cloth. Avoid the use of spray and other harsh cleaners as they may stain, streak or dull the door surface.

EASY CARE™ STAINLESS STEEL / SMUDGE _PRO OF™ STAINLESS STEEL / BLACK STAINLESS STEEL(SOME MODELS)

Your microwave oven(some models) may have a Stainless Steel finish or coating. Clean the stainless with warm soapy water using a clean sponge or cloth. Rinse with clean water and dry with a soft clean cloth. DO NOT use ANY store bought cleaners like Stainless Steel cleaners or any other types of cleaners containing any abrasive, chlorides, chlorines or ammonia. It is recommended to use mild dish soap and water or a 50/50 solution of water and vinegar.

TOUCH CONTROL PANEL

Care should be taken in cleaning the touch control panel. If the control panel becomes soiled, open the microwave oven door before cleaning. Wipe the panel with a cloth dampened slightly with water only. Dry with a soft cloth. Do not scrub or use any sort of chemical cleaners. Close door and touch STOP/Cancel

INTERIOR

Cleaning is easy because little heat is generated to the interior surfaces . To clean the interior surfaces, wipe with a soft cloth and warm water. DO NOT USE ABRASIVE OR HARSH CLEANERS OR SCOURING PADS. For heavier soil, use baking soda or a mild soap; rinse thoroughly with hot water. The round wire rack and shelf can be cleaned with hot soapy water, rinsed and dried.

WAVEGUIDE COVER

The waveguide cover is located on the right side in the microwave oven cavity. It is made from mica so requires special care. Keep the waveguide cover clean to assure good microwave oven performance. Carefully wipe with a damp cloth any food splatters from the surface of the cover immediately after they occur. Built-up splashes may overheat and cause smoke or possibly catch fire. DO NOT REMOVE THE WAVEGUIDE COVER.

ODOR REMOVAL

Occasionally, a cooking odor may remain in the microwave oven. To remove, combine 1 cup water, grated peel and juice of 1 lemon in a 2-cup glass measuring cup.

Boil for several minutes using 100% power. Allow to set in microwave oven until cool. Wipe interior with a soft cloth.

TURNTABLE/TURNTABLE SUPPORT

The turntable and turntable support can be removed for easy cleaning. Wash them in mild, sudsy water; for stubborn stains use a mild cleanser and non-abrasive scouring sponge. They are also dishwasher-proof. Use upper wire rack of dishwasher. The turntable motor shaft is not sealed, so excess water or spills should be wiped up immediately.

20 CLEANING AND CARE

Disconnect the power cord or leave the door open to deactivate the oven during cleaning. Disconnect the power cord before replacing filters and lights.

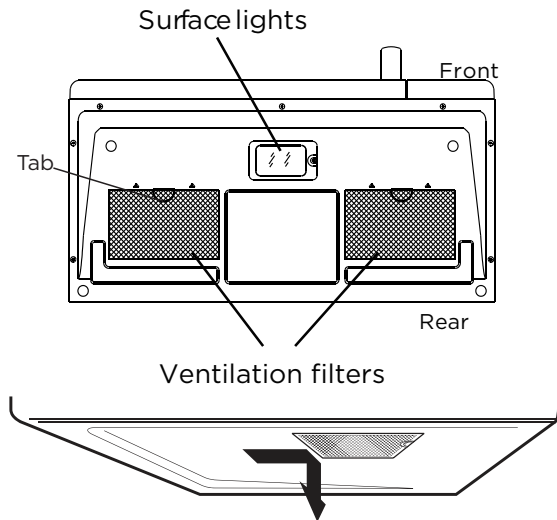
CLEANING THE EXHAUST FILTERS

The oven ventilation exhaust filters should be removed and cleaned often; generally at least once every month.

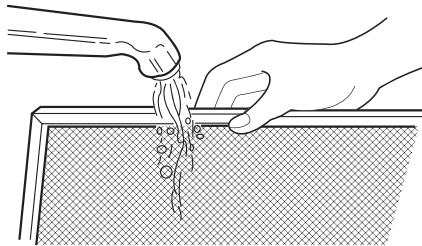
Vent exhaust filter part number 5304478913
To order parts call 800-599-7569

CAUTION

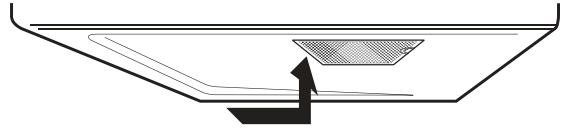
To avoid risk of personal injury or property damage, do not operate oven hood without filters properly in place.



- To remove the exhaust ventilation filters, slide the filter to the rear. Then pull filter downward and push to the other side. The filter will drop out. Repeat for the 2nd filter.



- Soak the ventilation filters in hot water using a mild detergent. Rinse well and shake to dry or wash in a dishwasher. Do not use ammonia. The aluminum on the filter will corrode and darken.



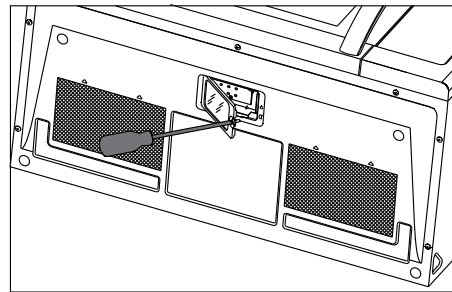
- To reinstall the exhaust ventilation filter, slide it into the side slot, then push up and toward oven to lock.
Reinstall the 2nd filter using the same procedure.

SURFACE LIGHT REPLACEMENT

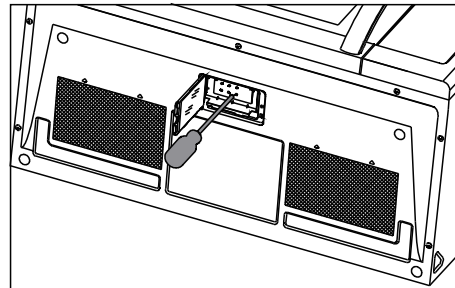
CAUTION

To avoid risk of personal injury or property damage, wear gloves when replacing the light bulbs.

- Unplug the microwave oven or turn off power at the main circuit breaker.
- Remove the LED light cover mounting screw under the microwave.

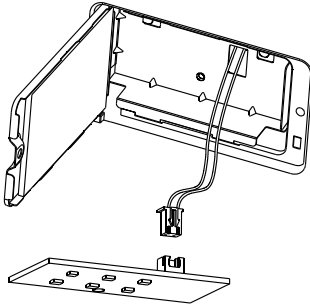


- Remove the LED light mounting screw.



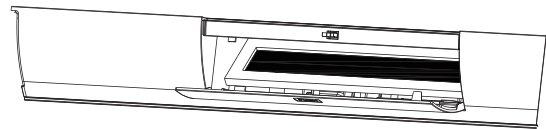
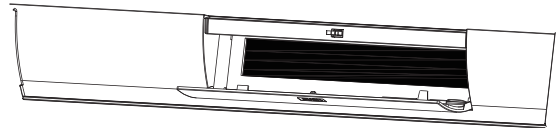
Disconnect the power cord or leave the door open to deactivate the oven during cleaning. Disconnect the power cord before replacing filters and lights.

- Unplug the LED light from the harness, replace with part 5304499540. To order parts call 800-599-7569. Then reconnect the harness.

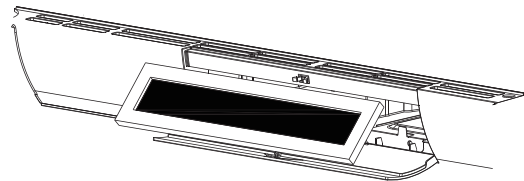


- Re-install LED light and mounting screw. When re-installing mounting screw be careful not to damage the LED light.
- Re-install LED light cover and mounting screw.
- Plug the microwave back into the power supply or turn the power back on at the main circuit breaker.

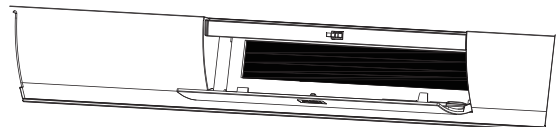
- Remove the charcoal filter by pushing the top of the filter inwards, then pull it forward out from the unit.



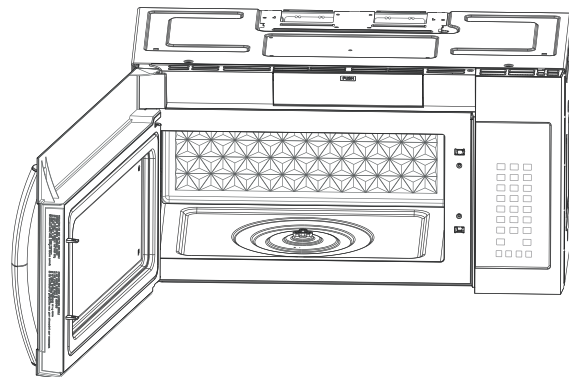
- Slide the top of the new charcoal filter into the top area of the filter cavity.



- Press the bottom of charcoal filter to place it into the correct position.



- Press the "Push" to close the cover.

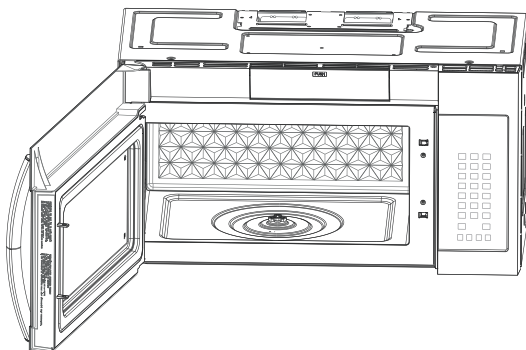


CHARCOAL FILTER REPLACEMENT

**Charcoal filter part number FRPAMRAF
To order parts call 800-599-7569**

Charcoal Filter when installed in your microwave oven, is used for nonvented, recirculated Installation. When it is time to replace the charcoal filter, the FILTER light on display will turn on. If your microwave is vented to the outside, then you can turn off the filter light in the settings.

- Disconnect power to the microwave oven at the circuit breaker panel or by unplugging.
- Press the "Push" position on the cover.
- And then open the cover.



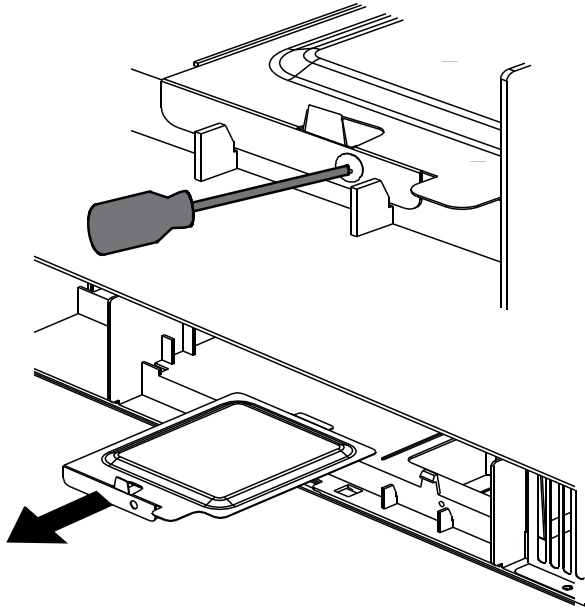
22 CLEANING AND CARE

Disconnect the power cord or leave the door open to deactivate the oven during cleaning. Disconnect the power cord before replacing filters and lights.

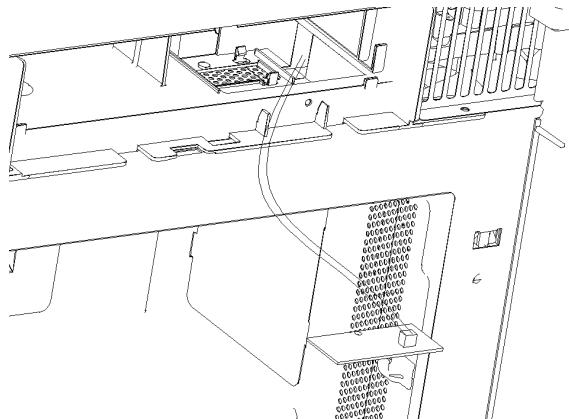
OVEN LIGHT REPLACEMENT

Remove the vent grill (see steps 1-4 in charcoal filter replacement section).

- Remove the screw and remove the lamp cover.

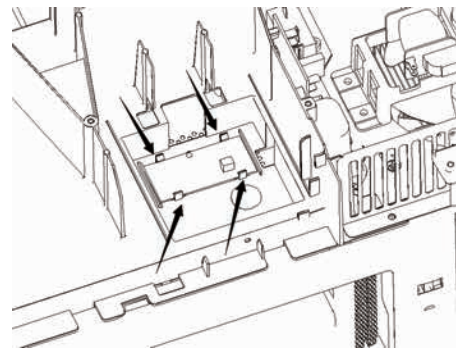


- Remove the LED bracket and light assembly. Remove the LED light from the bracket by removing the mounting screw and replace only with part 5304499540. To order parts call 800-599-7569.

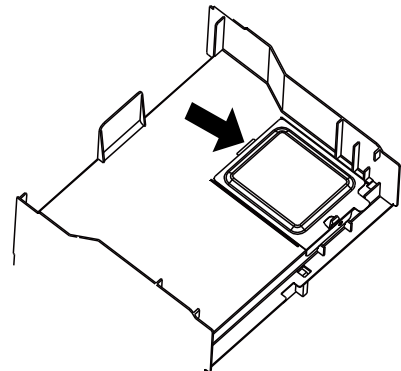


- Re-install LED light to the bracket with mounting screw. When re-installing mounting screw be careful not to damage the LED light.

- Reconnect LED light to the harness and place the LED light assembly back into the plastic housing.



- Replace the microwave oven light cover by carefully pushing into place (make sure the light cover rear tab is inserted into slot at rear), replace the screw.



- Replace the charcoal filter (if installed). Push the vent grill back into place (engaging both the bottom and top tabs) and replace the vent grill mounting screws.

SERVICE CALL CHECK 23

Please check the following before calling for service:

Place one cup of water in a glass measuring cup in the microwave oven and close the door securely. Operate the microwave oven for one minute at HIGH 100%.

- | | |
|--|------------------|
| A Does the microwave oven light come on? | YES ____ NO ____ |
| B Does the cooling fan work? (Put your hand at top above Display) | YES ____ NO ____ |
| C Does the turntable rotate? (It is normal for the turntable to turn in either direction.) | YES ____ NO ____ |
| D Is the water in the microwave oven warm? | YES ____ NO ____ |

If “NO” is the answer to any of the above questions, please check electrical outlet, fuse and/or circuit breaker. If they are functioning properly, CONTACT YOUR NEAREST ELECTROLUX AUTHORIZED SER-VICER.

A microwave oven should never be serviced by a “do-it-yourself” repair person.

NOTE

1. If time appearing in the display is counting down very rapidly, check Demonstration Mode on page 20.
2. If the oven is set for more than 30 minutes at 90 or 100 percent power level, after the first 30 minutes the power level will automatically adjust itself to 80 percent power to avoid overcooking.

SPECIFICATIONS

AC Line Voltage:	Single phase 120V, 60Hz, AC only
AC Power Required:	1500W 13.5 amps.
Output Power*:	1000 W
Frequency:	2450 MHz (Class B/Group2)**
Outside Dimensions (including handle):	29.88 " (W) x 15.04 " (D) x 16.41 " (H)
Cavity Dimensions:	19.84 "(W) x 13.78 "(D) x 9.09 "(H)
Microwave oven Capacity***:	1.8 Cu.Ft.
Cooking Uniformity:	Turntable
Weight:	Approx. (net) 55.2 lbs, (gross) 60.7 lbs
Work/Night Light:	1*1.2W LED, the part number is 5304499540.
Oven Light:	1*1.2W LED, the part number is 5304499540.

* The International Electrotechnical Commission's standardized method for measuring output wattage. method is widely recognized. test method

** This is the classification of ISM (Industrial, Scientific and Medical) equipment described in the International Standard CISPR11.

*** Internal capacity is calculated by measuring maximum width, depth and height. Actual capacity for holding food is less. In compliance with standards set by:

FCC - Federal Communications Commission Authorized.

DHHS - Complies with Department of Health and Human Services (DHHS) rule, CFR, Title 21, Chapter I, Subchapter J.



- This symbol on the nameplate means the product is listed by Underwriters Laboratories, Inc.



- This symbol on the nameplate means the product is listed by Underwriters Laboratories, Inc. for use in USA or Canada.

24 WARRANTY

Your appliance is covered by a one year limited warranty. For one year from your original date of purchase, Electrolux will pay all costs for repairing or replacing any parts of this appliance that prove to be defective in materials or workmanship when such appliance is installed, used and maintained in accordance with the provided instructions.

Exclusions

This warranty does not cover the following:

1. Products with original serial numbers that have been removed, altered or cannot be readily determined.
2. Product that has been transferred from its original owner to another party or removed outside the USA or Canada.
3. Rust on the interior or exterior of the unit.
4. Products purchased "as-is" are not covered by this warranty.
5. Food loss due to any refrigerator or freezer failures.
6. Products used in a commercial setting.
7. Service calls which do not involve malfunction or defects in materials or workmanship, or for appliances not in ordinary household use or used other than in accordance with the provided instructions.
8. Service calls to correct the installation of your appliance or to instruct you how to use your appliance.
9. Expenses for making the appliance accessible for servicing, such as removal of trim, cupboards, shelves, etc., which are not a part of the appliance when it is shipped from the factory.
10. Service calls to repair or replace appliance light bulbs, air filters, water filters, other consumables, or knobs, handles, or other cosmetic parts.
11. Surcharges including, but not limited to, any after hour, weekend, or holiday service calls, tolls, ferry trip charges, or mileage expense for service calls to remote areas, including the state of Alaska.
12. Damages to the finish of appliance or home incurred during installation, including but not limited to floors, cabinets, walls, etc.
13. Damages caused by: services performed by unauthorized service companies; use of parts other than genuine Electrolux parts or parts obtained from persons other than authorized service companies; or external causes such as abuse, misuse, inadequate power supply, accidents, fires, or acts of God.

DISCLAIMER OF IMPLIED WARRANTIES; LIMITATION OF REMEDIES

CUSTOMER'S SOLE AND EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY SHALL BE PRODUCT REPAIR OR REPLACEMENT AS PROVIDED HEREIN. CLAIMS BASED ON IMPLIED WARRANTIES, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE, ARE LIMITED TO ONE YEAR OR THE SHORTEST PERIOD ALLOWED BY LAW, BUT NOT LESS THAN ONE YEAR. ELECTROLUX SHALL NOT BE LIABLE FOR CONSEQUENTIAL OR INCIDENTAL DAMAGES SUCH AS PROPERTY DAMAGE AND INCIDENTAL EXPENSES RESULTING FROM ANY BREACH OF THIS WRITTEN LIMITED WARRANTY OR ANY IMPLIED WARRANTY. SOME STATES AND PROVINCES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, OR LIMITATIONS ON THE DURATION OF IMPLIED WARRANTIES, SO THESE LIMITATIONS OR EXCLUSIONS MAY NOT APPLY TO YOU. THIS WRITTEN WARRANTY GIVES YOU SPECIFIC LEGAL RIGHTS. YOU MAY ALSO HAVE OTHER RIGHTS THAT VARY FROM STATE TO STATE.

If You Need Service

Keep your receipt, delivery slip, or some other appropriate payment record to establish the warranty period should service be required. If service is performed, it is in your best interest to obtain and keep all receipts. Service under this warranty must be obtained by contacting Electrolux at the addresses or phone numbers below.

This warranty only applies in the USA and Canada. In the USA, your appliance is warranted by Electrolux Major Appliances North America, a division of Electrolux Home Products, Inc. In Canada, your appliance is warranted by Electrolux Canada Corp. Electrolux authorizes no person to change or add to any obligations under this warranty. Obligations for service and parts under this warranty must be performed by Electrolux or an authorized service company. Product features or specifications as described or illustrated are subject to change without notice.

USA

1-800-374-4432

Electrolux Home Products,
Inc., 10200 David Taylor
Drive Charlotte, NC 28262



Canada

1.800.265.8352

Electrolux Canada Corp.
5855 Terry Fox Way
Mississauga, Ontario, Canada

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▲ 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 or moderate injury.

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

SAFETY INSTRUCTIONS (or equivalent) signs indicate specific safety-related instructions or procedures.

▲ PELIGRO indica una situación peligrosa que, si no se evita, provocará lesiones graves o incluso la muerte.

▲ ADVERTENCIA indica una situación riesgosa, la cual, si no se evita, puede ocasionar lesiones graves o incluso la muerte.

▲ PRECAUCIÓN indica una situación riesgosa, la cual, si no se evita, puede provocar heridas leves o moderadas.

AVISO hace referencia a prácticas que no presentan riesgos de generar lesiones personales.

INSTRUCCIONES PARA SU SEGURIDAD (o equivalentes) son señales que designan instrucciones o procedimientos específicos de seguridad.

▲ DANGER indique une situation dangereuse qui, si elle n'est pas évitée, entraînera la mort ou une blessure grave.

▲ AVERTISSEMENT indique une situation dangereuse qui, si elle n'est pas évitée, pourrait entraîner la mort ou une blessure grave.

▲ MISE EN GARDE indique une situation dangereuse qui, si elle n'est pas évitée, pourrait entraîner une blessure mineure ou modérée.

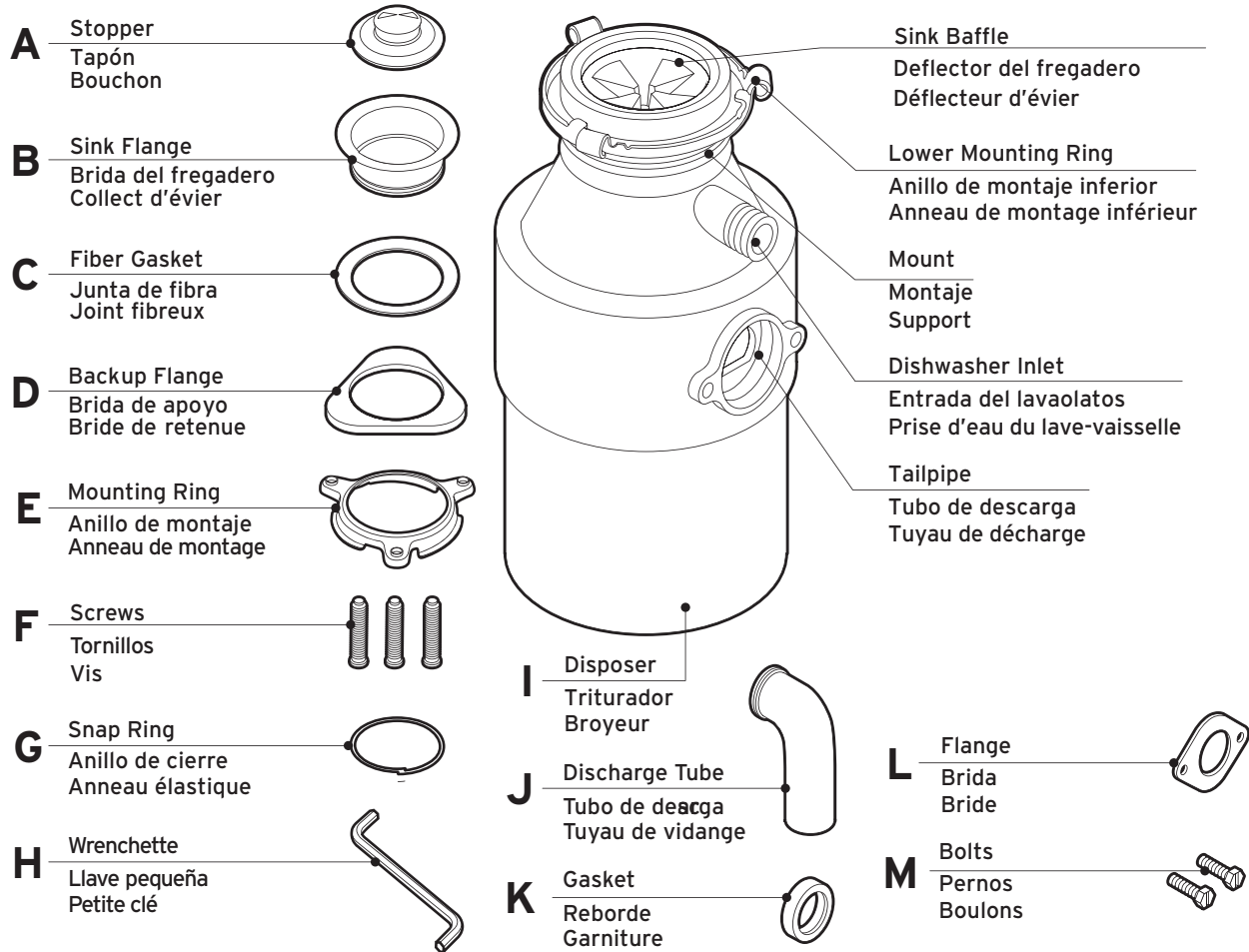
AVIS est utilisé pour décrire des pratiques qui ne sont pas liées à des blessures.

DIRECTIVES DE SÉCURITÉ (ou l'équivalent) ces panneaux indiquent des directives ou des procédures concernant spécifiquement la sécurité.

79899-ISE Rev B

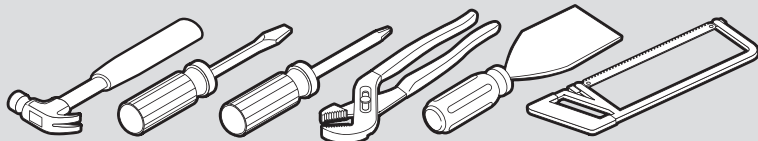
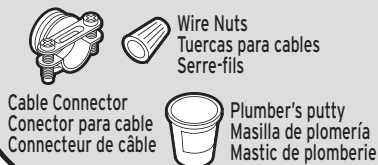
Badger®

Includes/Incluye/Comprend



Tools and Materials/Herramientas y materiales/Outils et pièces

Not Included/No incluidos/Non compris



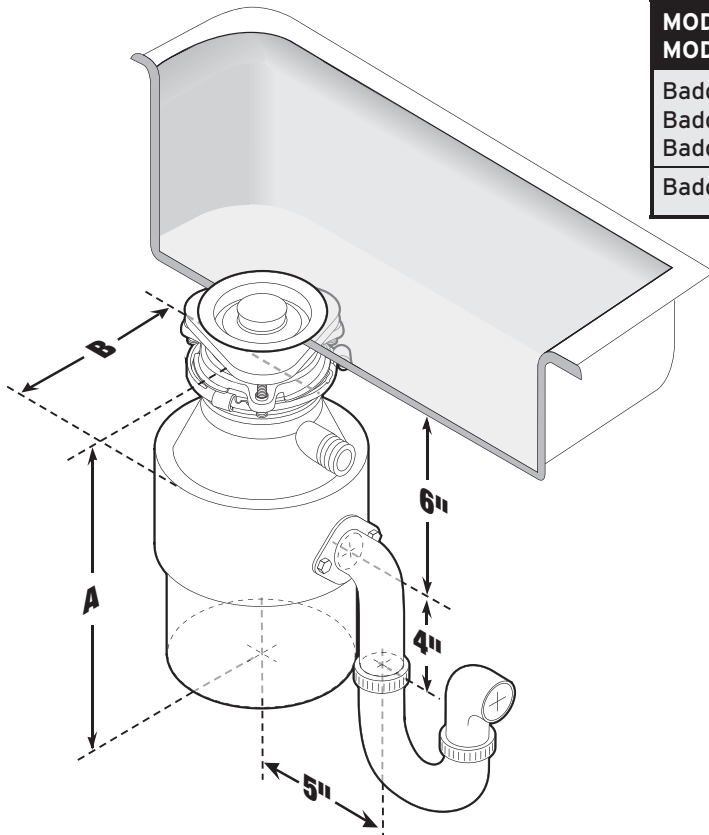


WARNING/ADVERTENCIA/AVERTISSEMENT

Read these instructions carefully. Failure to follow the Installation, Operating and User-Maintenance Instructions may result in personal injury or property damage.

Lea atentamente estas instrucciones. Si no sigue las instrucciones de mantenimiento para el usuario, de funcionamiento y de instalación puede provocar lesiones personales o daños materiales.

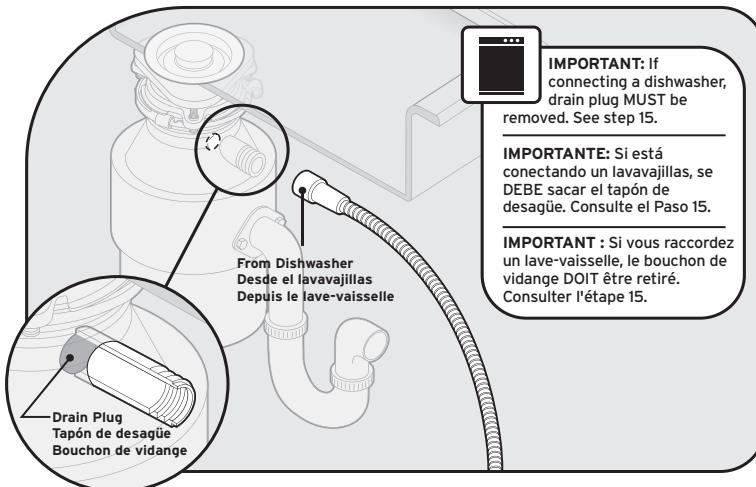
Lire ces instructions avec soin. Le non-respect des instructions d'installation, d'utilisation et d'entretien par l'utilisateur peut entraîner des blessures et des dommages matériels.



MODEL/ MODELO/MOÛLE	A	B
Badger® 1, Badger® 1XL, Badger® 100, Badger® 5, Badger® 5XL, Badger® 500	11-1/2"	6-5/16"
Badger 5XP®	12-5/8"	6-5/16"

Dimensions/Dimensiones/Dimensions

Before You Begin/Antes de comenzar/Avant de commencer



Removal of old disposer/Extracción del triturador viejo/Retrait de l'ancien broyeur

! WARNING/ADVERTENCIA/AVERTISSEMENT

SHOCK HAZARD

Turn off electrical power at circuit breaker or fuse box.

PELIGRO DE DESCARGA ELÉCTRICA

Desconecte el suministro eléctrico desde la caja de fusibles o del interruptor de circuito.

DANGER D'ÉLECTROCUTION

Couper l'alimentation au tableau de distribution (retirer le fusible ou actionner le disjoncteur).

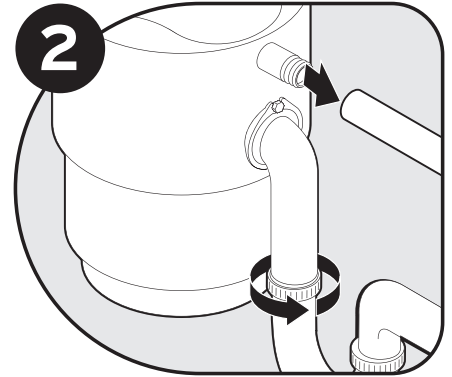
1

If you are replacing an existing disposer, continue to Step 2. If there is no existing disposer, disconnect sink drain and skip to Step 9.

Si tiene que reemplazar un triturador existente, continúe con el Paso 2. Si no existe un triturador, desconecte el desagüe del fregadero y continúe con el Paso 9.

En cas de remplacement d'un broyeur existant, passer à l'étape 2. Dans le cas contraire, déconnecter le drain de l'évier et passer à l'étape 9.

2



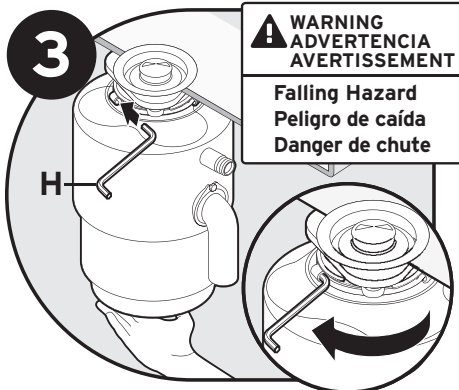
Turn off electrical power at circuit breaker or fuse box. Disconnect drain trap from waste discharge tube. Disconnect dishwasher if connected to the disposer.

Desconecte el suministro eléctrico desde la caja de fusibles o del interruptor de circuito. Desconecte la trampa de desagüe del tubo de descarga de desperdicios. Desconecte el lavaplatos si está conectado al triturador.

Couper l'alimentation au tableau de distribution (retirer le fusible ou actionner le disjoncteur). Déconnecter le robinet de vidange du tube de vidange. Déconnecter le lave-vaisselle s'il est connecté au broyeur.

3

**! WARNING
ADVERTENCIA
AVERTISSEMENT**
**Falling Hazard
Peligro de caída
Danger de chute**

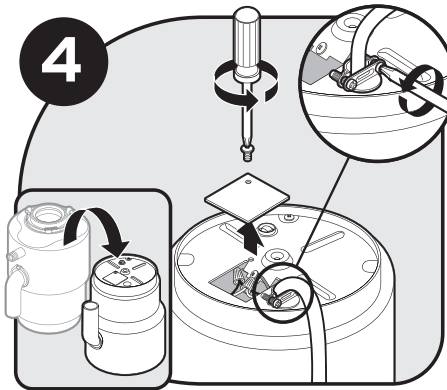


Support disposer, insert end of wrench (H) into right side of mounting lug, and turn. Disposer will fall free.

Sostenga el triturador, inserte el extremo de la llave (H) en el lado derecho de la aleta de montaje y gírela. El triturador se liberará.

Soutenir le broyeur, insérer l'extrémité de la petite clé (H) dans le côté droit de la patte de fixation et tourner. Le broyeur chutera librement en place.

4

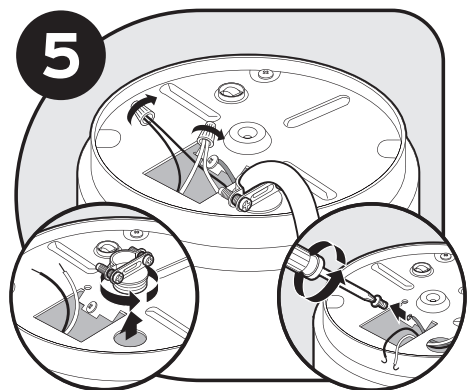


Flip disposer over and remove electrical cover plate. Save cable connector if applicable.

Dé vuelta al triturador y retire la placa de protección eléctrica. Guarde el conector del cable si corresponde.

Renverser le broyeur et retirer la plaque électrique. Conserver le connecteur de câble s'il y a lieu.

5



Disconnect the disposer wires from the electrical supply.

Desconecte del suministro eléctrico los cables del triturador.

Débrancher les fils du broyeur de l'alimentation électrique.

Removal of old disposer/Extracción del triturador viejo/Retrait de l'ancien broyeur

6

Is the new disposer mounting the same as the old one?

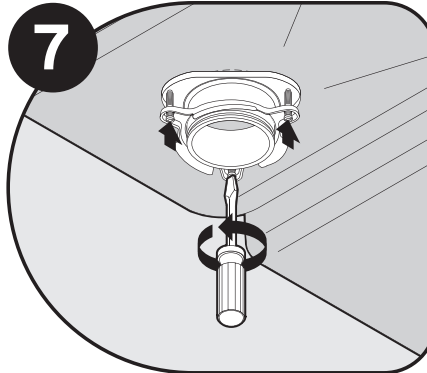
If YES, you may choose to skip to step 15.
If NO, continue to step 7.

¿El montaje del triturador nuevo es el mismo que el del viejo?

Si la respuesta es SÍ, continúe en el paso 15.
Si la respuesta es NO, continúe en el paso 7.

Est-ce que le montage du nouveau broyeur est le même que celui de l'ancien?

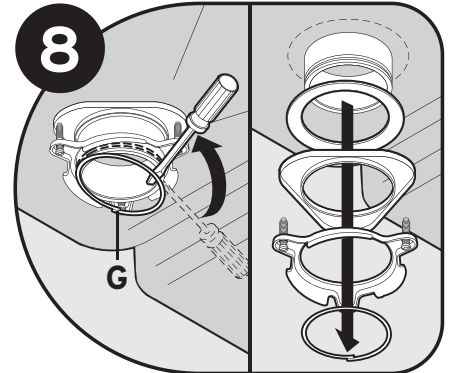
Si OUI, passer à l'étape 15.
Si NON, passer à l'étape 7.



Using a flathead screwdriver, loosen the 3 screws on the mounting assembly.

Con un destornillador de punta plana, afloje los 3 tornillos del conjunto de montaje.

Au moyen d'un tournevis à tête plate, desserrer les trois vis du montage de base.

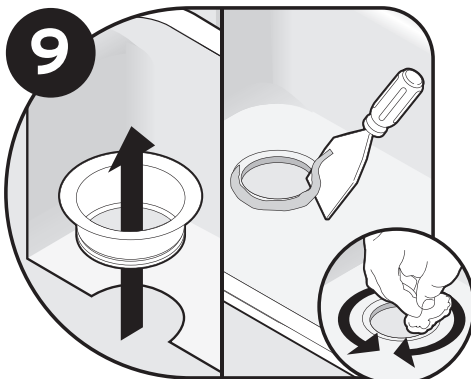


Using a screwdriver, remove the snap ring (G).

Retire el anillo de cierre con un destornillador (G).

Au moyen d'un tournevis, retirer le jonc de blocage (G).

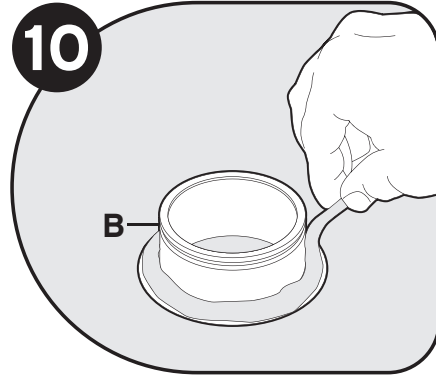
Install flange in sink hole/Instale la brida en el orificio del fregadero/Installer le collet dans le trou de l'évier



Remove flange from sink. Remove old plumber's putty from sink with putty knife.

Retire la brida del fregadero. Retire la masilla de plomería vieja del fregadero con una espátula para masilla.

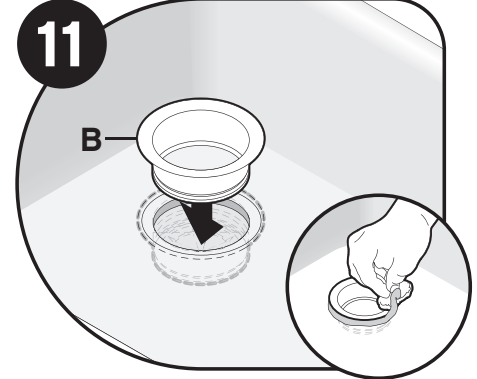
Retirer le collet de l'évier. Enlever le mastic de plomberie usagé au moyen d'un couteau à mastic.



Evenly apply 1/2" thick rope of plumber's putty around sink flange (B).

Aplique una tira gruesa de masilla de plomería, de 1/2" (1.3 cm), en forma uniforme alrededor de la brida (B).

Appliquez uniformément un cordon de mastic de plomberie de 1/2" (1,3 cm) d'épaisseur autour du collet (B).



Press sink flange (B) firmly into sink drain. Remove excess putty.

Presione la brida (B) firmemente en el desagüe del fregadero. Retire la masilla sobrante.

Enfoncer le collet (B) fermement dans le drain de l'évier. Enlever l'excès de mastic.

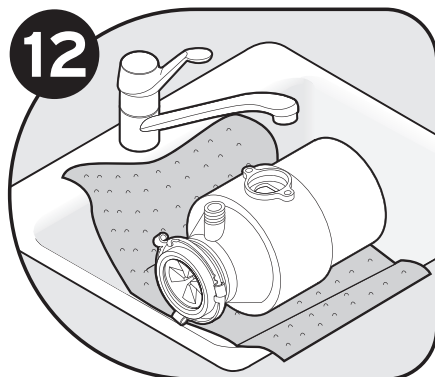
NOTICE/AVISO/AVIS

Property Damage: Risk of long/short term water leakage if not properly assembled.

Daño a la propiedad: Si no se coloca de la manera adecuada existe riesgo de filtración de agua a corto o largo plazo.

Domages matériels : Un assemblage incorrect peut entraîner un risque de fuite d'eau à court ou à long terme.

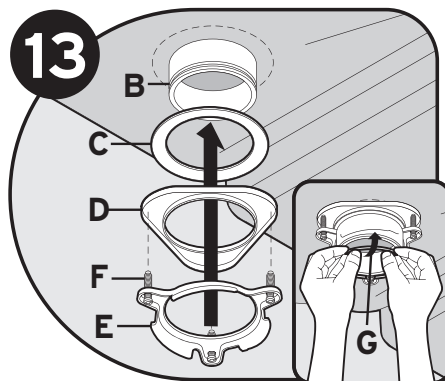
Attach upper mounting assembly/Conecte el conjunto de montaje superior/Fixer le montage de base supérieur



Place a weight, such as the disposer, on the sink flange to hold it in place. Use a towel to avoid scratching sink.

Coloque un peso, por ejemplo el triturador, sobre la brida del fregadero para mantenerla en su lugar. Utilice una toalla para evitar que se raye el fregadero.

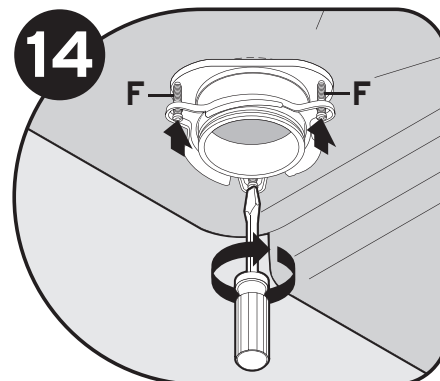
Placer un poids tel que le broyeur sur le collet de l'évier pour le maintenir en place. Utiliser une serviette pour éviter d'égratigner l'évier.



Insert fiber gasket (C), backup flange (D) and mounting ring (E). Hold in place while inserting snap ring (G). Pull snap ring (G) open and press firmly until it snaps into place.

Inserte la junta de fibra (C), la brida de soporte (D) y el anillo de montaje (E). Sosténgalos en su lugar mientras inserta el anillo de cierre (G). Abra el anillo de cierre (G) y presione firmemente hasta que se coloque en el lugar.

Insérer le joint fibreux (C), la bride de retenue (D) et l'anneau de montage (E). Tenir le tout en place pendant l'insertion de l'anneau élastique (G). Ouvrir l'anneau élastique (G) et appuyer fermement jusqu'à ce qu'il s'enclenche.



Tighten 3 mounting screws (F) evenly and firmly against backup flange.

Ajuste los 3 tornillos de montaje (F) en forma uniforme y firme contra la brida de soporte.

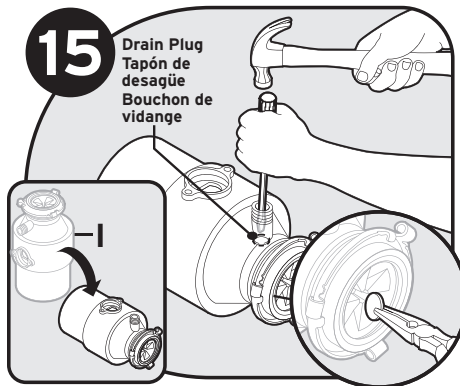
Serrer les trois vis de montage (F) uniformément et fermement contre la bride de retenue.

Attach upper mounting assembly/Conecte el conjunto de montaje superior/Fixer le montage de base supérieur

STOP! If connecting a dishwasher, remove drain plug in step 15.

¡PARE! Si está conectando un lavavajillas, saque el tapón de desagüe como se indica en el paso 15.

ARRÊTEZ! Si vous raccordez un lave-vaisselle, retirez le bouchon de vidange à l'étape 15.



IMPORTANT: Dishwasher connection only
IMPORTANTE: Sólo para la conexión del lavavajillas
IMPORTANT : Connexion du lave-vaisselle seulement

If NOT connecting a dishwasher, continue to step 16.

Si no está conectando un lavavajillas, continúe con el paso 16.

Si vous ne raccordez pas un lave-vaisselle, continuez à l'étape 16.

NOTICE: Drain plug cannot be replaced once it is knocked out. Turn disposer (J) onto side and knock out drain plug with screwdriver. Remove plug from inside of disposer with pliers.

AVISO: El tapón de drenaje no se puede colocar de nuevo una vez que se ha quitado. Dé vuelta el triturador (J) para un costado y golpee el tapón del desagüe con un destornillador para extraerlo. Retire el tapón del interior del triturador con pinzas.

AVIS : Le bouchon de vidange ne peut être remis en place une fois qu'il est retiré. Déposer le broyeur (J) sur le côté et enlever le bouchon du drain avec un tournevis. Retirer le tampon de l'intérieur du broyeur avec des pinces.

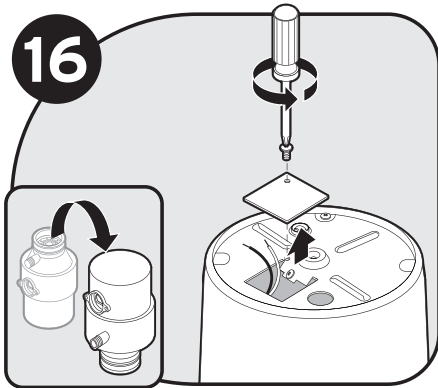
NOTICE/AVISO/AVIS

If the dishwasher connection is made without removing the plug, the dishwasher may overflow.

Si conecta el lavavajillas sin retirar la tapa ciega, el lavavajillas puede rebalsarse.

Si le raccordement du lave-vaisselle est effectué sans que le bouchon ne soit retiré, le lave-vaisselle peut déborder.

**Connect disposer to electrical supply/Conecte el triturador al suministro eléctrico/
Raccorder le broyeur à l'alimentation électrique**



Turn disposer over and remove electrical cover plate. Pull out wires.

Dé vuela el triturador y retire la placa protectora eléctrica. Saque los cables.

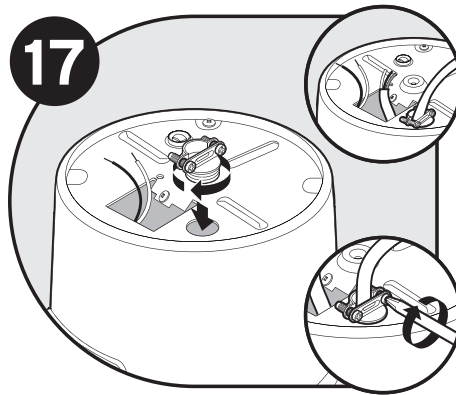
Renverser le broyeur et enlever la plaque électrique. Extraire les fils électriques

NOTICE/AVISO/AVIS

Property Damage: Do not remove or displace motor compartment insulation shield.

Daño a la propiedad: No retire o desplace la protección aislante del compartimento del motor.

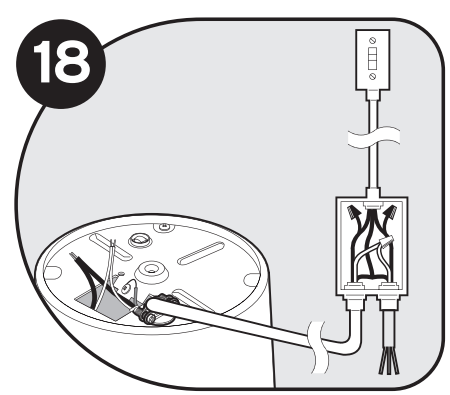
Dommages matériels : Ne pas enlever ni déplacer l'écran d'isolation du compartiment moteur.



Insert cable connector (not included) and run electrical cable through access hole on bottom of disposer. Tighten cable connector.

Introduzca el conector del cable (no incluido) y pase el cable eléctrico a través del orificio de acceso en la parte inferior del triturador. Ajuste el conector del cable.

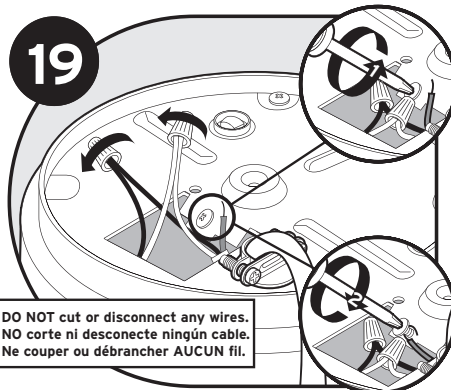
Insérer le connecteur de câble (non compris) et faire passer le câble électrique par le trou d'accès qui se trouve au fond du broyeur. Serrer le connecteur de câble.



This disposer requires a switch with a marked "Off" position (wired to disconnect all ungrounded supply conductors) installed within sight of the disposer sink opening (1 hp minimum rating).

Este triturador requiere un interruptor que tenga la posición "Off" marcada (cableado de modo de desconectar todos los conductores de suministro no conectados a tierra) e instalado no muy lejos de la abertura del fregadero para el triturador (capacidad mínima de 1 hp).

Ce broyeur doit être équipé d'un interrupteur sur lequel la position d'arrêt (Off) est indiquée (pour débrancher tous les conducteurs d'alimentation non mis à la terre) et installé à la vue du trou d'évier du broyeur (puissance minimale de 1 HP).



⚠ DO NOT cut or disconnect any wires.
⚠ NO corte ni desconecte ningún cable.
⚠ Ne couper ou débrancher AUCUN fil.

Connect white wire from disposer to neutral (white) wire from power source. Connect black wire from disposer to hot (black, red) wire from power source with wire nuts (not included). Connect ground wire to green grounding screw. Unit must be grounded for safe and proper installation.

Conecte el cable blanco del triturador al cable neutro (blanco) de la fuente de energía, y el cable negro del triturador al cable vivo (negro, rojo) de la fuente de energía, use para ello tuercas para cable (no incluidas); finalmente, una el cable de conexión a tierra con el tornillo verde conectado a tierra. La unidad debe estar conectada a tierra para una instalación segura y adecuada.

Raccordez le fil blanc du broyeur au fil neutre (blanc) de la source d'alimentation et le fil noir du broyeur au fil sous tension (noir ou rouge) de la source d'alimentation au moyen de serre-fils (non inclus); mettez le fil à la terre au moyen de la vis verte de mise à la terre. L'unité doit être mise à la terre pour assurer une installation adéquate et sûre.

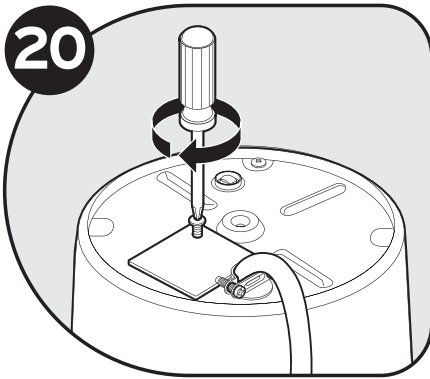
⚠ WARNING/ADVERTENCIA/AVERTISSEMENT

Improper grounding can result in electric shock hazard.

La conexión incorrecta a tierra puede representar un riesgo de descarga eléctrica.

Une mise à la terre inefficace peut entraîner un risque de choc électrique.

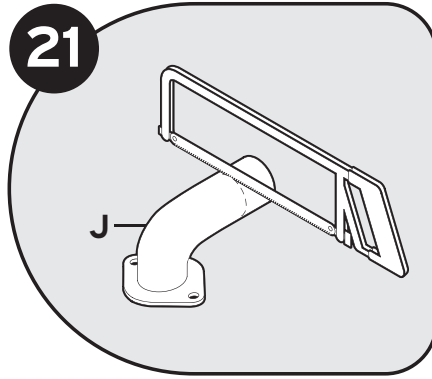
**Connect disposer to electrical supply/Conecte el triturador al suministro eléctrico/
Raccorder le broyeur à l'alimentation électrique**



Push wires into disposer and replace electrical cover plate.

Coloque los cables dentro del triturador y vuelva a colocar la placa protectora eléctrica.

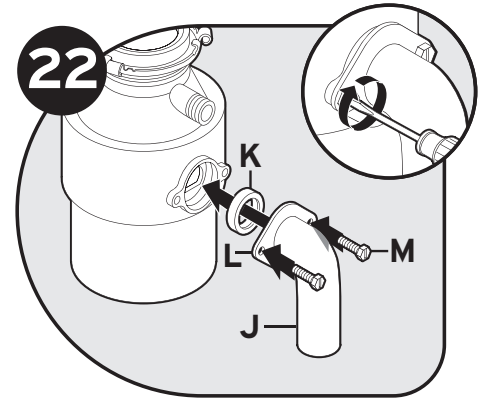
Pousser les fils dans le broyeur et replacer la plaque électrique.



You may need to trim discharge tube (J) to ensure proper fit.

Es posible que deba recortar el tubo de descarga (J) para asegurarse de que quede bien colocado.

Vous devrez peut-être ajuster le tuyau de vidange (J) pour qu'il s'adapte correctement.



Slide flange (L) over discharge tube (J). Insert gasket (K) into discharge outlet. Secure flange and discharge tube to disposer with two bolts (M). Although the supplied discharge tube is preferred, a straight discharge tube may be used.

Deslice la brida (L) sobre el tubo de descarga (J). Introduzca la junta (K) en la salida de descarga. Fije con dos pernos (M) la brida y el tubo de descarga al triturador. Aunque se recomienda utilizar el tubo de descarga incluido con la unidad, puede usar un tubo de descarga recto.

Glisser le collet (L) sur le tuyau de vidange (J). Insérer le joint (K) dans l'orifice d'évacuation. À l'aide des deux boulons (M), fixer le collet et le tuyau de vidange au broyeur. Même s'il est préférable d'utiliser le tuyau de vidange fourni, un tuyau de vidange droit peut être utilisé.

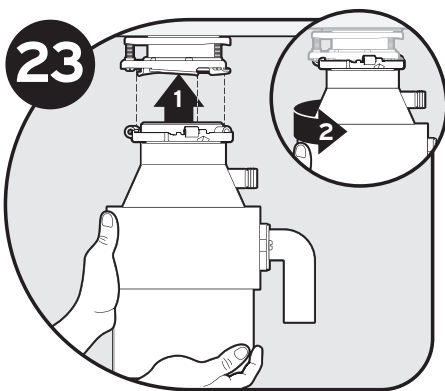
NOTICE/AVISO/AVIS

Property Damage Risk: Do not remove or displace motor compartment insulation shield.

Daño a la propiedad: No retire o desplace la protección aislante del compartimento del motor.

Dommages matériels : Ne pas enlever ni déplacer l'écran d'isolation du compartiment moteur.

Connect disposer to mounting assembly with Lift & Latch™/Conecte el triturador al conjunto de montaje con Lift & Latch™/Fixation du broyeur au support de montage à l'aide du dispositif Lift & Latch™



Lifting disposer from the bottom (1), hang disposer by aligning 3 mounting tabs with slide-up ramps on mounting ring and (2) slightly turn disposer clockwise.

Levante el triturador desde la parte inferior (1), inclínelo alineando las tres lengüetas de montaje con las rampas deslizantes hacia arriba sobre el anillo de montaje y (2) gire ligeramente el triturador en el sentido de las agujas del reloj.

En soulevant le broyeur par le bas (1), accrochez le broyeur en alignant 3 pattes de montage avec les rampes coulissantes sur l'anneau de montage et (2) tournez légèrement le broyeur dans le sens des aiguilles d'une montre.

⚠ WARNING/ADVERTENCIA/AVERTISSEMENT

Do not position your head or body under disposer; unit could fall during removal or installation.

Lesiones personales: No coloque la cabeza ni el cuerpo debajo del triturador, ya que la unidad podría caerse mientras lo retira o instala.

Ne pas placer la tête ou le corps sous le broyeur de déchets, l'unité pourrait tomber pendant le retrait ou l'installation.

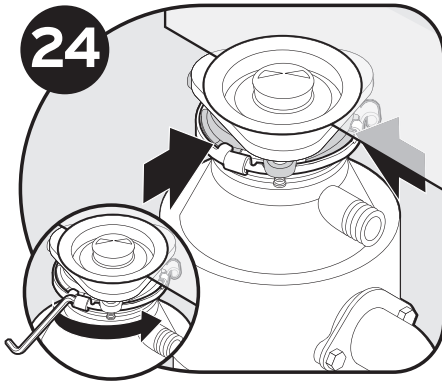
NOTICE/AVISO/AVIS

Property Damage: Risk of long/short term water leakage if all three mounting tabs are not properly engaged on all slide-up ramps and locked in place past the ridges.

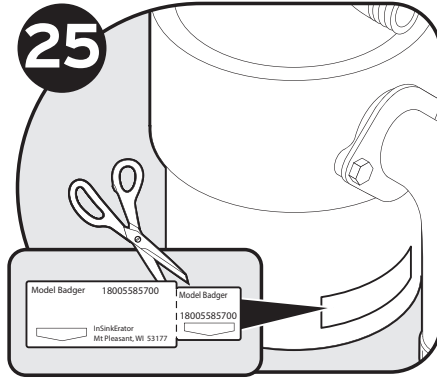
Daño a la propiedad: Riesgo de filtración de agua a corto/largo plazo si las tres lengüetas de montaje no están correctamente acopladas a todas las rampas deslizantes y aseguradas en el lugar por los bordes.

Dommages matériels : Risque de fuite à court terme ou à long terme si les trois languettes de montage ne sont pas correctement enclenchées dans les rampes de glissement vers le haut et verrouillées en position en amont des arêtes.

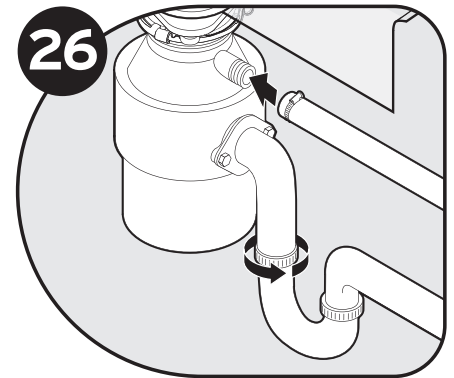
Connect disposer to mounting assembly with Lift & Latch™/Conecte el triturador al conjunto de montaje con Lift & Latch™/Fixation du broyeur au support de montage à l'aide du dispositif Lift & Latch™



Turn mounting ring until all 3 mounting tabs latch over the ridges on the slide-up ramps.
Gire el anillo de montaje hasta que las tres lengüetas de montaje enganchen en las crestas de las rampas de montaje.
Tournez la bague de montage jusqu'à ce que les 3 pattes de montage s'enclenchent sur les arêtes des rampes coulissantes.



Detach removable portion of spec label and place on a visible location.
Corte la parte desmontable de la etiqueta de especificaciones y colóquela en un lugar visible.
Détacher la partie détachable de l'étiquette de spécifications et la placer dans un endroit bien visible.



Reconnect plumbing (and dishwasher connection if used).
Vuelva a conectar las tuberías (y la conexión del lavavajillas, si fuese necesario).
Le tuyau devra peut-être être coupé pour s'ajuster proprement.

⚠ CAUTION/PRECAUCIÓN/MISE EN GARDE

To avoid leaks and/or potential falling hazard, make sure all 3 mounting tabs are latched over ridges.
Para evitar pérdidas o el peligro de una posible caída, asegúrese de que las tres lengüetas de montaje están enganchadas en las crestas.
Pour éviter les fuites et les risques de chute potentiels, assurez-vous que les 3 languettes de montage sont verrouillées sur les arêtes.



Insert stopper (A) into sink opening. Fill sink with water, then test for leaks. Reconnect electrical power at fuse box or circuit breaker box.
Introduzca el tapón (A) en la abertura del fregadero. Llene el fregadero con agua y luego verifique que no haya fugas. Vuelva a conectar el suministro eléctrico desde la caja de fusibles o el disyuntor.
Remette le bouchon (A) dans l'ouverture de l'évier. Remplir l'évier d'eau pour vérifier qu'il ne fuit pas. Rétablir l'alimentation électrique au boîtier de fusibles ou de disjoncteurs.

NOTICE/AVISO/AVIS

Property Damage: Risk of long/short term water leakage if not properly assembled.

You may need to trim tube for proper fit. To reduce the potential of leaking, the drain line must be properly pitched (not less than 1/4" of pitch per foot of run) from the disposer to the drain connection, with the drain connection being lower than the disposer discharge. Failure to do so could lead to premature corrosion or leaking due to standing water left in the disposer.

Daño a la propiedad: Si no se coloca de la manera adecuada existe riesgo de filtración de agua a corto o largo plazo.

Es posible que deba recortar el tubo para que quede bien colocado. Para reducir el potencial de fugas, la línea del drenaje debe estar colocada de la manera apropiada (no menos de 1/4" de inclinación por pie de tramo) desde el triturador hasta la conexión del drenaje, y la conexión del drenaje debe estar más baja que la descarga del triturador. Si no se coloca de la manera apropiada, puede provocar corrosión prematura o filtraciones debido al agua estancada en el triturador.

Dommages matériels : Un assemblage incorrect peut entraîner un risque de fuite d'eau à court ou à long terme.

Il peut être nécessaire de couper le tube pour l'ajuster correctement. Pour réduire les risques de fuite, le tuyau de vidange doit avoir une pente adéquate (chute d'au moins 6 mm sur 30 cm ou 1/4 po par pied) entre le broyeur et le raccord de vidange, le raccord de vidange devant se trouver plus bas que l'évacuation du broyeur. Le non-respect de cette instruction pourrait entraîner une corrosion prématurée ou des fuites en raison de la présence d'eau stagnante dans le broyeur.

ENGLISH

INSTRUCTIONS PERTAINING TO RISK OF FIRE, ELECTRIC SHOCK, INJURY TO PERSONS OR DAMAGE TO PROPERTY

IMPORTANT SAFETY INSTRUCTIONS

WARNING

Personal Injury: Do not position your head or body under disposer; unit could fall during removal or installation.

GROUNDING INSTRUCTIONS

For all grounded, cord-connected disposers:

This disposer must be grounded to reduce the risk of electric shock in the event of a malfunction or breakdown. Grounding provides a path of least resistance for electric current. If your disposer did not include a factory installed power cord, use a cord having an equipment-grounding conductor and a grounding plug. (InSinkErator power cord accessory CRD-00 recommended.) The plug must be plugged into an outlet that is properly installed and grounded in accordance with all local codes and ordinances.

For permanently connected disposers:

This disposer must be connected to a grounded, metal, permanent wiring system; or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment-grounding terminal or lead on the disposer.

WARNING

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the disposer is properly grounded. If the plug you are using does not fit the outlet, do not modify the plug or attempt to force the plug into the outlet - have a proper outlet installed by a qualified electrician.

- This disposer must be properly grounded.
- Do not attach ground wire to gas supply line.
- Disconnect power before installing or servicing disposer.
- If three-prong grounded plug is used, plug must be inserted into three-hole grounded receptacle.
- All wiring must comply with local electrical codes.
- Do not reconnect electrical current at main service panel until proper grounds are installed.

NOTICE

- Do not use plumber's putty on any other disposer connection other than sink flange. Do not use thread sealants or pipe dope. These may harm disposer and cause property damage.

WARNING When using electric appliances, basic precautions are always to be followed, including:

- Read all instructions before using the appliance.
- To reduce the risk of injury, close supervision is required when an appliance is used near children.
- Do not put fingers or hands into a waste disposer.
- Turn the power switch to the off position before attempting to clear a jam, removing an object from the disposer or pressing reset button.
- When attempting to loosen a jam in a waste disposer, use the self-service wrenchette.
- When attempting to remove objects from a waste disposer, use long-handled tongs or pliers.
- Do not put the following into a disposer: clam or oyster shells, caustic drain cleaners or similar products, glass, china, or plastic, metal (such as bottle caps, steel shot, tin cans, or utensils), hot grease or other hot liquids.
- When not operating a disposer, leave the stopper in place to reduce the risk of objects falling into the disposer.
- This product is designed to dispose of normal household food waste; inserting materials other than food waste into disposer could cause personal injury and/or property damage.
- To reduce the risk of injury and/or property damage, do not use the sink containing the disposer for purposes other than food preparation (such as baby bathing or washing hair).
- Do not dispose of the following in the disposer: paints, solvents, household cleaners and chemicals, automotive fluids, plastic wrap.
- FIRE HAZARD: Do not store flammable items such as rags, paper or aerosol cans near disposer. Do not store or use gasoline or other flammable vapors and liquids in vicinity of disposer.
- LEAK HAZARD: Regularly inspect disposer and plumbing fittings for leaks, which can cause property damage and could result in personal injury.

SAVE THESE INSTRUCTIONS

OPERATING INSTRUCTIONS

1. Remove stopper from sink opening and run cold water.
2. Turn on disposer.
3. Slowly insert food waste into disposer. **WARNING!** Position stopper to minimize possible ejection of material while grinding.
4. After grinding is complete, turn disposer off and run water for a few seconds to flush drain line.

DO...

- First turn on cold water and then turn on the disposer. Continue running cold water for several seconds after grinding is completed to flush the drain line.
- Grind hard materials such as small bones, fruit pits, and ice. A scouring action is created by the particles inside the grind chamber.
- Grind peelings from citrus fruits to freshen up drain smells.
- Use a disposer cleaner, degreaser, or deodorizer as necessary to relieve objectionable odors caused by grease build-up.

NOTICE

Failure to flush the disposer properly may result in damage to the disposer and/or property damage.

DON'T...

- **DON'T POUR GREASE OR FAT DOWN YOUR DISPOSER OR ANY DRAIN. IT CAN BUILD UP IN PIPES AND CAUSE DRAIN BLOCKAGES. PUT GREASE IN A JAR OR CAN AND DISPOSE IN THE TRASH.**
- Don't use hot water when grinding food waste. It is OK to drain hot water into the disposer between grinding periods.
- Don't fill disposer with a lot of vegetable peels all at once. Instead, turn the water and disposer on first and then feed the peels in gradually.
- Don't grind large amounts of egg shells or fibrous materials like corn husks, artichokes, etc., to avoid possible drain blockage.
- Don't turn off disposer until grinding is completed and only sound of motor and water is heard.



USER MAINTENANCE INSTRUCTIONS

CLEANING DISPOSER

Over time, food particles may accumulate in the grind chamber and baffle. An odor from the disposer is usually a sign of food buildup. To clean disposer:

1. Place stopper in sink opening and fill sink halfway with warm water.
2. Mix 1/4 cup baking soda with water. Turn disposer on and remove stopper from sink at same time to wash away loose particles.

RELEASING DISPOSER JAM

If motor stops while disposer is operating, disposer may be jammed. To release jam:

1. Turn off disposer and water.
2. Insert one end of self-service Jam-Buster™ Wrench into center hole on bottom of disposer (see Figure A). Work Jam-Buster™ Wrench back and forth until it turns one full revolution. Remove Jam-Buster™ Wrench.
3. Reach into disposer with tongs and remove object(s). Allow disposer motor to cool for 3 - 5 minutes, then lightly push red reset button on disposer bottom (see Figure B). (If motor remains inoperative, check service panel for tripped circuit breakers or blown fuses.)

Figure A

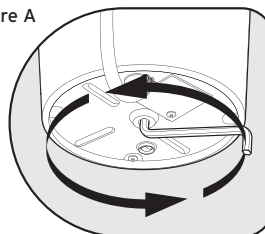
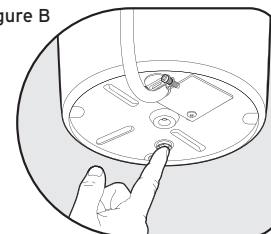


Figure B



IN-HOME FULL-SERVICE LIMITED WARRANTY BADGER® 1, BADGER® 1XL, BADGER® 100 - 1 YEAR BADGER® 5, BADGER® 5XL, BADGER® 500 - 3 YEARS BADGER 5XP® - 4 YEARS

This limited warranty is provided by InSinkErator, LLC, ("InSinkErator" or "Manufacturer" or "we" or "our" or "us") to the original consumer owner of the InSinkErator product with which this limited warranty is provided (the "InSinkErator Product"), and any subsequent owner of the residence in which the Product was originally installed ("Customer" or "you" or "your").

InSinkErator warrants to Customer that your InSinkErator Product will be free from defects in materials and workmanship, subject to the exclusions described below, for the warranty period, commencing on the later of: (a) the date your InSinkErator Product is originally installed, (b) the date of purchase, or (c) the date of manufacture as identified by your InSinkErator Product serial number. You will be required to show written documentation supporting (a) or (b). If you are unable to provide documentation supporting either (a) or (b), the Warranty Period commencement date will be determined by Manufacturer, in its sole and absolute discretion, based upon your InSinkErator Product serial number.

What is Covered

This limited warranty covers defects in materials or workmanship, subject to the exclusions below, in InSinkErator Products used by a consumer Customer for residential use only, and includes all replacement parts and labor costs. YOUR SOLE AND EXCLUSIVE REMEDY UNDER THIS LIMITED WARRANTY SHALL BE LIMITED TO REPAIR OR REPLACEMENT OF THE INSINKERATOR PRODUCT, PROVIDED THAT IF WE DETERMINE IN OUR SOLE DISCRETION THAT NEITHER REMEDY IS PRACTICABLE, WE MAY PROVIDE YOU A REFUND OF YOUR PURCHASE PRICE OR A CREDIT TOWARDS ANOTHER INSINKERATOR PRODUCT.

What is not Covered

This limited warranty does not extend to and expressly excludes:

- Losses or damages or the inability to operate your InSinkErator Product resulting from conditions beyond the Manufacturer's control including, without limitation, accident, alteration, misuse, abuse, neglect, negligence (other than Manufacturer's), failure to install, maintain, assemble, or mount the InSinkErator Product in accordance with Manufacturer's instructions or local electrical and plumbing codes.
- Wear and tear expected to occur during the normal course of use, including without limitation, cosmetic rust, scratches, dents or comparable and reasonably expected losses or damages.

In addition to the above exclusions, this limited warranty does not apply to InSinkErator Products installed in a commercial or industrial application.

No Other Express Warranty Applies

This limited warranty is the sole and exclusive warranty provided to the Customer identified above. No other express warranty, written or verbal, applies. No employee, agent, dealer, or other person is authorized to alter this limited warranty or make any other warranty on behalf of Manufacturer. The terms of this limited warranty shall not be modified by the Manufacturer, the original owner, or their respective successors or assigns.

What we will do to Correct Problems

If your InSinkErator Product does not operate in accordance with the documentation provided to you, or you have questions concerning your InSinkErator Product or how to determine when service is needed, please call the toll free InSinkErator AnswerLine® at 1 (800) 558-5700, or visit our website at www.insinkerator.com. You may also notify us at: InSinkErator Service Center, 4700 21st Street, Racine, Wisconsin 53406 USA.

The following information must be provided as part of your warranty claim: your name, address, phone number, your InSinkErator Product model and serial number, and if necessary, upon request, written confirmation of either: (a) the date shown on your installation receipt, or (b) the date shown on your purchase receipt.

Manufacturer or its authorized service representative will determine, in its sole and absolute discretion, if your InSinkErator Product is covered under this limited warranty. You will be given the contact information for your closest authorized InSinkErator Service Center. Please contact your InSinkErator Service Center directly to receive in home warranty repair or replacement service. Only an authorized InSinkErator service representative may provide warranty service. InSinkErator is not responsible for warranty claims arising from work performed on your InSinkErator Product by anyone other than an authorized InSinkErator service representative.

If a covered claim is made during the Warranty Period, Manufacturer will, through its authorized service representative, either repair or replace your InSinkErator Product. Cost of replacement parts or a new InSinkErator Product, and cost of labor for repair or installation of the replacement InSinkErator Product are provided at no cost to you. Repair or replacement shall be determined by Manufacturer or its authorized service representative in their sole discretion. All repair and replacement services will be provided to you at your home. If Manufacturer determines that your InSinkErator Product must be replaced rather than repaired, the limited warranty on the replacement InSinkErator Product will be limited to the unexpired term remaining in the original Warranty Period.

This disposer is covered by Manufacturer's limited warranty. This limited warranty is void if you attempt to repair the InSinkErator Product. For service information, please visit www.insinkerator.com or call, toll free, 1-800-558-5700.

Limitation of Liability

TO THE EXTENT PERMITTED BY LAW, IN NO EVENT SHALL MANUFACTURER OR ITS AUTHORIZED SERVICE REPRESENTATIVES BE LIABLE FOR ANY INCIDENTAL, SPECIAL, INDIRECT, OR CONSEQUENTIAL DAMAGES, INCLUDING ANY ECONOMIC LOSS, WHETHER RESULTING FROM NONPERFORMANCE, USE, MISUSE OR INABILITY TO USE THE INSINKERATOR PRODUCT OR THE MANUFACTURER'S OR ITS AUTHORIZED SERVICE REPRESENTATIVE'S NEGLIGENCE. MANUFACTURER SHALL NOT BE LIABLE FOR DAMAGES CAUSED BY DELAY IN PERFORMANCE AND IN NO EVENT, REGARDLESS OF THE FORM OF THE CLAIM OR CAUSE OF ACTION (WHETHER BASED IN CONTRACT, INFRINGEMENT, NEGLIGENCE, STRICT LIABILITY, OTHER TORT OR OTHERWISE), SHALL MANUFACTURER'S LIABILITY TO YOU EXCEED THE PRICE PAID BY THE ORIGINAL OWNER FOR THE INSINKERATOR PRODUCT.

The term "consequential" damages shall include, but not be limited to, loss of anticipated profits, business interruption, loss of use or revenue, cost of capital or loss or damage to property or equipment.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation may not apply to you. This limited warranty gives you specific legal rights and you may also have other rights which vary from state to state.



Food waste in roughly 80% water. By using your disposal regularly, you can help divert food waste from landfills and reduce greenhouse gas emissions. Make sustainability a family affair by using your disposal. After all, the smallest changes can make the biggest impact.

For U.S. www.insinkerator.com/green For Canada www.insinkerator.ca

InSinkErator® may make improvements and/or changes in the specifications at any time, in its sole discretion, without notice or obligation and further reserves the right to change or discontinue models.

The mounting collar configuration is a trademark of InSinkErator, LLC.

INSTRUCCIONES SOBRE RIESGO DE INCENDIO, CHOQUE ELÉCTRICO, LESIONES PERSONALES O DAÑO A LA PROPIEDAD

INSTRUCCIONES IMPORTANTES PARA SU SEGURIDAD

⚠ ADVERTENCIA

Lesiones personales: No coloque la cabeza ni el cuerpo debajo del triturador, ya que la unidad podría caerse mientras lo retira o instala.

INSTRUCCIONES PARA LA CONEXIÓN A TIERRA

Instrucciones para todos los trituradores con conexión a tierra conectados por cable:

El triturador debe estar conectado a tierra a fines de reducir el riesgo de descarga eléctrica en caso de mal funcionamiento o avería. La conexión a tierra proporciona una vía de menor resistencia para la corriente eléctrica. Si su triturador no incluía un cable de alimentación instalado de fábrica, use un cable que tenga un conductor de conexión a tierra y un enchufe de conexión a tierra. (Se recomienda el accesorio de cable de alimentación InSinkErator CRD-00). El enchufe debe estar conectado a un tomacorriente que esté instalado correctamente y con conexión a tierra de acuerdo con todos los reglamentos y códigos locales.

Instrucciones para los trituradores de desperdicios de comida de conexión permanente:

El triturador debe estar conectado a un sistema de cableado permanente de metal y con conexión a tierra, o bien el conductor de conexión a tierra del equipo debe funcionar junto con los conductores de circuito y estar conectado al cable o terminal con conexión a tierra del equipo del triturador.

⚠ ADVERTENCIA

La conexión incorrecta del conductor de conexión a tierra del equipo puede representar un riesgo de descarga eléctrica. Consulte a un electricista calificado o especialista en reparaciones si tiene dudas sobre la conexión a tierra del triturador. Si el enchufe que está usando no coincide con el tipo de tomacorriente, no altere el enchufe ni lo fuerce para que entre en el tomacorriente; pídale a un electricista calificado que instale un tomacorriente adecuado.

- El triturador debe tener una adecuada conexión a tierra.
- No conecte el cable de conexión a tierra en un tubo de suministro de gas.
- Desconecte la corriente eléctrica antes de instalar o reparar el triturador.
- Si se utiliza un enchufe de tres patas con conexión a tierra, el enchufe debe introducirse en un receptáculo de tres orificios con conexión a tierra.
- Todo el cableado debe cumplir con los códigos eléctricos locales.
- No reconecte la corriente eléctrica al panel de servicio principal sino hasta que se instalen las conexiones a tierra adecuadas.

AVISO

- No utilice masilla de plomería ni ninguna otra conexión del triturador que no sea la brida del fregadero. No utilice sellador de rosca ni grasa para rosca de cañerías. Estos productos pueden dañar el triturador y ocasionar daños a la propiedad.

⚠ ADVERTENCIA

Al usar artefactos electrodomésticos, siempre se deben tomar precauciones básicas, las que incluyen:

- Lea todas las instrucciones antes de utilizar el aparato.
- Para reducir el riesgo de lesiones, se requiere estrecha supervisión cuando se usa un artefacto cerca de niños.
- No ponga los dedos ni las manos dentro de un triturador de desperdicios.
- Coloque el interruptor de encendido en la posición de apagado antes de tratar de eliminar un atasco, retirar un objeto del triturador de desperdicios o presionar el botón de reposición.
- Para eliminar obstrucciones de un triturador de desperdicios, utilice la llave para autoservicio.
- Al tratar de extraer objetos de un triturador de desperdicios use tenazas o pinzas de mango largo.
- No coloque los siguientes elementos dentro de un triturador: conchas de almejas u ostras, limpiadores de drenaje cáusticos o productos similares, vidrio, loza o plástico, metales (como tapas de botellas, granalla de acero, latas o utensilios), grasa caliente u otros líquidos calientes.
- Cuando el triturador no esté en funcionamiento, deje la tapón del drenaje en su lugar para reducir el riesgo de que algún objeto caiga en el triturador.
- Este producto está diseñado para deshacerse de desperdicios normales de los alimentos hogareños; insertar materiales que no son desperdicios en el triturador podría ocasionar lesiones personales o daños a la propiedad.
- Para reducir el riesgo de lesiones o de daños en bienes, no utilice el fregadero con el triturador de desperdicios de comida en otras actividades que no sean preparación de comida (tales como bañar a un bebé o lavarse el pelo).
- No elimine ninguno de los siguientes elementos en el triturador: pinturas, solventes, limpiadores de uso doméstico, productos químicos, líquidos para automóviles o envolturas de plástico.
- PELIGRO DE INCENDIO: No guarde artículos inflamables, como trapos, papel o aerosoles, cerca del triturador. No guarde ni utilice gasolina ni otros vapores o líquidos inflamables cerca del triturador.
- PELIGRO DE FUGA: Revise periódicamente el triturador y los acoples de plomería para ver si hay fugas que puedan ocasionar daños materiales y puedan provocar lesiones personales.

GUARDE ESTAS INSTRUCCIONES

INSTRUCCIONES DE OPERACION

1. Retire el tapón del fregadero y haga correr agua fría.
2. Encienda el triturador.
3. Introduzca lentamente los desperdicios de comida dentro del triturador. **¡ADVERTENCIA!** Coloque el tapón para disminuir la posibilidad de que los materiales salgan despedidos durante la trituración.
4. Luego de que la trituración esté completa, apague el triturador y deje correr el agua durante unos segundos para enjuagar la línea de drenaje.

LO QUE DEBE HACER

- Primero haga correr el agua fría y luego encienda el triturador. Después de que termine la trituración, deje correr el agua durante varios segundos para enjuagar la línea de drenaje.
- Triture materiales duros como huesos pequeños, carozos de frutas y hielo. Las partículas crean una acción de restregado en el interior de la cámara de trituración.
- Triture cáscaras de frutas cítricas para refrescar el olor del drenaje.
- Utilice un limpiador, desengrasante o desodorante para trituradores cuando sea necesario a fin de eliminar malos olores causados por la acumulación de grasa.

LO QUE NO DEBE HACER

- **NO VIERTA GRASA NI ACEITE EN EL TRITURADOR NI EN NINGÚN DRENAJE. ESTOS MATERIALES SE PUEDEN ACUMULAR EN LAS CAÑERÍAS Y TAPAR EL DRENAJE. COLOQUE LA GRASA EN UN FRASCO O LATA Y DESÉCHELO EN LA BASURA.**
- No use agua caliente para triturar desperdicios de comidas. Puede dejar correr agua caliente en el triturador entre períodos de trituración.
- No llene el triturador con demasiadas cáscaras de vegetales al mismo tiempo. Primero abra la llave del agua y encienda el triturador y luego coloque las cáscaras gradualmente.
- No triture grandes cantidades de cáscaras de huevo ni materiales fibrosos como barbas del choclo, alcachofas, etc., pues ello podría obstruir el drenaje.
- No apague el triturador hasta que la trituración esté completa y sólo se escuche el sonido del motor y del agua.



AVISO

Si no enjuaga el triturador de la manera adecuada puede provocar daños al triturador o a la propiedad.

INSTRUCCIONES DE MANTENIMIENTO PARA EL USUARIO

LIMPIEZA DEL TRITURADOR

Con el tiempo, pueden acumularse partículas de comida en la cámara de trituración y el deflector. Los malos olores provenientes del triturador son generalmente un signo de acumulación de comida. Para limpiar el triturador:

1. Coloque el tapón en la abertura del fregadero y llénelo con agua tibia hasta la mitad.
2. Mezcle 1/4 de taza de bicarbonato de sodio con agua. Encienda el triturador y retire el tapón del fregadero al mismo tiempo para eliminar las partículas sueltas.

COMO LIBERAR LAS OBSTRUCCIONES DEL TRITURADOR

Si el motor se detiene durante el funcionamiento del triturador, puede ser debido a una obstrucción.

Para liberar las obstrucciones:

1. Apague el triturador y cierre la llave de agua.
2. Inserte un extremo de la Llave incorporada Jam-Buster™ en el orificio central, en el fondo del triturador (ver Figura A). Mueva la Llave Jam-Buster™ hacia adelante y hacia atrás hasta que gire una vuelta completa. Quite la Llave Jam-Buster™.
3. Introduzca unas tenazas dentro del triturador y retire el objeto u objetos. Deje enfriar el motor durante 3 a 5 minutos y luego oprima suavemente el botón de reposición rojo ubicado en la parte inferior del triturador (ver Figura B). (Si el motor sigue sin funcionar, revise el panel de servicio para ver si hay interruptores de circuito activados o fusibles quemados.)

Figura A

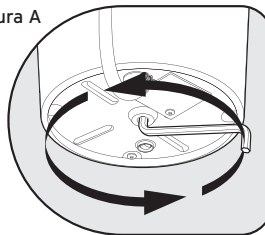
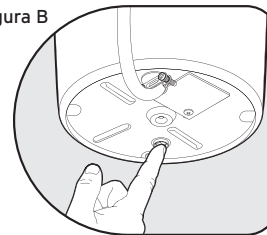


Figura B



GARANTÍA LIMITADA DE SERVICIO COMPLETO EN EL HOGAR BADGER® 1, BADGER® 1XL, BADGER® 100 - 1 AÑO BADGER® 5, BADGER® 5XL, BADGER® 500 - 3 AÑOS BADGER 5XP® - 4 AÑOS

InSinkErator, LLC («InSinkErator», el «fabricante», «nosotros» o «nuestro») proporciona esta garantía al consumidor propietario original del producto de InSinkErator con el que se entrega esta garantía limitada (el «Producto de InSinkErator»), y a cualquier propietario posterior de la residencia en la que se instaló originalmente el Producto («Cliente», «usted» o «su»).

InSinkErator le garantiza al Cliente que su Producto InSinkErator no tendrá defectos en el material ni la mano de obra, sujetos a las exclusiones descritas a continuación, durante el período de garantía, que comienza luego de: (a) la fecha en la que se instaló originalmente su Producto InSinkErator, (b) la fecha de compra o (c) la fecha de fabricación indicada por el número de serie de su Producto InSinkErator. Deberá presentar la documentación escrita correspondiente para justificar (a) o (b). En caso de que no pueda presentar la documentación para justificar (a) o (b), la fecha de inicio del Período de Garantía quedará a consideración del Fabricante, bajo su único y absoluto criterio, basado en el número de serie del Producto InSinkErator.

Cobertura

Esta garantía limitada cubre defectos en los materiales y en la mano de obra, sujeta a las excepciones detalladas a continuación, en productos de InSinkErator utilizados por un Cliente usuario solo para uso doméstico, e incluye el costo de todos los repuestos y servicios de mano de obra. SU ÚNICO Y EXCLUSIVO RECURSO SEGÚN LOS TÉRMINOS DE ESTA GARANTÍA LIMITADA SERÁ LA REPARACIÓN O EL REEMPLAZO DEL PRODUCTO INSINKERATOR, EN EL ENTENDIDO DE QUE SI A NUESTRO JUICIO NINGÚN RECURSO ES PRÁCTICO, LE PODREMOS REEMBOLSAR EL PRECIO DE SU COMPRA O APLICARLO COMO CRÉDITO PARA LA COMPRA DE OTRO PRODUCTO INSINKERATOR.

Qué no cubre la cobertura

Esta garantía limitada no cubre y excluye de manera expresa lo siguiente:

- Pérdidas o daños, o la imposibilidad de operar su producto InSinkErator debido a condiciones que escapan al control del Fabricante, las que incluyen, de forma no taxativa, accidentes, modificaciones, uso incorrecto, abuso, descuido, negligencia (que no sea responsabilidad del Fabricante), fallas en la instalación, mantenimiento, armado o montaje del producto de InSinkErator, según lo indican las instrucciones del Fabricante o los códigos locales eléctricos y de plomería.
- El deterioro previsto bajo condiciones normales de uso incluye, de forma no taxativa, óxido superficial, rayones, abolladuras o pérdidas y daños comparables o razonablemente previstos.

Además de las excepciones anteriores, esta garantía limitada no se aplica a productos de InSinkErator instalados con fines comerciales o industriales.

No se aplica ninguna otra garantía expresa

Esta es la única y exclusiva garantía limitada que se le brinda al Cliente descrito anteriormente. No se aplica ninguna otra garantía expresa, oral o escrita. No se autoriza a ningún empleado, agente, distribuidor o tercero a modificar esta garantía limitada o a elaborar alguna otra garantía en nombre del Fabricante. Ninguna persona podrá modificar los términos de esta garantía limitada independientemente de si se trata del Fabricante, el propietario original o sus respectivos sucesores o beneficiarios.

Solución de problemas

Si su producto de InSinkErator no funciona según la documentación brindada, o si tiene preguntas sobre su producto de InSinkErator o desea saber si necesita servicio, llame a la línea de ayuda gratuita AnswerLine® de InSinkErator al 1 (800) 558-5700, o visite nuestro sitio web www.insinkerator.com. También puede comunicarse con nosotros en: InSinkErator Service Center, 4700 21st Street, Racine, Wisconsin 53406 USA. Wisconsin 53406 USA.



Los desperdicios de comida son aproximadamente un 80% de agua. Si utiliza su triturador con frecuencia, ayuda a desviar los desperdicios de comida de los vertederos (basureros) y a reducir las emisiones de gases de efecto invernadero. Haga que la sostenibilidad sea un asunto familiar mediante el uso del triturador. Después de todo, hasta el cambio más pequeño puede provocar el efecto más grande.

Para EEUU www.insinkerator.com/green Para Canadá www.insinkerator.ca

InSinkErator® podrá hacer mejores y/o cambios en las especificaciones en cualquier momento, a su discreción exclusiva, sin aviso ni obligación, y se reserve adicionalmente el derecho a cambiar o descontinuar los modelos.

La configuración del collar de montaje es una marca registrada de InSinkErator, LLC.

Debe brindar la siguiente información para presentar su reclamo de garantía: nombre, dirección, número de teléfono, modelo y número de serie del producto de InSinkErator, y en caso de ser necesario, se solicitará confirmación por escrito de: (a) fecha detallada en el recibo de instalación, o (b) fecha detallada en el recibo de compra.

El fabricante o su representante de servicio autorizado determinarán, a su exclusivo y absoluto criterio, si esta garantía limitada cubre su producto de InSinkErator. Se le dará la información para comunicarse con el centro de servicio autorizado de InSinkErator más cercano. Comuníquese directamente con el centro de servicio de InSinkErator para recibir en su hogar el servicio de garantía de reparación o reemplazo. Solo un representante de servicio autorizado de InSinkErator puede ofrecer el servicio de garantía. InSinkErator no se hace responsable de los reclamos de garantía que surjan del trabajo realizado en su producto de InSinkErator por otra persona que no sea un representante autorizado de servicio de InSinkErator.

Si se realiza un reclamo cubierto por la garantía durante el período de garantía, el Fabricante reparará o reemplazará su producto de InSinkErator a través de un representante de servicio autorizado. No se le cobrará el costo de los repuestos o del nuevo producto de InSinkErator, ni el costo de la mano de obra para la reparación o instalación del producto de InSinkErator de reemplazo. El Fabricante o su representante de servicio autorizado determinarán, a su exclusivo criterio, la reparación o el reemplazo. Todos los servicios de reparación y reemplazo se realizarán en su hogar. Si el Fabricante determina que se debe reemplazar su producto InSinkErator en vez de repararlo, la garantía limitada del producto InSinkErator de reemplazo se limitará al plazo restante vigente de la garantía original.

Este triturador está cubierto por la garantía limitada del Fabricante. Esta garantía limitada es nula si usted intenta reparar el producto InSinkErator. Para obtener información sobre el servicio, visite www.insinkerator.com o llame a la línea gratuita 1-800-558-5700.

Limitación de responsabilidades

EN LA MEDIDA EN QUE LA LEY LO PERMITA, EN NINGÚN CASO EL FABRICANTE NI SUS REPRESENTANTES DE SERVICIO AUTORIZADO SE RESPONSABILIZARÁN DE CUALQUIER DAÑO INCIDENTAL, ESPECIAL, DIRECTO O CONSECUENTE, INCLUIDA CUALQUIER PÉRDIDA ECONÓMICA, YA SEA RESULTADO DEL INCUMPLIMIENTO, EL USO, EL USO INCORRECTO O LA IMPOSIBILIDAD DE USAR EL PRODUCTO DE INSINKERATOR O LA NEGLIGENCIA POR PARTE DEL FABRICANTE O SUS REPRESENTANTES DE SERVICIO AUTORIZADO. EL FABRICANTE NO SE RESPONSABILIZARÁ DE LOS DAÑOS CAUSADOS POR DEMORAS EN EL CUMPLIMIENTO Y, EN NINGÚN CASO, INDEPENDIENTEMENTE DEL TIPO DE RECLAMO O CAUSA DE ACCIÓN (YA SEA QUE SE BASE EN EL CONTRATO, INCUMPLIMIENTO, NEGLIGENCIA, RESPONSABILIDAD OBJETIVA U OTRA RESPONSABILIDAD EXTRA CONTRACTUAL, ENTRE OTROS), LA RESPONSABILIDAD DEL FABRICANTE SUPERARÁ EL PRECIO ABONADO POR EL PROPIETARIO ORIGINAL DEL PRODUCTO DE INSINKERATOR.

El término "daños consecuentes" incluye, de forma no taxativa, pérdida de ganancias anticipadas, interrupción de actividades comerciales, uso o lucro cesante, costo de capital o pérdidas, o daños de propiedades o equipos.

Algunos estados no permiten la exclusión o limitación de responsabilidades por daños incidentales o consecuentes; por lo tanto, es posible que estas limitaciones no se apliquen a usted. Esta garantía limitada le otorga derechos legales específicos y también puede tener otros derechos que varían según el estado.

FRANÇAIS

DIRECTIVES RELATIVES AUX RISQUES D'INCENDIE, DE CHOC ÉLECTRIQUE, DE BLESSURES ET DE DOMMAGES MATÉRIELS

CONSIGNES DE SÉCURITÉ IMPORTANTES

AVERTISSEMENT

Blessures : Ne pas placer la tête ou le corps sous le broyeur de déchets, l'unité pourrait tomber pendant le retrait ou l'installation.

DIRECTIVES DE MISE À LA TERRE

Pour tous les broyeurs mis à la terre et raccordés à l'aide d'un cordon d'alimentation :

Le broyeur doit être mis à la terre pour réduire le risque de choc électrique en cas de défaillance ou de panne. La mise à la terre fournit un espace de moindre résistance au courant électrique. Si votre broyeur ne comprenait pas un cordon d'alimentation installé en usine, utilisez un cordon ayant un conducteur et une fiche de mise à la terre. (Le cordon d'alimentation CRD-00 d'InSinkErator est recommandé.) La fiche doit être branchée sur une prise qui est correctement installée et mise à la terre conformément à tous les codes et ordonnances locaux.

Pour les broyeurs connectés en permanence :

Le broyeur doit être connecté à une installation électrique métallique permanente mise à la terre ou un conducteur de mise à la terre d'équipement doit être lié aux conducteurs du circuit et raccordé à la borne de mise à la terre d'équipement ou au fil de connexion se trouvant sur le broyeur.

AVERTISSEMENT

Un branchement inadéquat du conducteur de mise à la terre d'équipement peut entraîner des risques de choc électrique. En cas de doute sur la mise à la terre du broyeur, demandez l'avis d'un électricien ou d'un réparateur qualifié. Si la fiche que vous utilisez ne convient pas à la prise, ne modifiez pas la fiche et ne tentez pas de la forcer dans la prise – faites installer une prise appropriée par un électricien qualifié.

- Ce broyeur doit être correctement mis à la terre.
- Ne pas fixer de fil de mise à la terre au tuyau d'alimentation du gaz.
- Couper l'alimentation électrique avant d'installer ou de réparer le broyeur.
- Si une fiche de mise à la terre à trois branches est utilisée, celle-ci doit être insérée dans une prise de trois trous mise à la terre.
- Tout le câblage utilisé doit être conforme aux codes de l'électricité locaux en vigueur.
- Ne pas remettre le courant au panneau principal avant que des conducteurs de mise à la terre ne soient installés.

AVIS

- Ne pas utiliser du mastic de plomberie sur aucune autre connection du broyeur que le collier d'évier. Ne pas utiliser de produit d'étanchéité pour filetage ni de pâte lubrifiante. Ces produits sont nuisibles au broyeur et peuvent causer des dommages.

AVERTISSEMENT

Lors de l'utilisation d'appareil électriques, des précautions élémentaires doivent toujours être prises, y compris :

- Lire les instructions au complet avant d'utiliser l'appareil.
- Pour réduire les risques de blessure, surveiller étroitement les enfants lorsqu'ils se trouvent à proximité d'un appareil en marche.
- Ne pas mettre les doigts ou la main dans un broyeur de déchets.
- Mettre l'interrupteur à la position d'arrêt avant de tenter de libérer un objet coincé, d'enlever un objet du broyeur ou d'appuyer sur le bouton de réenclenchement.
- Pour tenter de dégager un objet coincé dans le broyeur de déchets, utiliser la petite clé d'entretien.
- Pour enlever des objets du broyeur de déchets, utiliser des clés ou des pinces à longs manches.
- Ne pas mettre les produits ou objets suivants dans le broyeur de déchets : coquilles de palourde ou d'huître, nettoyeurs caustiques pour drain ou produits similaires, verre, porcelaine ou plastique, métal (tel que bouchons de bouteille, morceaux de métal, boîtes de conserve ou ustensiles), graisse chaude ou autres liquides chauds.
- Lorsque le broyeur n'est pas utilisé, laisser le bouchon en place pour éviter toute chute d'objet dans le broyeur.
- Ce produit a été conçu pour disposer des déchets de cuisine, le fait d'insérer autre chose que des déchets de cuisine dans le broyeur pourrait entraîner des blessures et/ou des dommages matériels.
- Afin de réduire les risques de blessure et de dommages matériels, ne pas utiliser un évier doté d'un broyeur de déchets à d'autres fins que la préparation d'aliments (par exemple, pour donner le bain à un bébé ou pour se laver les cheveux).
- Ne pas jeter les produits suivants dans le broyeur : peinture, solvants, produits chimiques et nettoyeurs ménagers, liquides automobiles, pellicule plastique.
- RISQUES D'INCENDIE : Ne pas ranger d'articles inflammables tels que des chiffons, du papier ou des aérosols à proximité du broyeur. Ne pas ranger ni utiliser de l'essence ou autres vapeurs et liquides inflammables à proximité du broyeur.
- RISQUES DE FUITE : Inspectez régulièrement le broyeur de déchets alimentaires et les raccords de plomberie pour détecter les fuites qui pourraient entraîner des dommages matériels, lesquels pourraient causer des blessures.

GARDER CES INSTRUCTIONS

MODE D'EMPLOI

1. Enlever le bouchon de l'ouverture de l'évier et faire couler l'eau froide.
2. Mettre le broyeur en marche.
3. Insérer lentement les déchets de cuisine dans le broyeur. **AVERTISSEMENT!** Placer le bouchon de façon à minimiser l'éjection possible de déchets pendant le broyage.
4. Une fois le broyage terminé, éteindre le broyeur et faire couler l'eau dans la conduite du drain pendant quelques secondes pour la rincer.

UTILISATION ADÉQUATE

- Ouvrir d'abord l'eau froide, puis mettre le broyeur en marche. Continuer à faire couler l'eau froide pendant plusieurs secondes après la fin du broyage pour rincer le conduit de vidange.
- Broyer des objets durs tels que de petits os, des noyaux de fruits et de la glace. Une action de frottement est créée par les particules à l'intérieur de la chambre de broyage.
- Broyer des pelures d'agrumes afin de rafraîchir les odeurs que dégagent le drain.
- Au besoin, utiliser un nettoyeur, un dégraissant ou un désodorisant pour éliminer les mauvaises odeurs causées par l'accumulation de graisse dans le broyeur.

UTILISATION INADÉQUATE

- **NE PAS VERSER D'HUILE OU DE GRAISSE DANS VOTRE BROYEUR OU DANS N'IMPORTE QUEL DRAIN. LA GRAISSE POURRAIT S'ACCUMULER DANS LES TUYAUX ET ENTRAÎNER UN BLOCAGE DU DRAIN. VERSER LA GRAISSE DANS UN POT OU UNE BOÎTE DE CONSERVE VIDE ET LA METTRE AU REBUS.**
- Ne pas utiliser d'eau chaude pendant le broyage des déchets de cuisine. Le fait de faire couler de l'eau chaude dans le broyeur entre les broyages ne nuit pas à l'appareil.
- Ne pas remplir le broyeur de pelures de légumes en une seule fois. Faire plutôt couler l'eau et allumer le broyeur, puis ajouter les pelures dans le broyeur graduellement.
- Ne pas procéder au broyage de grandes quantités de coquilles d'œuf ou de matières fibreuses telles que des enveloppes de maïs, des artichauts etc. afin d'éviter tout blocage du drain.
- Ne pas éteindre le broyeur avant d'avoir complètement broyé les déchets et d'entendre uniquement le bruit du moteur et de l'eau qui coule.



AVIS

Un rinçage inadéquat du broyeur peut endommager celui-ci et provoquer des dommages matériels.

INSTRUCTIONS D'ENTRETIEN PAR L'UTILISATEUR

NETTOYAGE DU BROYEUR

À la longue, des particules d'aliments peuvent s'accumuler dans la cuve de broyage et sur l'écran. Une odeur émanant du broyeur signifie habituellement une accumulation d'aliments. Pour nettoyer le broyeur :

1. Poser le bouchon dans l'ouverture de l'évier et remplir ce dernier à moitié avec de l'eau tiède.
2. Verser 125 ml de bicarbonate de soude dans l'eau. Allumer le broyeur et enlever le bouchon de l'évier simultanément afin d'évacuer les particules qui se sont détachées.

Le broyeur est équipé d'un dispositif Jam-Sensor® Circuit qui empêche pratiquement n'importe quels déchets alimentaires de se bloquer pendant le broyage. Si cet incident peu probable se produisait, débloquer le broyeur comme suit :

DÉBLOCAGE DU BROYEUR

Si le moteur s'arrête pendant que le broyeur fonctionne, il est possible que celui-ci soit bloqué.

Pour débloquer le broyeur :

1. Éteindre le broyeur et cesser de faire couler l'eau.
2. Insérez une extrémité de la Clé libre-service Jam-Buster™ dans le trou central au fond du broyeur (reportez-vous à la figure A). Déplacez la Clé Jam-Buster™ de l'avant vers l'arrière jusqu'à ce qu'elle tourne un tour complet. Retirez la Clé Jam-Buster™.
3. Au moyen de pinces, dégager et enlever les débris qui bloquent le broyeur. Laisser le moteur du broyeur refroidir pendant 3 à 5 minutes puis enfoncer légèrement le bouton de réenclenchement rouge au bas du broyeur (voir Figure B). (Si le moteur ne fonctionne toujours pas, vérifier le panneau de service pour y rechercher des disjoncteurs déclenchés ou des fusibles grillés.)

Figure A

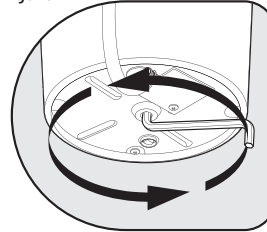
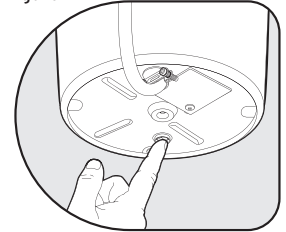


Figure B



GARANTIE LIMITÉE DE SERVICE COMPLET À DOMICILE BADGER® 1, BADGER® 1XL, BADGER® 100 - 1 AN BADGER® 5, BADGER® 5XL, BADGER® 500 - 3 ANS BADGER 5XP® - 4 ANS

Cette garantie limitée est fournie par InSinkErator, LLC, (« InSinkErator », « Fabricant », « nous », « nos » ou « notre ») au consommateur original propriétaire du produit InSinkErator avec lequel cette garantie est fournie (le « Produit InSinkErator ») et tout propriétaire subséquent de la résidence dans laquelle le Produit a originellement été installé (« Client », « vous », « vos » ou « votre »).

InSinkErator garantit au Client que votre Produit InSinkErator sera de défauts de matières premières et de main d'œuvre, sous réserve des exclusions décrites ci-dessous, pendant la période de garantie, à compter de la date la plus récente entre : (a) la date d'installation originale de votre Produit InSinkErator, (b) la date d'achat ou (c) la date de fabrication identifiée par le numéro de série de votre Produit InSinkErator. Vous devez présenter une documentation écrite prouvant (a) ou (b). Si vous ne pouvez pas fournir un document prouvant (a) ou (b), la date de début de la Période de garantie sera déterminée par le Fabricant, à son entière discrétion, selon le numéro de série du Produit InSinkErator.

Ce qui est couvert

Cette garantie limitée couvre les défauts de matériaux ou de main d'œuvre, sous réserve des exclusions ci-dessous, dans les Produits InSinkErator utilisés par un Client consommateur en vertu d'un usage résidentiel seulement et comprend toutes les pièces de rechange et les frais de main d'œuvre. VOTRE SEUL ET EXCLUSIF REMÈDE EN VERTU DE CETTE GARANTIE LIMITÉE SE LIMITE À LA RÉPARATION OU AU REMPLACEMENT DU PRODUIT INSINKERATOR, ENTENDU QUE, SI NOUS DÉTERMINONS À NOTRE ENTIÈRE DISCRÉTION, QU'AUCUN REMÈDE N'EST POSSIBLE, NOUS POUVONS VOUS PROPOSER LE REMBOURSEMENT DE VOTRE PRIX D'ACHAT OU UN CRÉDIT POUR L'ACHAT D'UN AUTRE PRODUIT INSINKERATOR.

Ce qui n'est pas couvert

Cette garantie limitée ne couvre pas et exclut expressément :

- Les pertes ou les dommages ou l'incapacité à utiliser votre Produit InSinkErator en raison de conditions indépendantes de la volonté du Fabricant, y compris sans en exclure d'autres, les accidents, les altérations, les mauvaises utilisations, les abus, la négligence (autre que celle du Fabricant), le défaut d'installer, de maintenir, d'assembler ou de monter le Produit InSinkErator conformément aux directives du Fabricant ou aux codes locaux de plomberie ou d'électricité.
- L'usure devant se produire durant le cours normal de l'utilisation, y compris sans en exclure d'autres, la rouille cosmétique, les égratignures, les bosselures ou les pertes ou dommages similaires et raisonnablement prévus.

En plus des exclusions ci-dessus, cette garantie limitée ne s'applique pas aux Produits InSinkErator installés dans une application commerciale ou industrielle.

Aucune autre garantie expresse ne s'applique

Cette garantie limitée est la seule et unique garantie fournie au Client identifié ci-dessus. Aucune autre garantie expresse, écrite ou verbale ne s'applique. Aucun employé, agent, dépositaire ou autre personne n'est autorisé à modifier cette garantie limitée ou à effectuer toute autre garantie au nom du Fabricant. Les conditions de cette garantie limitée ne seront pas modifiées par le Fabricant, le propriétaire original ou leurs successeurs ou ayants droit respectifs.

Ce que nous ferons pour corriger le problème

Si votre Produit InSinkErator ne fonctionne pas conformément à la documentation qui vous est fournie ou si vous avez des questions concernant votre Produit InSinkErator ou sur la façon de déterminer s'il doit être réparé, veuillez appeler sans frais la ligne d'assistance AnswerLine® d'InSinkErator au 1 (800) 558-5700 ou visitez notre site Web à www.insinkerator.com. Vous pouvez aussi nous écrire à : Centre de service InSinkErator, 4700 21st Street, Racine, Wisconsin 53406 É.-U.

Les renseignements suivants doivent être fournis lors de votre réclamation au titre de la garantie : votre nom, adresse, numéro de téléphone, le numéro de série et modèle de votre Produit InSinkErator et si nécessaire, sur demande, une confirmation écrite de : (a) la date indiquée sur votre reçu d'installation ou (b) la date indiquée sur votre reçu d'achat.

Le Fabricant ou son représentant de service autorisé détermineront, à leur entière discrétion, si votre Produit InSinkErator est couvert en vertu de cette garantie limitée. On vous remettra les renseignements de contact de votre centre de service InSinkErator autorisé le plus proche. Veuillez communiquer avec votre centre de service InSinkErator directement pour obtenir une réparation de garantie à domicile ou un service de remplacement. Seul un représentant de service InSinkErator autorisé peut fournir le service de garantie. InSinkErator n'est pas responsable des réclamations de garantie découlant du travail effectué sur votre Produit InSinkErator par toute personne autre qu'un représentant de service InSinkErator autorisé.

Si une réclamation couverte est effectuée pendant la Période de garantie, le Fabricant, par l'entremise de son représentant de service autorisé, réparera ou remplacera votre Produit InSinkErator. Le coût des pièces de rechange ou d'un nouveau Produit InSinkErator et les frais de main d'œuvre pour la réparation ou l'installation du Produit InSinkErator de rechange sont offerts gratuitement. La réparation ou le remplacement seront déterminés par le Fabricant ou son représentant de service autorisé à leur entière discrétion. Tous les services de réparation et de remplacement seront effectués à votre domicile. Si le Fabricant détermine que votre Produit InSinkErator doit être remplacé au lieu d'être réparé, la garantie limitée sur le Produit InSinkErator de rechange se limitera à la durée restante de la Période de garantie originale.

Ce broyeur est couvert par la garantie limitée du fabricant. Cette garantie limitée est nulle si vous tentez de réparer le Produit InSinkErator. Pour obtenir des renseignements sur le service, veuillez visiter www.insinkerator.com ou composez, sans frais, le 1-800-558-5700.

Limite de responsabilité

DANS LA MESURE PERMISE PAR LA LOI, LE FABRICANT OU SES REPRÉSENTANTS DE SERVICE AUTORISÉS NE SERONT DANS AUCUN CAS RESPONSABLES DES DOMMAGES CONSÉCUTIFS, SPÉCIAUX, INDIRECTS OU CORRÉLATIFS, Y COMPRIS TOUTE PERTE ÉCONOMIQUE, DÉCOULANT D'UNE NON PERFORMANCE, DE L'UTILISATION, DE LA MAUVAISE UTILISATION OU DE L'INCAPACITÉ À UTILISER LE PRODUIT INSINKERATOR OU DE LA NÉGLIGENCE DU FABRICANT OU DE SES REPRÉSENTANTS DE SERVICE AUTORISÉ. LE FABRICANT NE SERA PAS RESPONSABLE DES DOMMAGES CAUSÉS PAR UN DÉLAI DE PERFORMANCE ET LA RESPONSABILITÉ DU FABRICANT NE DÉPASSERA DANS AUCUN CAS, QUELLE QUE SOIT LA FORME DE LA RÉCLAMATION OU LA RAISON DE L'ACTION (FONDÉE SUR UN CONTRAT, UNE INFRACTION, LA NÉGLIGENCE, LA RESPONSABILITÉ STRICTE OU TOUT AUTRE TORT OU AUTREMENT), LE PRIX PAYÉ PAR LE PROPRIÉTAIRE ORIGINAL DU PRODUIT INSINKERATOR.

Le terme dommages « indirects » comprend, sans en exclure d'autres, la perte des profits anticipés, l'interruption commerciale, la perte d'utilisation ou de revenus, le coût du capital ou la perte ou les dommages aux biens ou à l'équipement.

Certaines provinces ne permettent pas l'exclusion ou la limite des dommages indirects ou corrélatifs, par conséquent, la limite ci-dessus peut ne pas s'appliquer à votre cas. Cette garantie limitée vous confère des droits légaux précis et vous pouvez aussi avoir d'autres droits qui peuvent varier d'un État ou d'une province à l'autre.



..... Environ 80 % des déchets alimentaires sont constitués d'eau. Une utilisation régulière du broyeur peut contribuer à détourner les déchets alimentaires des sites d'enfouissement et à réduire les émissions de gaz à effet de serre. Le broyeur est une solution écologique pour toute la famille. Après tout, même les petits changements peuvent avoir un grand impact.

..... Pour les Etats-Unis www.insinkerator.com/green Pour le Canada www.insinkerator.ca

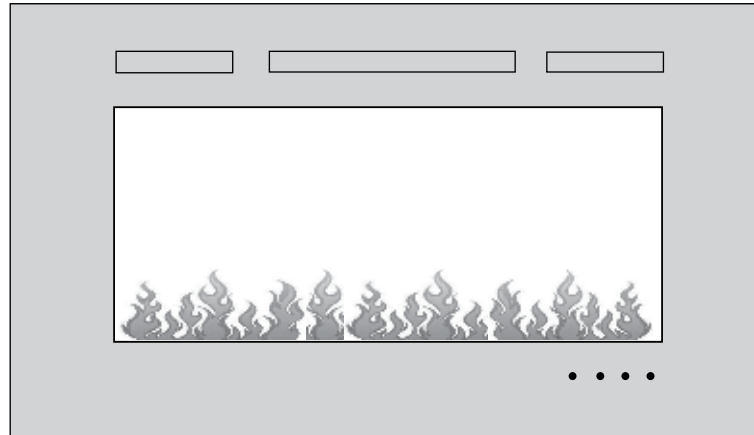
InSinkErator® se réserve le droit, à sa seule discrétion, d'apporter en tout temps des améliorations ou des modifications aux spécifications sans préavis ou obligation de sa part, ou de modifier ou de supprimer des modèles.

La configuration du collier de montage est une marque de commerce d'InSinkErator, LLC

Allusion Series:

Model(s):

SF-ALL40-BK
SF-ALL48-BK
SF-ALL60-BK
SF-ALL84-BK



NOTICE



DO NOT DISCARD THIS MANUAL

- Important operating and maintenance instructions included.
- Read, understand and follow these instructions for safe installation and operation.
- Leave this manual with party responsible for use and operation.

**DO NOT
DISCARD**

Congratulations!

Congratulations on selecting a SimpliFire Electric Fireplace, an elegant and clean alternative to wood & gas burning fireplaces. The SimpliFire electric fireplace you have selected is designed to provide the utmost in safety, reliability, and efficiency.

READ CAREFULLY BEFORE ATTEMPTING TO ASSEMBLE, INSTALL, OPERATE, OR MAINTAIN THIS PRODUCT.

PROTECT YOURSELF AND OTHERS BY OBSERVING ALL SAFETY INFORMATION. FAILURE TO COMPLY WITH INSTRUCTIONS COULD RESULT IN PERSONAL INJURY AND/OR PROPERTY DAMAGE.

⚠ WARNING: To reduce risk of fire, electrical shock, or personal injury, read all instructions before using appliance.

SimpliFire, a brand of Hearth & Home Technologies
7571 215th Street West, Lakeville, MN 55044
www.hearthnhome.com

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1 IMPORTANT INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

WARNING! Risk of Fire! Risk of Burns! Risk of Electrical Shock!

DO NOT:

- Install or operate damaged heater
- Modify heater
- Operate the heater without fully assembling all components

Hearth & Home Technologies disclaims any responsibility for, and the warranty and agency listing

will be voided by the above actions.

When using electrical appliances, basic precautions should always be followed to reduce the risk of fire, electric shock, and injury to persons including the following:

- Read all instructions before installing this appliance.
- This appliance is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Keep combustible materials such as furniture, pillows, bedding, papers, clothes, etc., and curtains at least 3 ft. (0.9 m) from the front of the appliance and keep them away from the sides and rear.
- Extreme caution is necessary when any appliance is used by or near children or other at-risk individuals and whenever the appliance is left operating and unattended.
- Do not operate any appliance if it malfunctions. Disconnect power at service panel and have appliance inspected by a reputable electrician before reusing.
- Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock, fire, or damage the appliance.
- To prevent a possible fire, do not block appliance fan air intakes or exhausts in any manner.
- A heater has hot and parking parts inside. Do not use it in areas where gasoline, paint, flammable vapors or liquids are used or stored.
- Use this appliance only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
- Do not operate any appliance with a damaged cord, plug after the appliance malfunction has been dropped or damaged in any manner. Return appliance to authorized service facility for examination, electrical or mechanical adjustment or repair.
- Do not use outdoors
- Never locate appliance where it may fall into a bathtub or water container.
- Do not run cord under carpeting. Do not use cord with throw rugs, runners or the like. Arrange cord away from traffic areas and where it will not be tripped over. Do not tightly coil cord.
- Always use properly grounded, fused and polarized outlets
- Always use ground fault protection where required by electrical code.
- To disconnect appliance, turn controls to "OFF" then remove plug from outlet.
- Always disconnect power before performing any cleaning, maintenance or relocation of the appliance.
- To prevent electrical shock or fire, always use a certified electrician should new circuits be required.
- When transporting or storing the appliance, keep in a dry place free from excessive vibration to avoid damage.
- Avoid use of an extension cord because an extension cord may overheat and cause a fire. However if you have to use an extension cord, the cord should be No. 14 AWG minimum size and rated to not less than 1875 watts

SAVE THESE INSTRUCTIONS

▲ Safety Alert Key:

- **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 or moderate injury.

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A. Warranty

Hearth & Home Technologies LLC

LIMITED LIFETIME WARRANTY

Hearth & Home Technologies LLC (“HHT”) extends the following warranty for HHT gas, wood, pellet and electric hearth appliances (each a “Product” and collectively, the “Product(s)”) and certain component parts set forth in the table below (“Component Part(s)”) that are purchased from a HHT authorized dealer or distributor.

WARRANTY COVERAGE:

HHT warrants that the Products and their Component Parts will be free from defects in materials and workmanship for the applicable period of Warranty coverage set forth in the table below (“Warranty Period”). If a Product or Component Parts are found to be defective in materials or workmanship during the applicable Warranty Period, HHT will, at its option, repair the applicable Component Part(s), replace the applicable Component Part(s), or refund the purchase price of the applicable Product(s). The maximum amount recoverable under this Warranty is limited to the purchase price of the Product. This Warranty is transferable from the original purchaser to subsequent owners, but the Warranty Period will not be extended in duration or expanded in coverage for any such transfer. This Warranty is subject to conditions, exclusions, and limitations as described below.

WARRANTY PERIOD:

Warranty coverage begins at the date of installation. In the case of new home constructions, Warranty coverage begins on the date of first occupancy of the dwelling or six months after the sale of the Product(s) by an independent, authorized HHT dealer or distributor, whichever occurs earlier. However, the Warranty coverage shall commence no later than 24 months following the date of Product shipment from HHT, regardless of the installation or occupancy date.

The term “Lifetime” in the table below is defined as: 20 years from the beginning date of warranty coverage for gas appliances, 10 years from the beginning date of warranty coverage for wood and pellet appliances, and 5 years from the beginning of warranty coverage for standalone gas log sets. These time periods reflect the minimum expected useful lives of the designated Component Parts under normal operating conditions.

Warranty Period		HHT Manufactured Appliances and Venting					
Component Parts	Labor	Gas	Pellet	Wood	Electric	Venting	Component Parts Covered by this Warranty
1 Year		X	X	X		X	All parts including handles, external enameled components and other material except as covered by Warranty Conditions, Warranty Exclusions, and Warranty Limitations listed
2 Years					X		All parts except as covered by Warranty Conditions, Warranty Exclusions, and Warranty Limitations listed
2 years			X	X			Igniters, Auger Motors, Electronic Components, and Glass
		X					Electrical components limited to modules, remotes/wall switches, valves, pilots, blowers, junction boxes, wire harnesses, transformers and lights (excluding light bulbs)
		X		X			Molded Refractory Panels, Glass Liners
3 years			X				Firepots, burnpots, mechanical feeders/auger assemblies
5 years		X					Burners and logs for standalone gas log sets (Vented and Vent Free gas log sets not sold as components of the fireplace or stove)
5 years	1 year	X					Vent Free Burners and Vent Free Log components of HHT manufactured fireplaces or stoves
			X	X			Castings, Medallions and Baffles
6 years	3 years			X			Catalysts
7 years	3 years		X	X			Manifold tubes, HHT Chimney and Terminations
10 years	1 year	X					Burners, logs and refractory components of HHT manufactured fireplaces or stoves
Limited Lifetime	3 years	X	X	X			Firebox and heat exchanger, FlexBurn® System (engine, inner cover, access cover and fireback)
1 Year	None	X	X	X	X	X	All purchased replacement parts

WARRANTY CONDITIONS:

- Because HHT cannot control the quality of any Products sold by unauthorized sellers, this Warranty only covers Products that are purchased through an HHT authorized dealer or distributor unless otherwise prohibited by law; a list of HHT authorized dealers is available on the HHT branded websites.
- This Warranty is only valid while the applicable Product remains at the site of original installation.
- This Warranty is only valid in the country in which the HHT authorized dealer or distributor that sold the applicable Product is authorized to sell applicable Product.
- Contact your installing distributor or dealer for Warranty service. If the installing dealer or distributor is unable to provide necessary parts, contact the nearest HHT authorized dealer or supplier. Additional service fees may apply if you are seeking Warranty service from a dealer other than the dealer from whom you originally purchased the applicable Product.
- No HHT consumer should bear cost of warranty service or costs incurred while servicing warranty claims (i.e., travel, gas, or mileage) when the service is performed within the terms of this Warranty. Check with your dealer or distributor in advance for any costs to you when arranging a warranty call. Travel and shipping charges for parts are not covered by this Warranty.

WARRANTY EXCLUSIONS:

This Warranty does not cover the following:

- Changes in surface finishes as a result of normal use. As a heating appliance, some changes in color of interior and exterior surface finishes may occur. This is not a flaw and is not covered under the Warranty.
- Damage to printed, plated, or enameled surfaces caused by fingerprints, accidents, misuse, scratches, melted items or other external sources and residues left on the plated surfaces from the use of abrasive cleaners or polishes.
- Repair or replacement of parts that are subject to normal wear and tear during the Warranty Period are not covered. These parts include: paint, wood and pellet gaskets, firebricks, grates, flame guides, batteries and the discoloration of glass.
- Minor expansion, contraction, or movement of certain parts causing noise. These conditions are normal and complaints related to this noise are not covered by this Warranty.
- Damages resulting from: (1) failure to install, operate, or maintain the applicable Product in accordance with the installation instructions, operating instructions, and listing agent identification label furnished with the applicable Product; (2) failure to install the applicable Product in accordance with local building codes; (3) shipping or improper handling; (4) improper operation, abuse, misuse, continued operation with damaged, corroded or failed components, accident, or improperly/incorrectly performed repairs; (5) environmental conditions, inadequate ventilation, negative pressure, or drafting caused by tightly sealed constructions, insufficient make-up air supply, or handling devices such as exhaust fans or forced air furnaces or other such causes; (6) use of fuels other than those specified in the operation instructions; (7) installation or use of components not supplied with the applicable Product or any other components not expressly authorized and approved by HHT; (8) modification of the appliance not expressly authorized and approved by HHT in writing; and/or (9) interruptions or fluctuations of electrical power supply to the applicable Product.
- Non-HHT venting components, hearth connections or other accessories used in conjunction with the applicable Product.
- Any part of a pre-existing fireplace system in which an insert or a decorative gas applicable Product is installed.
- HHT's obligation under this Warranty does not extend to the Product's capability to heat the desired space. Information is provided to assist the consumer and the dealer in selecting the proper Product for the application. Consideration must be given to the Product location and configuration, environmental conditions, insulation and air tightness of the structure.

This warranty is void if:

- The applicable Product has been over-fired, operated in atmospheres contaminated by chlorine, fluorine, or other damaging chemicals. Over-firing can be identified by, but not limited to, warped plates or tubes, deformation/warping of interior cast iron structure or components, rust colored cast iron, bubbling, cracking and discoloration of steel or enamel finishes.
- The applicable Product is subjected to prolonged periods of dampness or condensation.
- There is any damage to the applicable Product due to water or weather damage which is the result of, but not limited to, improper chimney or venting installation.

LIMITATIONS OF REMEDIES AND LIABILITY:

- **EXCEPT TO THE EXTENT PROVIDED BY LAW, HHT MAKES NO EXPRESS WARRANTIES OTHER THAN THE WARRANTY SPECIFIED HEREIN. The owner's exclusive remedy and HHT's sole obligation under this Warranty or in contract, tort or otherwise, shall be limited to replacement of the Component Part(s), repair of the Component Part(s), or refund of the original purchase price of the applicable Product(s), as specified above; provided, however, that (i) if HHT is unable to provide replacement of the Component Part(s) and repair of the Component Part(s) is not commercially practicable or cannot be timely made, or (ii) the customer is willing to accept a refund of the purchase price of the applicable Product(s), HHT may discharge all such obligations by refunding the purchase price of the applicable Product. In no event will HHT be liable for any incidental or consequential damages caused by defects in the applicable Product. Some States do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from State to State. THE DURATION OF ANY IMPLIED WARRANTY IS LIMITED TO DURATION OF THE EXPRESSED WARRANTY SPECIFIED ABOVE FOR THE APPLICABLE PRODUCT. Some States do not allow limitations on how long an implied warranty lasts, so the above limitation may not apply to you.**

2 GENERAL INFORMATION

A. Appliance Certification

MODELS: SF-ALL40-BK, SF-ALL48-BK,
SF-ALL60-BK, SF-ALL84-BK

LABORATORY: CSA International

TYPE: Electric Air-Heaters; Fixed and Location-Dedicated
Electric Room Heaters

STANDARD: CSA C22.2 No 46-2013; UL 2021 (4th Edition)

NOTICE: This installation must conform with local codes.


NOT INTENDED FOR USE AS A PRIMARY HEAT SOURCE.
This appliance is tested and approved as either a supplemental room heater or as a decorative appliance. It should not be fabricated as primary heat in residential heating applications.

Note: The device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

1. This device may not cause harmful interference, and
2. This device must accept any interference received, including interference that may cause undesired operation.

This equipment uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on. The user is encouraged to try to correct the interference by one or more of the following measures:

- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

 **WARNING:** This product can expose you to Di-(2-ethylhexyl) phthalate, which is known to the State of California to cause cancer and reproductive harm. For more information go to: www.P65Warnings.ca.gov.

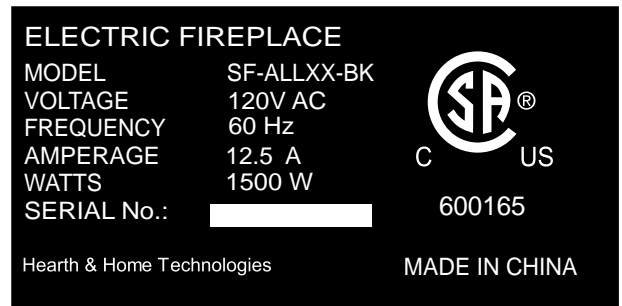
B. Unpacking and Inspecting Appliance

WARNING! DO NOT use this Electric Fireplace if any part has been under water. Immediately call a qualified service technician to inspect and to replace any part of the electrical system if necessary. Keep plastic wrapping away from children.

- Carefully remove the appliance and components from the packaging. Do not unpack.
- Carefully inspect components for any damage.
- Refer to parts list to verify all parts have been received.
- Read all the instructions before starting the installation. Follow these instructions carefully during the installation to ensure maximum safety and benefit.

C. Model and Serial Number Information

The model and serial number information is located on the rating plate. The rating plate is located on the left side of the top surface of the appliance.



Homeowner Reference Information

We recommend that you record the following pertinent information about your fireplace.

Model Name: _____ Date purchased/installed: _____

Serial Number: _____ Location of fireplace: _____

Dealer purchased from: _____ Dealer Phone: _____

Notes _____

3 GETTING STARTED

A. Parts and Hardware

Parts and Hardware List	
Part	Quantity
Appliance	1
Glass Panel	1
Installation Manual	1
Remote Control	1
AAA Battery	2
Fixing Brackets (Shipped attached to appliance with ST4X10 black screws (#4) and black washers (x4))	2
ST3X8 Metal Screws	2
ST6X50 Screws	8
ST4X40 Screws	4
Small Crystal Stones	1
Large Crystal Stones	1
Wall Mounting Bracket with two (2) M5X10 screws - (Only for Direct Wall Mount)	1
Toggle Bolt Anchor	8
Masonry Anchor	8
Power Cord Assembly (Only for Direct Wall Mount)	1

B. Tools and Supplies Needed

Before beginning the installation be sure that the following tools and building supplies are available.

Tape measure

Pliers

Hammer

Gloves

Level

Square

Magnetic Phillips screwdriver

Safety glasses

Drill

Small flat head screwdriver 3/32 in. or smaller (for power cord installation only)

Type NM-B Wire Strain Relief

5/16 in. Drill Bit for 3/16 in. diameter toggle bolts (applicable if installing on drywall-based walls)

Masonry Drill Bit 5/16 in. (applicable if installing on masonry walls)

Concrete screws or anchors compatible with #10 x 1-1/2 in. long screws 5/16 in. diameter pilot hole and rated minimum 150 lbs (only applicable if installing on hollow concrete block wall).

C. Appliance Dimensions

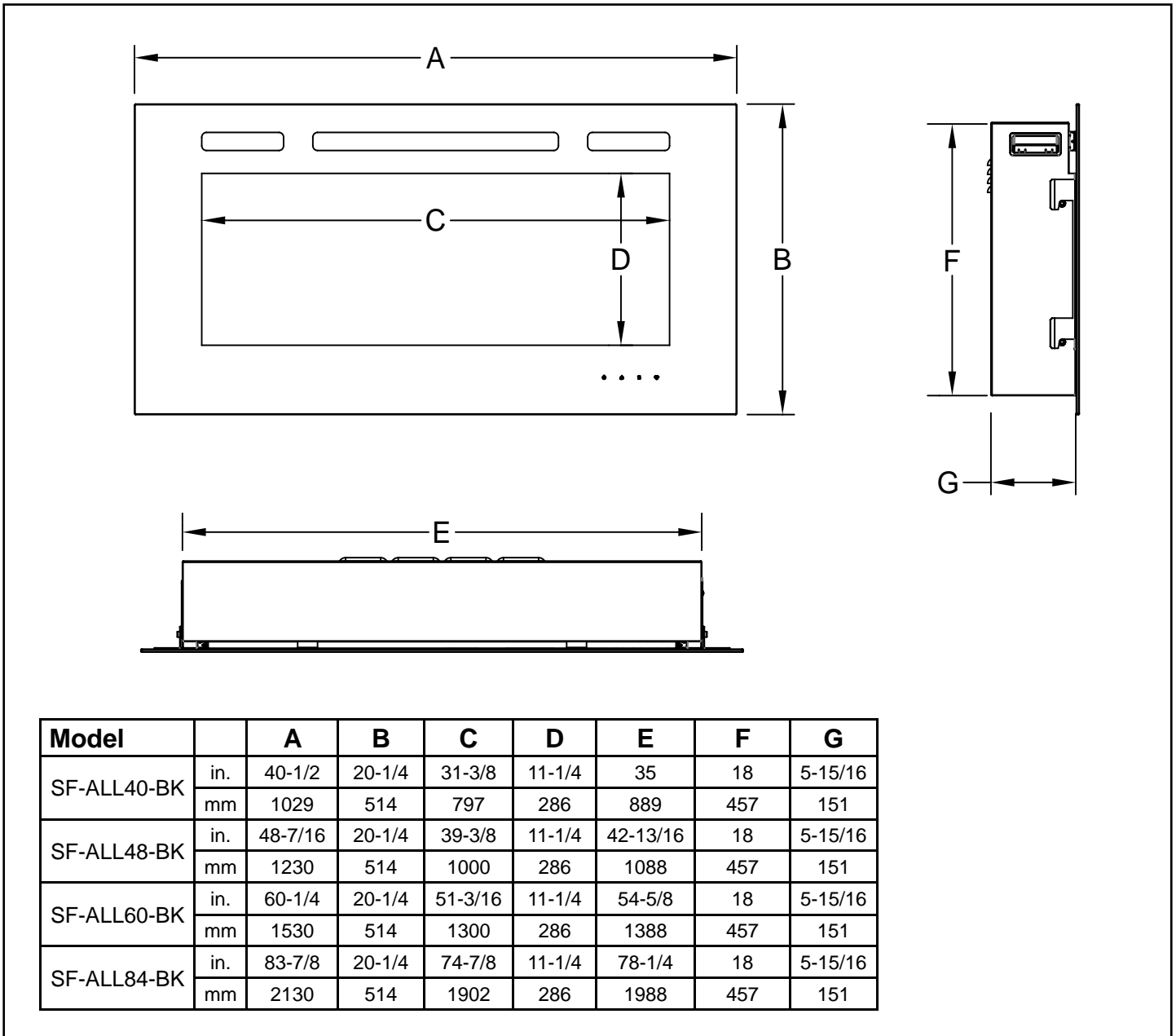


Figure 3.1 Appliance Dimensions

D. Location

Note: If this unit is installed in a bathroom, it must be protected by GFI receptacle or circuit. If receptacle is used it must be readily accessible. This electrical appliance is not water tight. To prevent electrical shock it must be installed as to prevent water from entering unit. It must be installed away from showers, tubs or other water sources. Never locate the appliance where it may fall into a bathtub or other water container.

When choosing a location for your fireplace ensure that the following general rules are followed:

- For best results install out of direct sunlight.
- Power supply wire must be installed within proximity of electric fireplace prior to finishing to avoid reinstallation.
- Appliance should be mounted so the front glass panel is located outside the swinging arc of adjacent door.
- See Figure 3.2 and 3.3 to determine location of appliance installation.

E. Clearance to Combustibles

Minimum Clearance to Combustible Construction

Sides	0 in.
Floor.....	0 in.
Top.....	0 in.
Back	0 in.
Front.....	36 in.
Mantel.....	5/8 in.

See Figure 3.2.

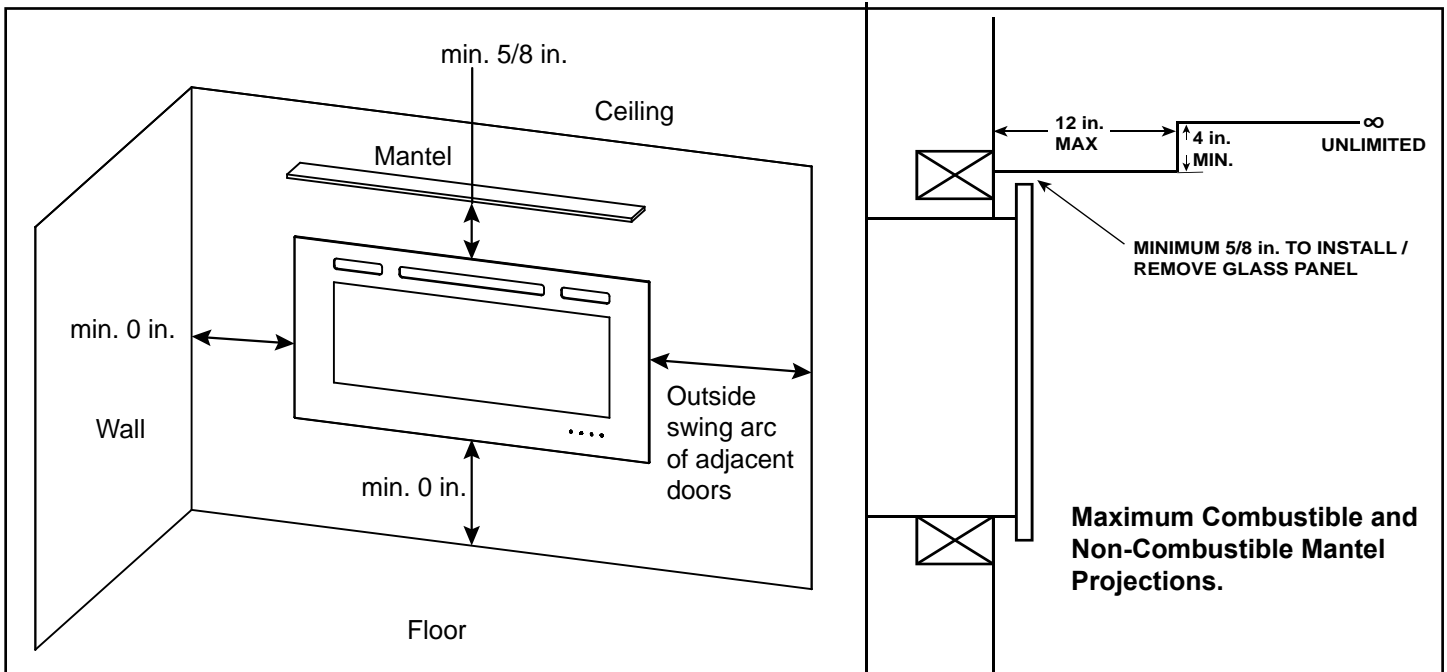


Figure 3.2 Location and Clearances Requirements

WARNING! Risk of Fire! Keep electrical cords, drapery, furnishings or other combustibles at least 3 ft. (0.9 m) from the front of the electric fireplace, and away from the sides or rear.

F. Electrical Supply Circuit Requirements

Plan the location of the appliance so that it will have adequate electric power. A 15 AMP, 120V/60Hz circuit is required. Additional appliances on the same circuit as this appliance may exceed the current rating of that circuit. A dedicated circuit is not required, but is preferred to prevent circuit breaker trips or fuse failure.

Note: If mounting on a wall and using the supplied power cord, choose a location near an outlet so an extension cord is not required.

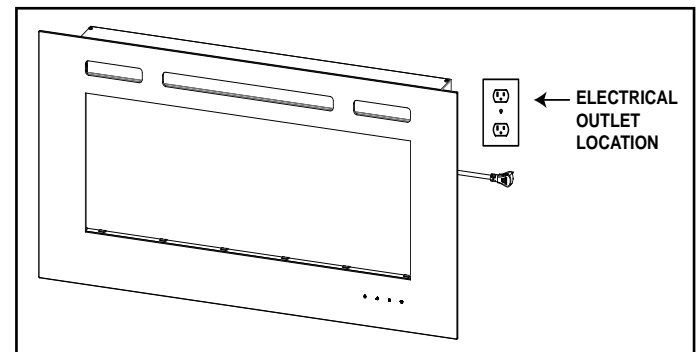


Figure 3.3 Electrical Outlet Location

5 OPERATING INSTRUCTIONS

CAUTION! The unit's power cord must be connected to a properly grounded and protected 120V outlet. Always use ground fault protection where required by the electrical code.

WARNING! Risk of Fire, Electrical Shock, and Injury! Do not operate the unit if it is damaged or has malfunctioned. If you suspect the unit is damaged, call a qualified service technician to inspect and replace any part of the electrical system if necessary.

A. Manual Switch Function

The appliance can be operated by both remote control and manual buttons. Once the unit has been properly connected to a grounded electrical outlet, turn on the main power switch located on the lower right side of the appliance. A beep should be heard when the power is first applied. See Figure 5.1.

Power Button

The Power button turns the power of the appliance on or off.

Flame Button

By pressing the FLAME button, the unit will cycle through four flame effects.

Heater Button

The HEATER button will cycle from low to high and to off settings.

Ember bed LED Light Button

The Ember Bed LED light button will turn on the LED lights and cycle through 14 color themes (13 colors and a color rotating option).

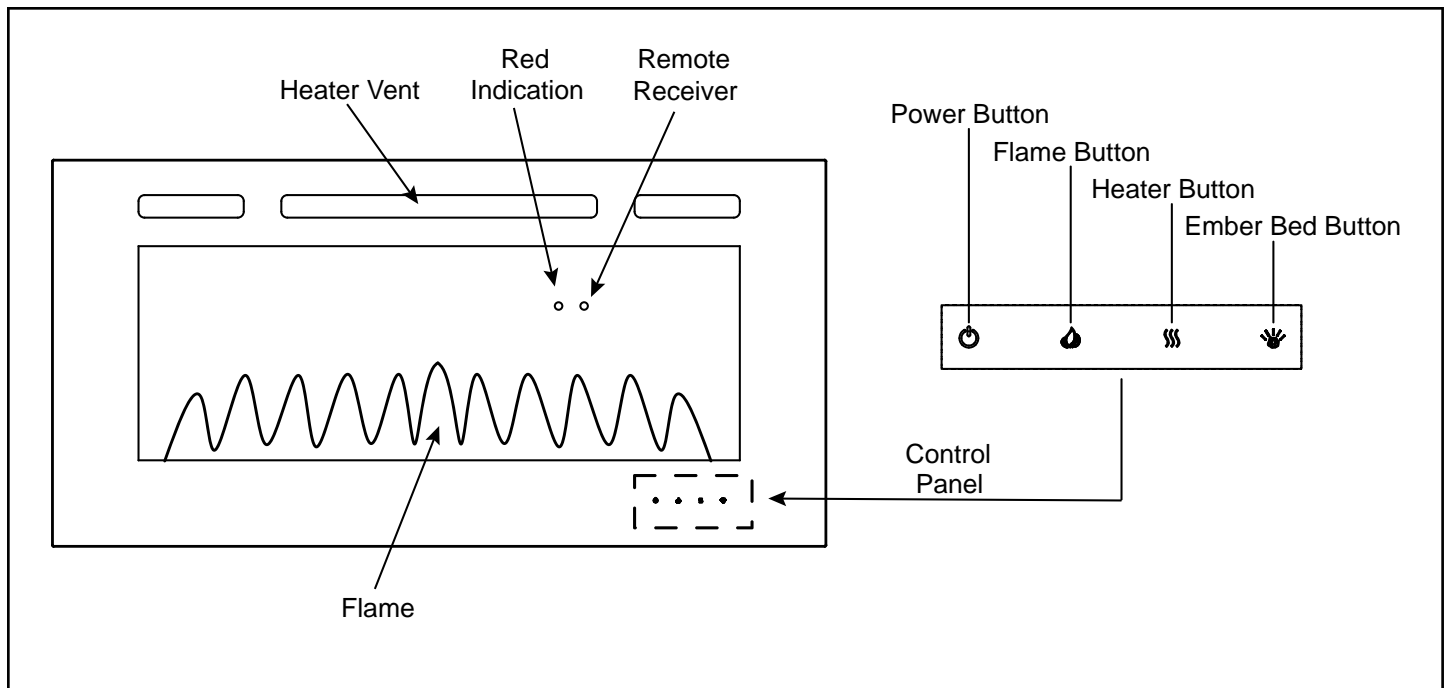








Figure 5.1 Manual Operating Switches

B. Operating by Remote Control

- The appliance Main Power Switch must be in the “ON” position for the remote control to function.
- Make sure batteries are properly installed in Remote Control.
 - Battery requirements 2 x AAA batteries (included).
- The effective range of the remote is up to 16 ft.
- The remote control must be within the 16 ft. range and always be pointed directly at the face of the appliance. For best results position the remote control within 45 degrees of the face of the appliance.

ICON	TITLE	FUNCTION	REMOTE LCD DISPLAY	FIREPLACE RESPONSE
	POWER	The POWER button will turn the fireplace on. It will also put the fireplace in a standby mode. This will turn off all functions at once but will hold the settings in memory except Timer function. The unit will turn on at the same settings by pressing the power button again.	LCD illuminates and displays flame status icon and temperature set point.	Fireplace emits single audible beep to confirm command to transition to ON or STANDBY state.
	FLAME	By pressing the FLAME button, the unit will cycle through four flame effects.	LCD illuminates and displays flame status icon.	Fireplace emits single audible beep to confirm command to transition between four FLAME states
	HEATER	Press Heater button once, heater turns on LOW. Press Heater button twice, heater turns on HIGH. Press Heater button three times, heater turns off.	LCD illuminates and displays heater status icon.	Fireplace emits single audible beep to confirm command to transition between HEATER states Fireplace displays one red LED for 10 seconds to confirm low heater command. Fireplace displays two red LED for ten (10) seconds to confirm high heater command.
	THERMOSTAT	Pressing the Temperature button adjusts the heaters response to the ambient temperature conditions in the room. Temperature adjusts from 16 °C - 28 °C (60 °F - 84 °F). Power button must be on to set °C to °F. Hold for 3 seconds and the LCD display from °C to °F.	Remote displays the temperature. If in Stand-by mode, temperature displays but cannot be adjusted.	Fireplace emits single audible beep to confirm command to change desired temperature set point.
	TIMER	Pressing the Timer button sets the time desired for the fireplace to run. The Timer can be set from .5 hour up to nine (9) hours in one (1) hour increments	Remote will display the time setting selected. If in Stand-by mode time will display but cannot be adjusted.	
	LIGHT	Pressing the Light button changes the ember bed colors (14 color themes available - 13 colors and a color rotating option), and turns it on/off.	No indicator.	

C. Room Temperature and Thermostat Function

The temperature display on the remote control is a set point for the desired temperature of the room in which the appliance is installed. The Thermostat button on the remote can be used to set the desired room temperature. The heater will only operate if the remote control temperature set point is higher than the actual room temperature. The heater will not operate if the actual temperature is greater than the remote control temperature set point.

This function can also be used as a thermostat, under the following conditions

- When the remote control display is set to a desired room temperature using the thermostat button, the appliance heater will turn OFF automatically when the room temperature reaches the set point.
- The heater will turn ON automatically if the room temperature falls below the set point.

Note: The actual room temperature is measured by a hidden sensor located behind the glass front of the appliance. During certain situations this sensor temperature can be slightly different than either the remote control location, or the overall space being heated. For this reason, the remote control set point temperature may need to be set slightly higher or lower than expected room temperature for the heater function to work as desired.

D. Resetting Temperature Cutoff Switch

The heater is protected with a safety device to prevent overheating. Should the heater overheat, an automatic cutoff will turn the heater OFF. It will not turn ON automatically without being reset. If it overheats for any reason, it can be reset by

1. Turn appliance to OFF.
2. Shut-off power at the circuit breaker.
3. Let appliance cool for 15 minutes
4. Turn on power at the circuit breaker.
5. Turn on appliance with manual switch or remote control.

CAUTION: *If you need to continuously reset the heater, contact your dealer for service.*

6 MAINTENANCE

A. Maintenance

WARNING! Risk of Shock! Always remove power before moving or servicing. Do not immerse appliance in water.

- Before cleaning or servicing, always turn off appliance and remove power, by either unplugging from the wall outlet or shutting off circuit breaker.
- Light accumulated dust may be removed from the appliance exterior with a soft cloth or vacuum cleaner.
- Wipe the exterior surfaces of the appliance occasionally with a slightly damp microfiber cloth using a solution of mild detergent and water. Dry thoroughly before operating the appliance.

CAUTION! Do not allow water to run into the interior of the appliance as this could create a fire or electric shock. Always remove power before moving or servicing.

- The fan motor is factory lubricated for life and will not require further lubrication.
- Store appliance in a clean dry place when not in use.

WARNING! Risk of Fire! To reduce risk of fire, do not store or use gasoline or any other flammable vapors or liquids in the vicinity of the appliance.

WARNING! Risk of Electrical Shock! Any other servicing needed must be performed by an authorized service representative. Do not attempt to service the unit yourself.

B. Cleaning

Cleaning Glass

Dust particles can be removed by buffing lightly with a clean dry cloth. Fingerprints and other marks can be cleaned with a cloth dampened with a quality household glass cleaner. The glass should be completely dried with a lint free cloth or paper towel. Do not use abrasive cleaners on glass surface. Do not spray liquids directly onto any surface.

Metal Surface

Dust particles can be removed by buffing lightly with a clean dry cloth. A damp cloth can be used to clean painted surfaces. Do not use abrasive cleaners. Do not spray liquids directly on to any surface.

C. Servicing

Expert for cleaning, an authorized service representative should perform any other service.

D. SimpliFire Troubleshooting Guide

Symptom	Possible Cause	Corrective Action
Circuit breaker trips or fuse blows when unit is turned on	Exceeding current rating of the circuit breaker or fuse, perhaps from operating other appliances on the same circuit as the fireplace	Install unit onto a dedicated 15 amp circuit.
Lights in room dim while the unit is on	Unit is drawing too close to circuit current rating	Install unit onto a dedicated 15 amp circuit.
Fireplace will not come on when using the manual controls on the unit	Appliance is not plugged into an electrical outlet	Ensure plug is connected to a working outlet.
	Hard-wire connections not correct (if applicable)	Review wiring instructions to ensure correct connection.
	No incoming power from the electrical outlet or electrical box	Check fuse/breaker panel.
	Defective control board (PCB)	Replace the control board (PCB).
Remote control does not work	Low/dead batteries	Replace batteries in the remote.
	Remote receiver is blocked, or remote is not pointed directly at the receiver.	Ensure receiver is not blocked. Move closer to the appliance.
	Appliance power switch is in the off "O" position (if equipped)	Turn the power switch on, to the "I" position (if equipped).
	Control board (PCB) malfunction	Replace control board (PCB).
Heater will not turn on, but flame is functioning	Remote is in thermostat mode and room temperature (temperature at appliance thermostat) is higher than the set point on the remote	Increase thermostat set point on the remote, or exit thermostat mode (press the thermostat button until no temperature set point is displayed on the remote). See "Room Temperature and Thermostat Function" section of the manual.
	Appliance has overheated and a safety thermal switch has tripped	Unplug or turn off power at circuit breaker and allow it to cool for 15 minutes. Then plug in the unit or turn power back on at circuit breaker and turn unit back on.
	Defective main control board	Replace control board (PCB).
	Defective heater assembly	Replace heater assembly.
Heater shuts off automatically or won't stay on	Room temperature (temperature at the appliance thermistor) is higher than the set point on the remote	Increase thermostat set point on the remote, or exit thermostat mode (toggle the thermostat button until no temperature set point is displayed on the remote). See "Room Temperature and Thermostat Function" section of the manual.
	Appliance has overheated and a safety thermal switch has tripped	Unplug or turn off power at circuit breaker and allow it to cool for 15 minutes. Then plug in the unit or turn power back on at circuit breaker and turn unit back on.
Heater emits an odor	Normal operation	It is normal for the heater to emit an odor for a brief amount of time after turning on. It is burning off dust that has accumulated on the heater.
Flame does not move at all	Flame rotisserie motor is stalled or malfunctioning	Cycle unit on or off. If problem persists inspect rotisserie and motor for blockage or interference. If no interference, replace the control board (PCB) and rotisserie motor.
Flame sputter	Flame rotisserie obstructing other internal components when spinning	Ensure rod is straight and mounted properly and is spinning freely without pins hitting other components
	Defective flame rotisserie motor	Replace rotisserie motor.
Ember bed does not light up	Ember bed is turned off	Refer to operation section of the user manual.
	Loose wiring	Check wiring to ember bed LEDs
	Defective control board (PCB)	Replace control board (PCB).
	Defective LED lights	Replace ember bed LED lights

SimpliFire Troubleshooting Guide (continued)

Symptom	Possible Cause	Corrective Action
Fireplace turns on by itself	Defective control board (PCB)	Replace control board (PCB).
	Similar infrared signal from another remote activating unit to turn on (pre-2019 manufactured units only)	Some TV remotes may cause the fireplace to turn on for appliances manufactured before 2019. Replace control board (PCB).
Excessive noise with heater on	Interference with fan blade	Inspect heater assembly and fan for obstructions or interference.
	Defective blower motor	Replace heater assembly.
Grinding or rubbing noise (when heater is off)	Rotisserie hitting or rubbing against internal components	Ensure rotisserie rod is straight and mounted properly and is spinning freely without pins hitting other components. If sound is coming from friction with the rotisserie bracket, apply grease to contact point.

SAVE THESE INSTRUCTIONS

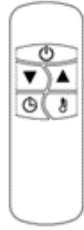
INSTALLATION AND MAINTENANCE



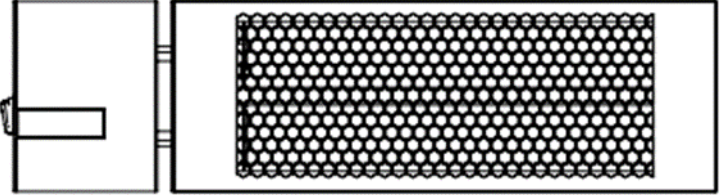
Models

RK2030-RMT-BLK and RK2430-RMT-BLK

SmartWave
Carbon Fiber Heaters



Remote Not Available
With Certain Models



DO NOT RETURN TO STORE

If you experience any difficulties installing or operating this product,
Call us at: 206-762-0400 Option 2 or email
tech@king-electric.com / 7:00am to 3:30pm PST Mon-Fri

IMPORTANT SAFETY INSTRUCTIONS



WARNING



READ CAREFULLY - Use the heater only as described in this manual. Any other use is not recommended and could result in fire, electric shock, and personal injury. Following these instructions will prevent difficulties that might occur during the installation and use of the heater. Please study the instructions first, as they may save considerable time and trouble during use in addition to providing important safety information. Make sure to save these instructions for future use.

- WARNING** To prevent a possible electrical shock, disconnect all power coming to heater at main service panel before wiring or servicing.
- WARNING** All wiring must be in accordance with the National Electrical Code (Canadian Electrical Code in Canada) and all applicable local codes. The heater must be grounded as a precaution against electrical shock. Supply wiring must be copper and suitable for at least 75° C.
- WARNING** Verify power supply and control voltages coming to the heater match the ratings printed on the heater nameplate before energizing.
- WARNING** Heater must be installed so the minimum clearances shown in Specifications table are maintained.
- WARNING** This heater is NOT suitable for use in hazardous locations as described by the National Fire Protection Association (NFPA). This heater has hot and arcing or sparking parts inside. DO NOT use in areas where gasoline, paint or other flammable liquids are used or stored.
- WARNING** The mounting structure and anchoring hardware MUST BE capable of reliably supporting the weight of the heater plus mounting bracket if used. Refer to specifications table for heater weight.
- WARNING** To prevent a possible fire, DO NOT block air intakes or exhaust openings in any manner. DO NOT allow foreign objects to enter grill openings as this may cause electric shock, fire or damage to heater.

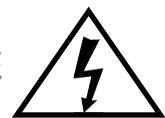


CAUTION—RISK OF ELECTRIC SHOCK

DO NOT OPEN HEATER SHELL -NO USER—SERVICEABLE PARTS INSIDE

FOR RESIDENTIAL & COMMERCIAL USE

RATED FOR INDOOR OR WELL PROTECTED OUTDOOR AREAS.



SAVE THESE INSTRUCTIONS

IMPORTANT SAFETY INSTRUCTIONS

READ CAREFULLY—The infrared heater is designed for safe operation. Nevertheless, installation, maintenance and operation of the heater can be dangerous. Observing the following procedures will reduce the risk of fire, electric shock, injury to persons and keep installation time to a minimum. Save these instructions for future use.

1. Read all instruction before using this heater.
2. Remove the unit from its packaging and check to make sure it is in good condition before using.
3. Do not let children play with parts of package (such as plastic bags).
4. Check the household voltage to ensure it matches the heater's rated specification.
5. **WARNING: RISK OF FIRE**—Keep combustible materials, such as furniture, paper, clothes, and curtains at least 3 feet (0.9 m) from the front of the heater and away from the sides and rear.
6. Do not install closer than 19.7" (0.5 m) inches to a vertical or horizontal surface. **CAUTION:** Mount with bottom of heater at least 7.9 feet (2.4 m) above floor or grade.
7. Use Copper Wire Only.
8. Extreme caution is necessary when heater is used by or near children or invalids and whenever the heater is left operating and unattended
9. Do not use near or in the immediate vicinity of a bath or swimming pool or any source of liquid.
10. To protect against electric shock, do not immerse in water or any other liquid.
11. Do not insert or allow foreign objects to enter any ventilation or exhaust opening, as this may cause an electric shock, fire or damage.
12. Do not put fingers or foreign objects into the grill while in operation.
13. Do not leave the appliance unattended when in use.
14. This heater is not intended for use in bathrooms, laundry and similar indoor locations. Never locate heater where it may fall into a bathtub or other water container.
15. No liability can be accepted for any damage caused by non compliance with instructions or any improper use or mishandling.
16. This appliance is not intended for use by persons (including children) with reduces physical, sensory or mental capabilities or lack of experience and knowledge. Supervision is to ensure they do not play with the appliance.
17. No liability can be accepted for any damage caused by non compliance with these instructions or any other improper use or mishandling.
18. This appliance is not intended for use by persons (including children) with reduces physical, sensory or mental capabilities or lack of experience and knowledge. Supervision is to ensure they do not play with the appliance.
19. Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
20. To disconnect heater, turn controls to off, and turn off power to heater circuit at main disconnect Panel.
21. To prevent overheating of this appliance, keep the air inlets and outlets clean and free of anything that may cause blockage. Check all inlets and outlets from time to time to ensure it is clear of any dirt or dust accumulation. **DO NOT COVER.** To prevent a possible fire, do not block air intakes or exhaust in any manner.
22. A heater has hot and arcing or sparking parts inside. To reduce the risk of fire, do not use it in areas where gasoline, paint, or flammable liquids are used or stored.
23. Parts of the heater may exceed 392F. Contact with the heating tube, reflector, or metal parts near the heating tube, may cause severe BURNS . Do not touch heater when in use.
24. **NEVER** place hands under the heating elements. **ALWAYS** allow heating element to cool at least 10 minutes before touching the heating tube or adjacent parts.
25. This product contains recyclable materials. Do not dispose this product as unsorted municipal waste. Please contact your local municipality for the nearest collection point.

SAVE THESE INSTRUCTIONS

SAVE THESE INSTRUCTIONS

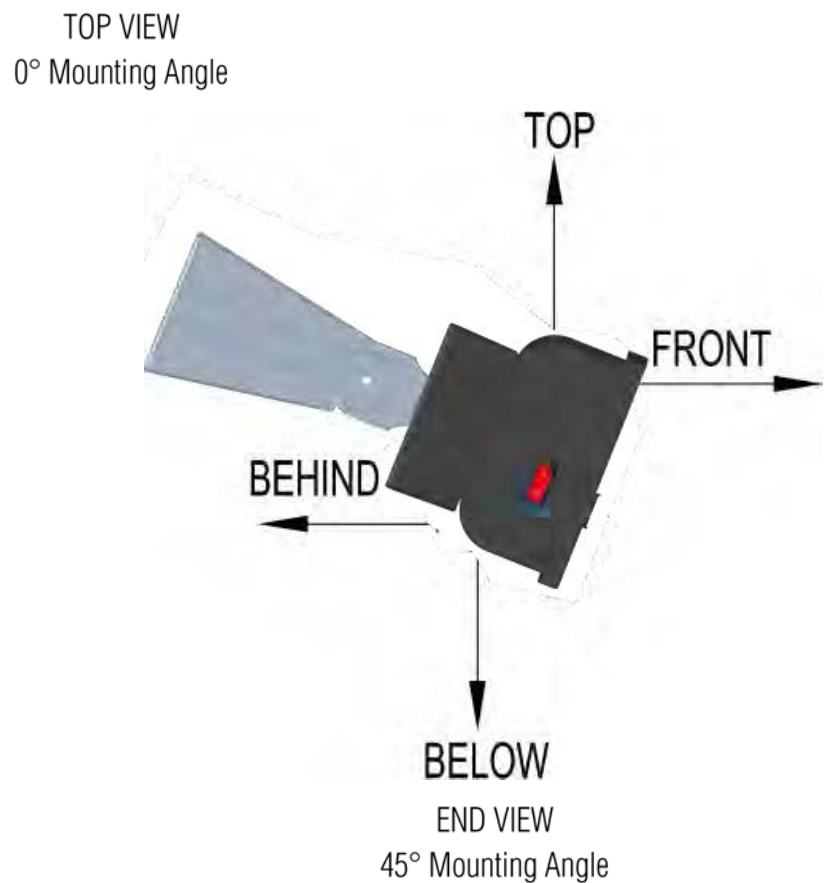
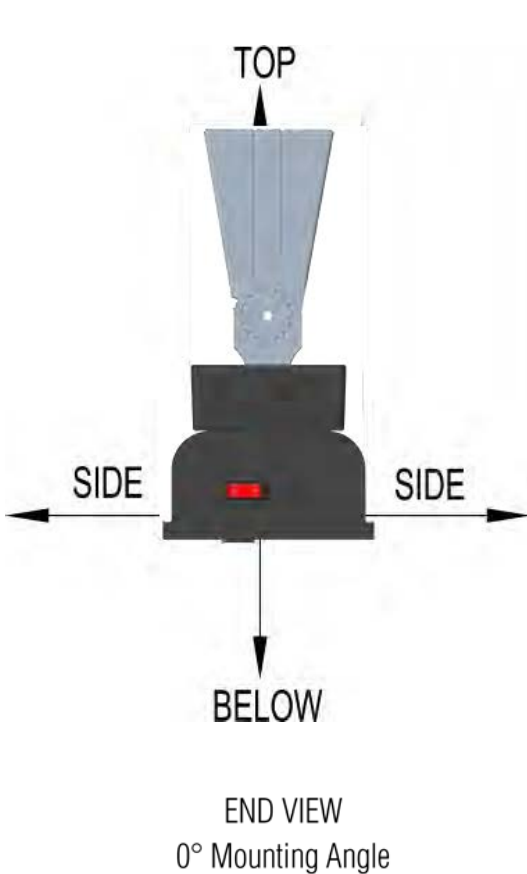
MINIMUM CLEARANCES TO COMBUSTIBLES

Minimum Clearances to Combustibles in Inches

Mounting Angle	-----Side-----		End	Top	Below	Min. Mtg. Height
	Front	Behind				
0°	1'7"	1'7"	1'7"	9.4"	7'9"	7'9"
45°	3'3"	6.5"	1'7"	6.5"	7'9"	7'9"

NOTE: Ensure that building materials with a low heat tolerance (i.e., awnings, fabrics, plastics, sprinklers, insulation, etc.) are protected against degradation. This may require the heater to be mounted at a distance in excess of the published clearances to combustibles. Contact the material manufacturer for specific details of safe temperatures.

Clearances to Combustibles Figure 1



SAVE THESE INSTRUCTIONS

INSTALLATION

Heating Application Chart

Series	Heater Wattage	Lamp Quantity	Minimum Mounting Height (Ft)	Recommended Mounting Height [Dim. A]	Recommended Distance Between Heaters (Ft)* [Dim. B]
RK	3000W	2	7'9"	9' to 10'6"	7' to 14'

NOTE: Minimum Clearances to combustibles published in this manual and on safety labels must be maintained at all times. Factory recommended mounting heights are listed as a guideline. If infrared heaters are mounted too low or too high, they may result in discomfort or lack of heat.

Test surrounding materials to verify that nothing is getting hotter than expected.

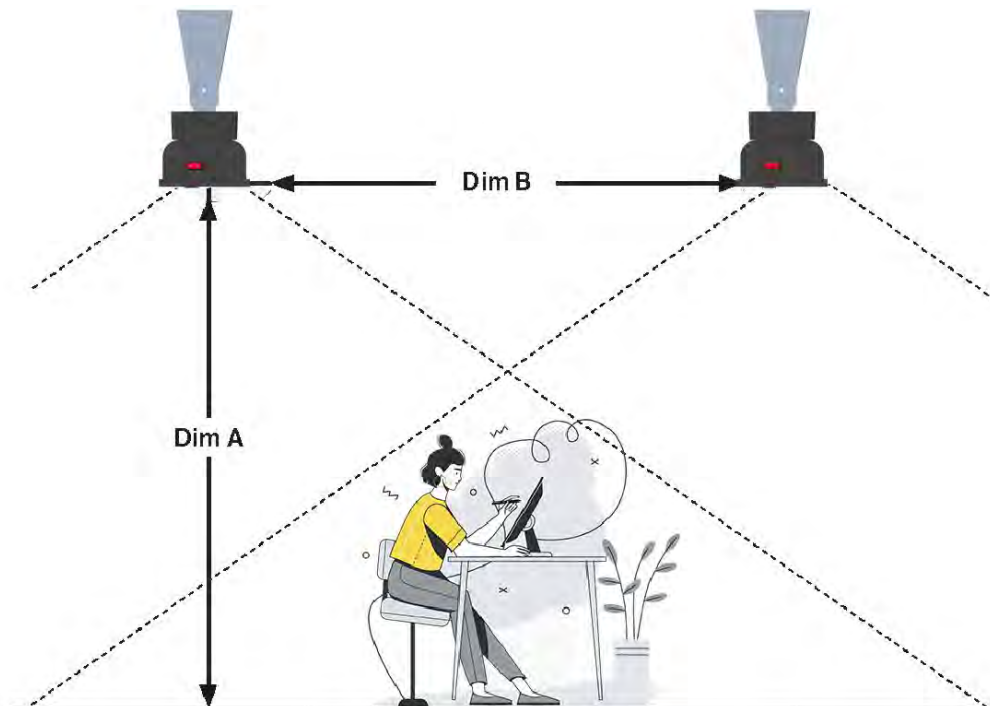
Coverage Area Chart

Series	Heater Wattage	Lamp Quantity	AVERAGE Coverage Of Heater Length X Width (Ft.)	*COLD/WINDY Coverage Of Heater Length X Width (Ft.)	**PROTECTED Coverage Of Heater Length X Width (Ft.)
RK	3000W	2	8' x 8'	6' x 6'	10' x 10'

NOTES: *Heaters can provide less than average coverage in extremely cold/windy conditions.

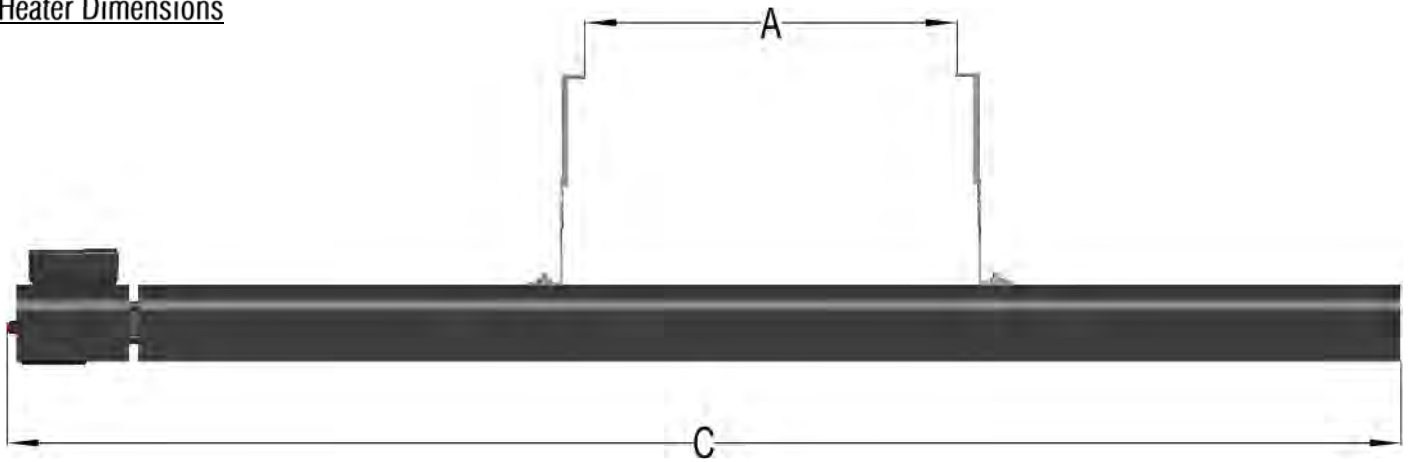
**Indoor or well-protected environments will generally exceed average coverage areas.

Heating Application Diagram



INSTALLATION

Heater Dimensions

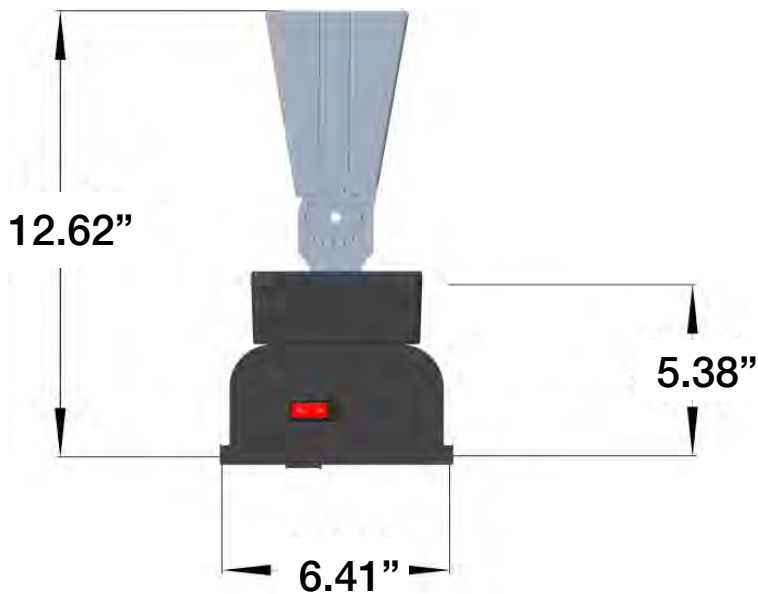


Mount Heater Level
-End to End-



Series	A	C
RK - 1 Lamp	7.5" - 8.25"	24"
RK - 2 Lamps	13.4" - 14.2"	42.3"
RK - 3 Lamps	19.7" - 20.5"	60.7"

Heater Dimensions

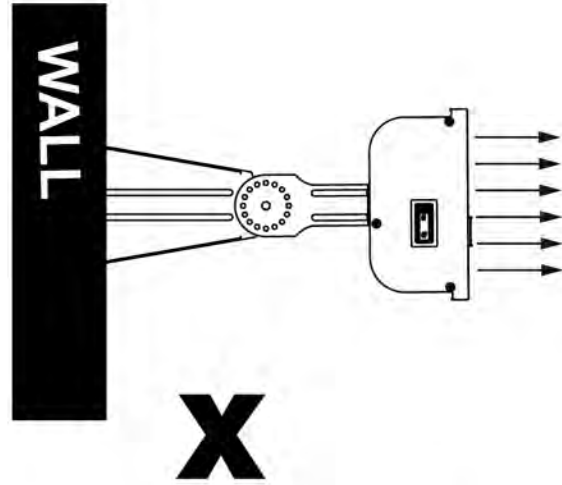
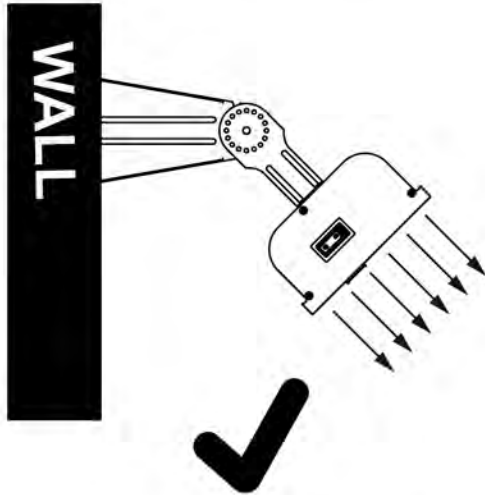


Mounting Bracket Dimensions



IMPORTANT SAFETY INSTRUCTIONS

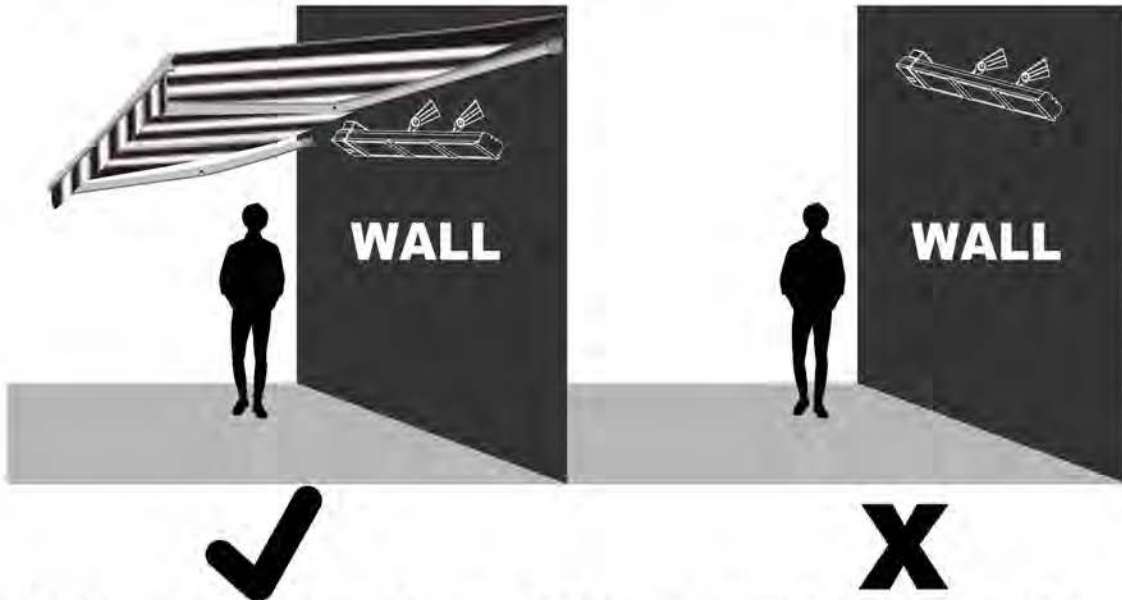
Correct Installation Position - 01



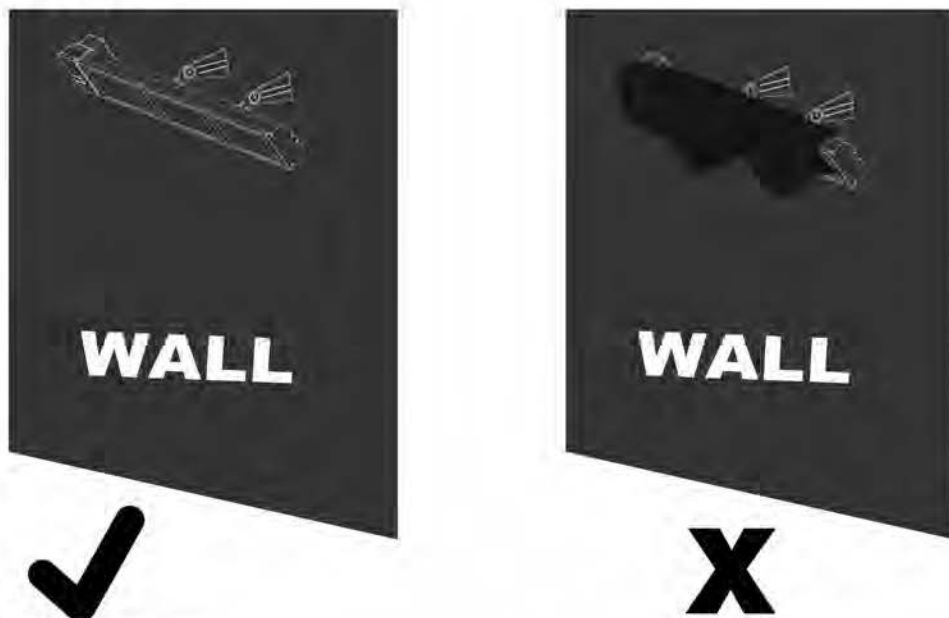
Note: Mounted angle with 30° - 45°.

IMPORTANT SAFETY INSTRUCTIONS

Correct Installation Position - 02



Note: Heater should be wall or ceiling mounted under well protected environments, at least keep 3feet (0.9m) away from any combusitble objects.



Note: Do not cover.

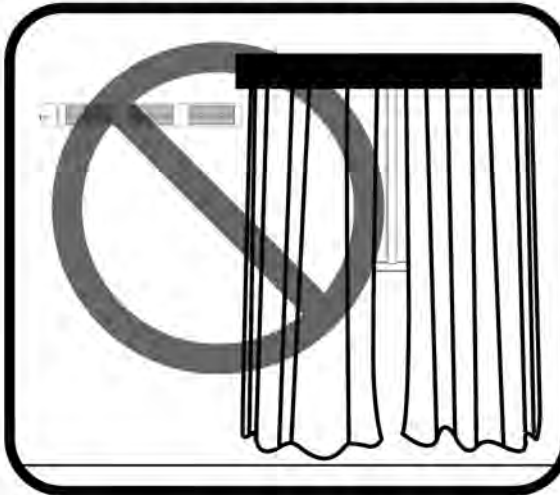
SAVE THESE INSTRUCTIONS



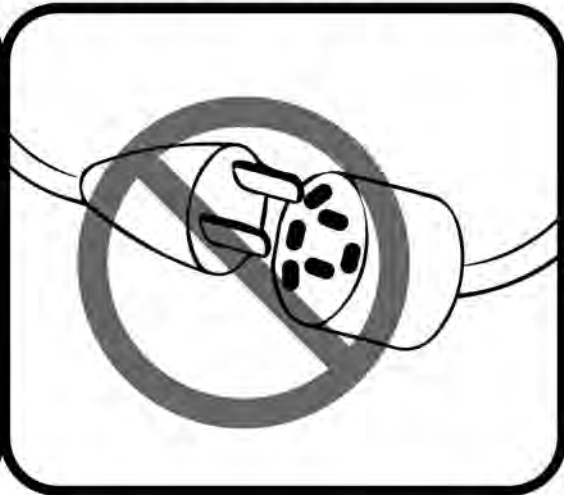
WARNING



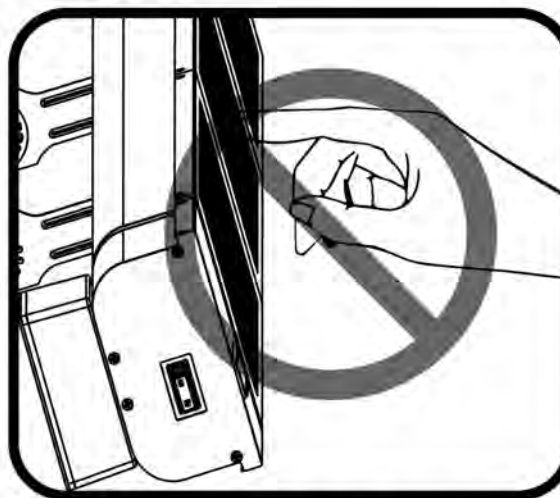
Warning - to reduce the risk of fire



Caution: Keep combustible materials, such as furniture, pillows, curtains at least 3 feet (0.9m) from the front of the heater and keep them away from the sides and rear.



Caution: Do NOT use with an extension cord or relocatable power tap (outlet/power strip).



Caution: Hot surface, do NOT touch.



Caution: Do NOT cover with any objects such as blanket on the heater.

SAVE THESE INSTRUCTIONS

MODEL CHART

King Model	Volts	Phase	Wattage	Lamps	Amps	Accessory	Circuit Size	Product Size	Wt. (LBs)
RK2030-RMT-BLK	208	1	3000	2	14.4	Remote Control	Use only on 20 Ampere Branch Circuit	42.6" x 6.5" x 5.25"	10.2
RK2430-RMT-BLK	240	1	3000	2	12.5	Remote Control			

INSTALLATION INSTRUCTIONS

CAUTION - High temperature, risk of fire, keep electrical cords, drapery, furnishings, and other combustibles at least 3 feet (0.9m) from the front of the heater and away from the side and rear.

To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater. Wiring procedures and connections shall be in accordance with the national and local codes having jurisdiction.

TOOLS NEEDED-

Pencil, Hammer, Level, Screw-Driver, Power Drill & Drill Bits

A wall mounting bracket is provide with the heater which has been specifically designed to allow this product to be secured to a wall or a ceiling. Before drilling any holes, check that the wall or ceiling is solid and that there are no hidden water pipes or electric wires. The heater must be installed no less than 1'7" from side walls and no less than 7'9" cff the floor.

Caution: Select appropriate mounting bolts and anchors for your application.

ATTENTION! The appliance must be installed on the solid surfaces like concrete, wood or metal etc.

Important: Ensure that the supply cable is well secured and that it does not come into contact with reflector of the heater or that it does not lay inside the heated area. The supply cable can be fixed to the metal mounting bracket behind heater with plastic zip ties.

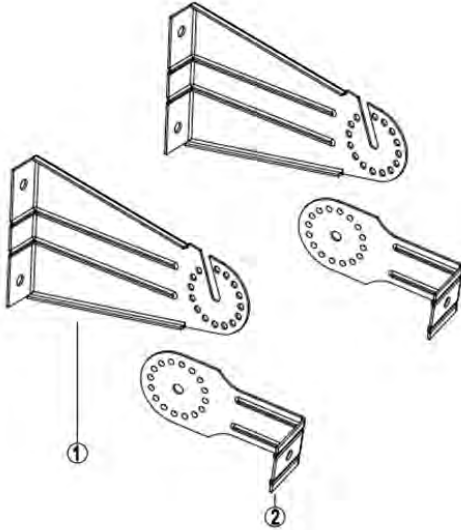
1. This heater should be installed by a competent person, i.e. a qualified electrician.
2. Always disconnected the heater from the electricity supply and allow it to cool before installation.
3. For ceiling mounting, the lowest part of the heater must be located at or above a minimum height of 7'9" from ground level, so that the heater can not be touched when in operation.
4. For ceiling mounting, there must be a 7'9" distance from your appliance to the ground.
5. When mounted to the ceiling, there must be a distance of 1'7" between side walls and the appliance.

6. Always maintain a minimum distance of 3'3" from the appliance to people.
7. The distance from the front side of the heater to materials such as wood, carton, cloth etc., must be a minimum of 3'3".
8. When mounting to a ceiling, do not position the heater at an angle more than 90° or less than 45°.
9. The supply cable must be at the lower end of the heater if the heater is installed at an angle.
10. Keep the supply cord away from the body of the heater which will get hot during use.
11. Do not install the heater on an flammable surface.
12. Observe the minimum safe distance between the heater body and flammable surfaces when mounted.
13. The heater should always have a minimum clearance of 1'7" from a ceiling and adjacent walls.
14. If the heater is to be used outside, a weatherproof outlet is recommended.
15. Before drilling ensure that there are no wires or water pipes in the area where the heater is to be installed.
16. The heater must be installed on the mounting brackets provided.
17. Fasten the brackets securely to the mounting surface and the backside of the heater using the nuts and screws supplied.
18. Fasten the heater securely on the brackets using the nuts and bolts supplied.

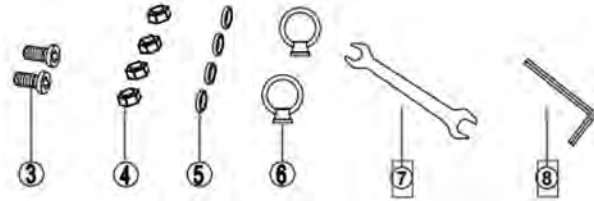
RATED FOR INDOOR OR WELL PROTECTED OUTDOOR AREAS.

SAVE THESE INSTRUCTIONS

INSTALLATION ACCESSORIES LIST



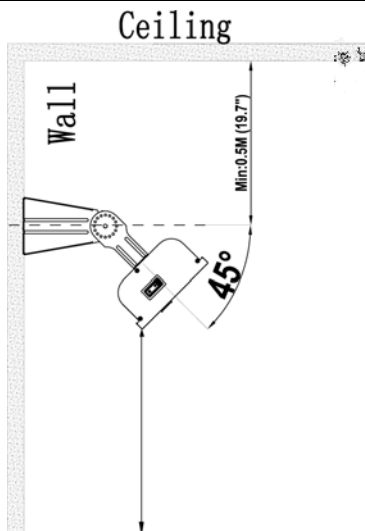
1	Bracket - Large	L shape	2 PCS
2	Bracket - Small	L shape	2 PCS
3	Bolt	M6mm*12mm	2 PCS
4	Nut	M6	4 PCS
5	Washer		4 PCS
6	Eye Nut	M6	2 PCS
7	Crescent Wrench		1 PC
8	Allen- Hex Key		1 PC



ATTENTION!

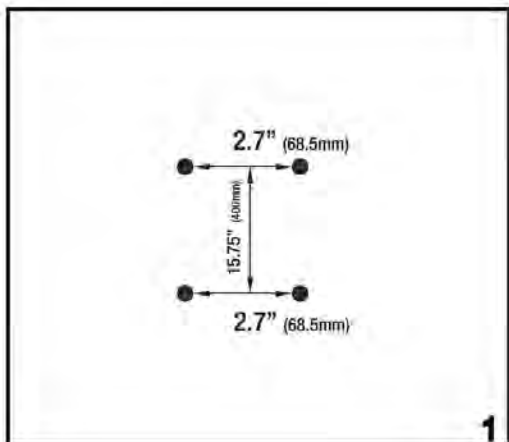
1. Always disconnect the heater from the electricity supply and allow it to cool before attempting to work on it.
2. If the heater has collected dust or dirt inside the unit or around the heating element, have to unit cleaned by a qualified service agent.
3. The only maintenance required is cleaning of the external surfaces of the heater.
4. Do not touch the heating element with bare fingers, as residue from your hand could affect the life of the lamp. If it is accidentally touched, remove the finger marks with a soft cloth moistened with mentholated spirit or alcohol.
5. Do not attempt to repair or adjust any electrical or mechanical functions on this heater.
6. The heater contains no user serviceable parts. Should the product suffer damage or breakdown, contact manufacturer.
7. Damaged supply cords to be replaced by the manufacturer, service agent or similarly qualified person in order to avoid hazard.
8. The heater must be properly installed before it is used.

WALL MOUNT GUIDE

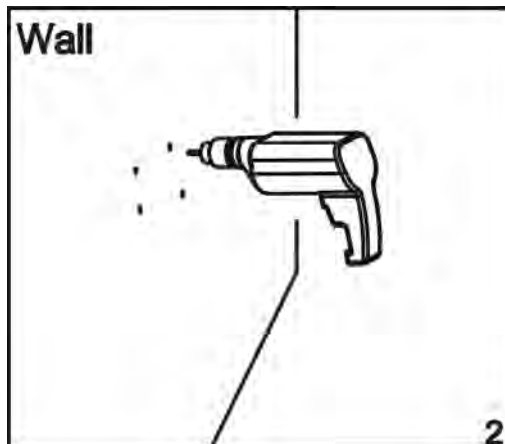


CAUTION: Select the suitable screw according to the heater weight/different model. Angle of reflector no more than 45°. The heater must be installed at least 7'9" above the floor.

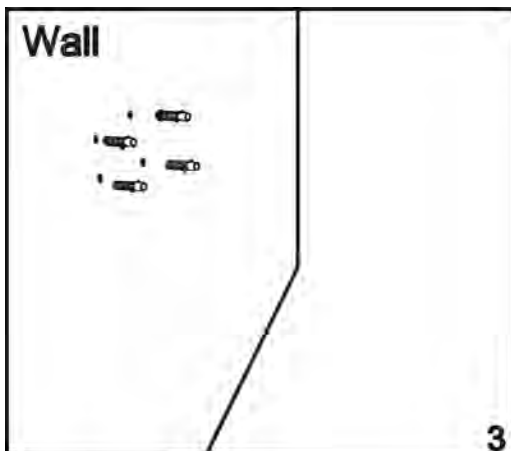
WALL MOUNT INSTALLATION STEPS



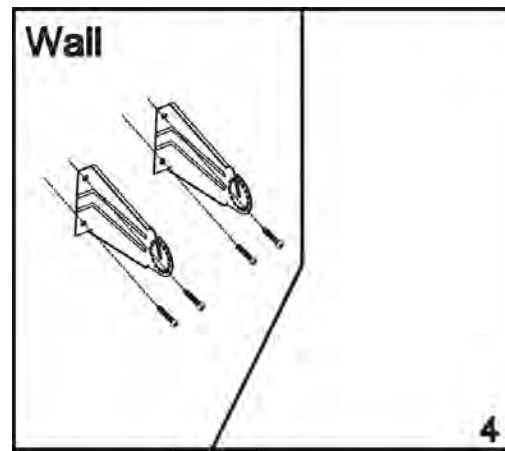
Step 1: Mark hole locations on the mounting surface with spacing as shown.



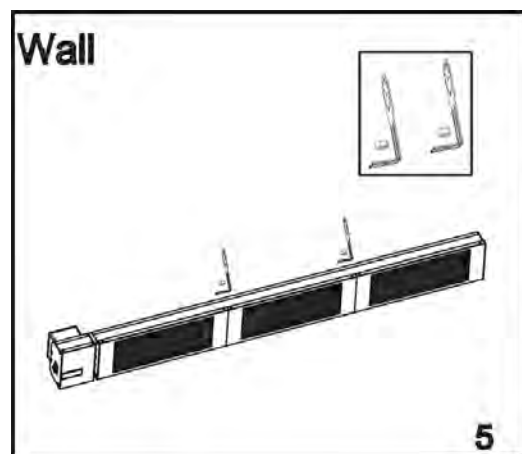
Step 2: Select fasteners and anchors of appropriate type sufficient for your specific wall type (Not provided). Drill holes on your indicator marks.



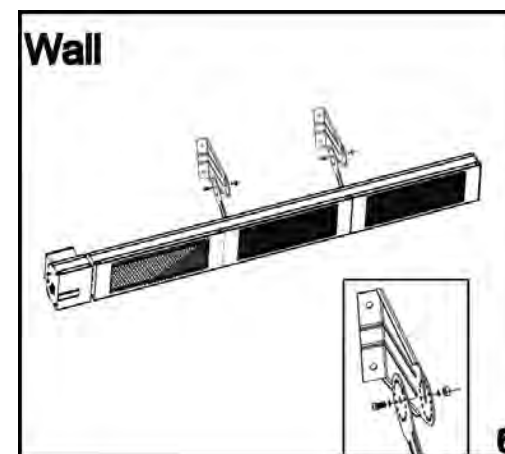
Step 3: Insert wall anchors into holes.



Step 4: Secure wall brackets to wall using 2 screws each. Make sure fasteners are suitable for your application.



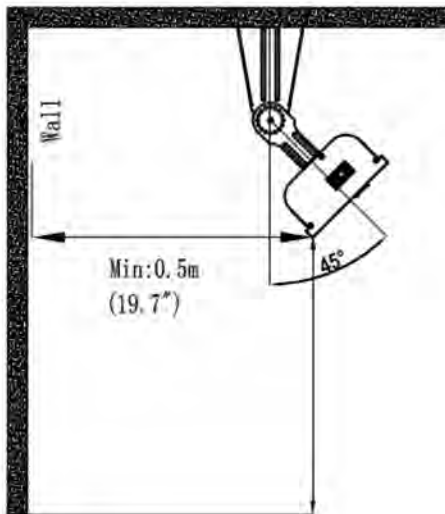
Step 5: Secure small brackets to heater using the supplied Eye Nuts. Then insert a bolt through hole in each small bracket and begin threading a nut onto end with a few threads of engagement.



Step 6: Hang heater onto wall mounted brackets by inserting the bolts through the vertical slot in the bracket and then tighten nuts completely to secure in place at the desired angle.

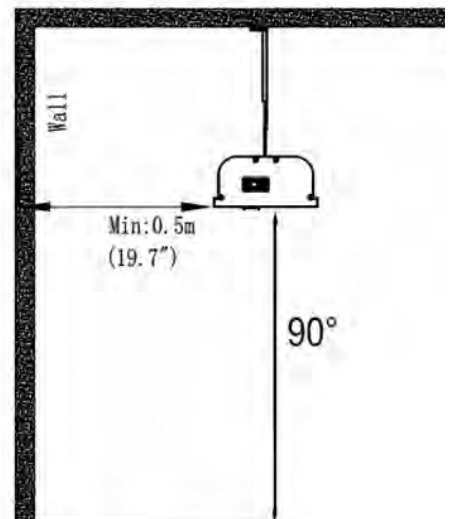
SAVE THESE INSTRUCTIONS

CEILING MOUNT GUIDE



CAUTION: Select the suitable screw according to the heater weight/different model.

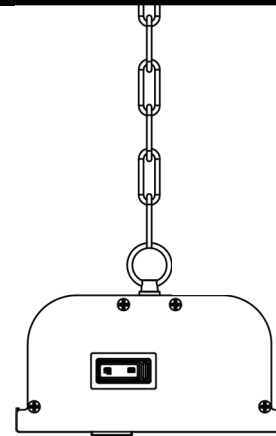
The heater must be installed at least 7'9" above the floor grade



CHAIN MOUNT INSTALLATION

1. Use only noncombustible materials for suspending hangers and brackets.
2. A minimum No. 2 chain with a working load limit of 115 lbs. is required.
3. Secure chain to heater using the provided eye nuts as attachment points.
4. Heaters must not be supported by electric supply lines and must be suspended from a permanent structure with adequate load capacity.

CAUTION: Select the suitable screw according to the heater weight/different model. The heater must be installed at least 7'9" above the floor grade



INSTALLATION INSTRUCTIONS

This heater must be permanently installed and hard wired by a licensed electrician in accordance with local electrical codes. Assembly procedure must be performed with no electrical power to unit.

Step 1: Check UL/CUL label on heater for proper voltage.

Step 2: Follow supplied wiring instructions. (See wiring instructions below)

Step 3: Heater must be mounted with reflector angled down.

Step 4: All electrical connections must be in compliance with the National Electric Code (NEC) and local codes for outdoor wiring.

Step 5: Use only wiring components UL/CUL listed for outdoor use with IPX4 minimum rating.

WIRING INSTRUCTIONS

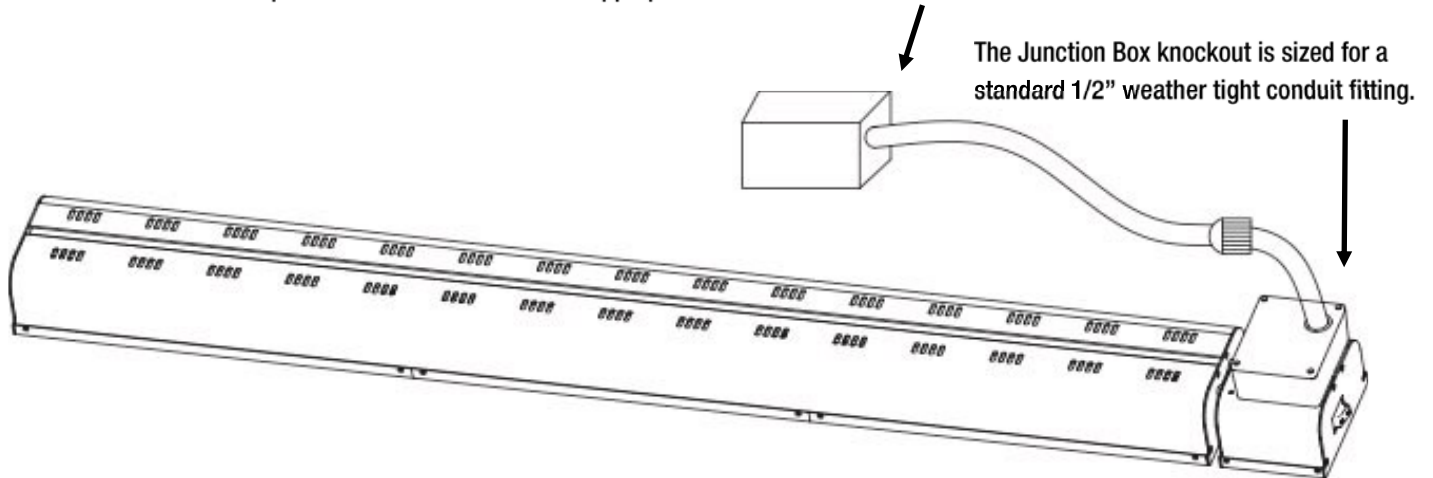
The heater has provisions for standard 1/2" conduit fittings. The installing electrician will need to provide the appropriate rigid metallic, flexible or liquid tight conduit for the installation location.

- Observe local electrical code regulations.
- Remove cover plate from junction box.
- An Additional junction box may be required if more space is needed.
- Attach conduit.
- Use only copper wire suitable for 90°C.
- Replace cover plate.

SAVE THESE INSTRUCTIONS

INSTALLATION INSTRUCTIONS

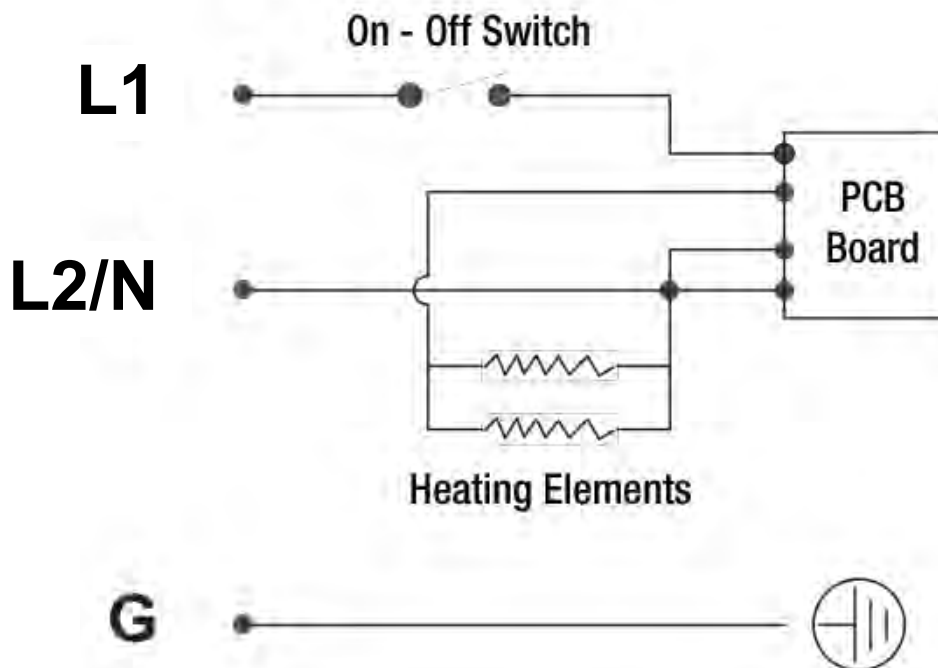
Connect power with flexible conduit or appropriate cord to allow heater to be swiveled.



NOTE: You maybe required to add an additional junction box to the wiring box if additional wires are installed.

WIRING DIAGRAMS

3000W Models



OPERATING INSTRUCTIONS

Heater Onboard Control Functions: (Fig. 1)

For Models: RK2030-RMT-B / RK2430-RMT-BLK

1. **POWER SWITCH:** Turns on Standby mode; display shows (- |);
2. **FUNCTION BUTTON:** Press button to select Heat Levels (L1-L2- Standby - |ff)
L1 = 1500W / L2 = 3000W

Remote Control Instructions (Fig. 2)

For Models RK2030-RMT-B / RK2430-RMT-BLK

1. **POWER BUTTON:** Turns the heater On/Off.
2. **UP BUTTON:** Increases Timer or Heat level.
3. **DOWN BUTTON:** Decreases Timer or Heat level.
4. **HEAT LEVEL BUTTON:** Press to adjust the Heat Levels (L1 - L2).

Press the Heat Level button, then use the Up and Down buttons to increase or decrease the heat level.

L1 = 1500W / L2 = 3000W

5. **TIMER BUTTON:** Press Timer button to set the timer from 0 hours to 24 hours (0H - |4H). Use Up or Down buttons to increase or decrease the timer length. (0H) will show on display as default. Then adjust to the number of hours you would like to set, using the Up and Down buttons.

Noted: The heaters and remote controls have the same frequency, so it is possible to control several heaters with just one remote.

Fig. 1

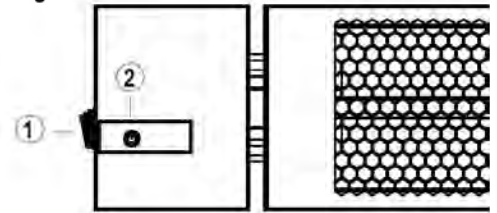
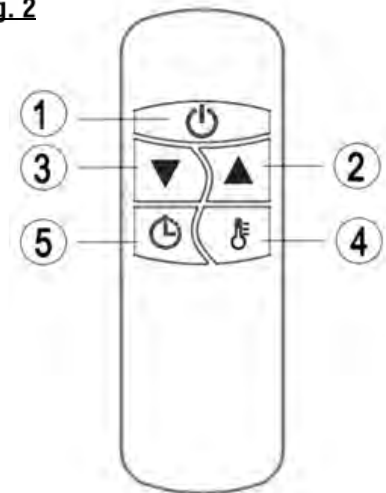


Fig. 2



INSERTING BATTERIES IN REMOTE

Insert 2 AAA/ Alkaline type batteries into your remote control

1. Flip to the backside of your remote control and pull off the battery cover. Insert the batteries in accordance with the instructions and polarity of the batteries.
2. Change the batteries in the same way depicted above.

NOTICE: Replace old batteries with the same battery type. Otherwise, your heater may not function well. Remove batteries when heater is not used for long periods of time to prevent leakage which may damage the remote. Do not allow water or liquids to get into the remote control.

CAUTION:

When the appliance is not operated for a long period of time, when cleaning or maintenance is conducted or when the location of the heater is changed, the heater should be turned to OFF and unplugged from the electrical connection.

SAVE THESE INSTRUCTIONS

TROUBLE SHOOTING

1. Check and verify the power at the main circuit breaker functioning correctly.
 2. Error code shows on display
- E1 Error on display: Control unit overheated. Cool down the heater for 1 hour and then restart heater.
- L1,2 shows in display, but no heat: Bulb is damaged. Arrange for replacement bulb with local Dealer.

MAINTENANCE

ATTENTION! Careful and regular maintenance of your heater is important to achieve long, efficient operation of your appliance.

Except below, all other servicing should be performed by a qualified service professional.

1. Before maintenance is performed, make sure the power has been turned off at the circuit breaker panel and the heating elements are cool.
2. Check the Reflector and IR-Filament at least once a month. If cleaning is necessary, follow the below cleaning and maintenance instructions.
3. Check more frequently if the unit is installed in a dusty environment.
4. Visually inspect the Reflector, Wire and Frame for any damage while cleaning the appliance.
5. Check the Power Cord and Plug visually while cleaning the appliance. In case of deformation, consult to your technical service.

CLEANING

Regular and careful cleaning helps your infrared heater operate efficiently for many years of trouble-free operation. To clean your heater follow steps below:

1. Before cleaning, make sure the power has been turned off at the circuit breaker panel and the heating elements of the heater are cool.
2. Make sure the heater is cool before continuing.
3. To keep the heater clean, the outer shell maybe cleaned with a soft, damp cloth. You may use a mild detergent if necessary. After cleaning, dry the unit with a soft cloth. (CAUTION: DO NOT let liquids enter the heater).
4. DO NOT use alcohol, gasoline, abrasive powders, furniture polish or rough brushes to clean the heater. This may cause damage or deterioration to the surface of the heater.
5. DO NOT immerse the heater in water
6. Wait until the heater is completely dry before use.

Storage: Store the heater in a cool, dry location when not in use to prevent dust and dirt build up. Use packaging carton to store.

RECYCLING

At the end of the electrical products useful life it should not be disposed of with household waste. Please recycle at an appropriate recycling center.

Installation Instructions and Use & Care Guide

Hybrid Electric Heat Pump Water Heater

DO NOT RETURN THIS UNIT TO THE STORE



Read this manual and the labels on the water heater before you install, operate, or service it. If you have difficulty following the directions, or aren't sure you can safely and properly do any of this work yourself:

- Call your Local plumbing supplies store to have this water heater installed. Professional Installation is available for this product and the work is guaranteed.
- Schedule an appointment with a qualified person to install your water heater.
- Call our Technical Assistance Hotline at **1-800-527-1953**. We can help you with installation, operations, troubleshooting, or maintenance. Before you call, write down the model and serial number from the water heater's data plate.

Incorrect installation, operation, or service can damage the water heater, your house and other property, and present risks including fire, scalding, electric shock, and explosion, causing serious injury or death.

AHRI Certification® applies to residential electric water heaters with rated capacities of 20 to 120 gallon and input ratings of 12 kw or less.

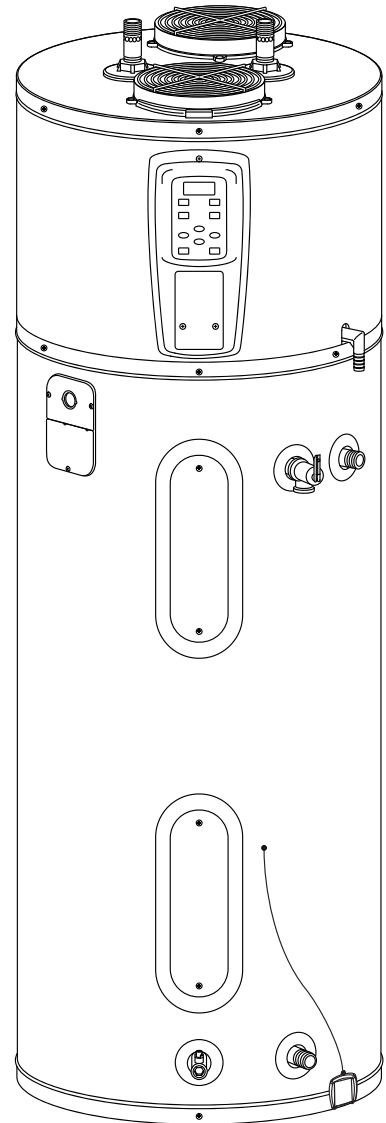


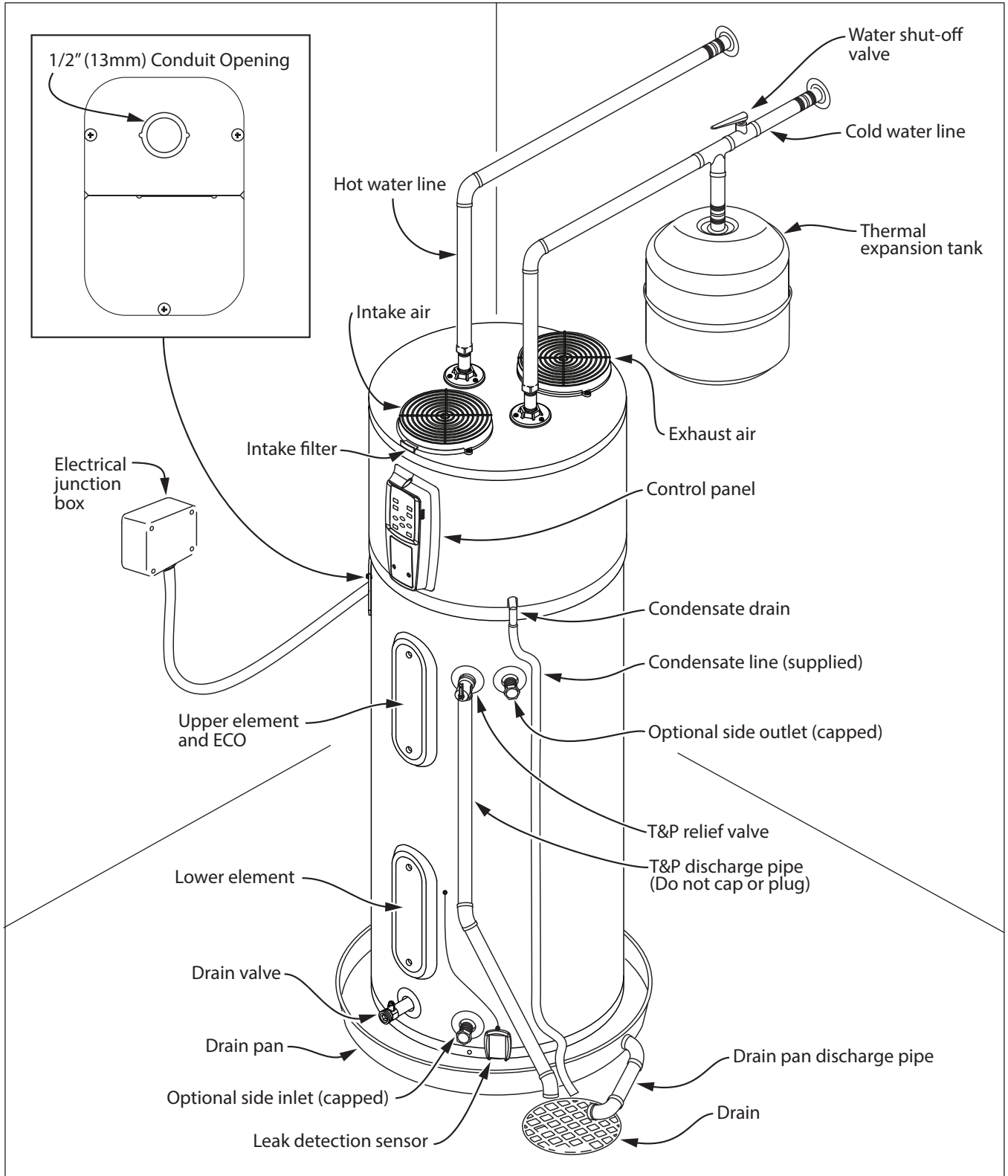
Table of Contents.....	Page
Important Safety Information	3
Getting Started	6
Installation.....	7
Operation	19
Troubleshooting	25
Maintenance	32
Diagrams.....	38
Reparts	39



Keep this manual in the pocket on heater for future reference whenever maintenance, adjustment or service is required.

Retain your original receipt as proof of purchase.

COMPLETED INSTALLATION (TYPICAL)







Notes:

- 1) If copper piping is used, then unions must be dielectric at inlet and outlet.
- 2) Plumb piping to desired inlet and outlet, either top or side (not in combination), and cap unused inlet and outlet to avoid water leaks.

IMPORTANT SAFETY INFORMATION

Read and follow all safety messages and instructions in this manual.

	<p>This is the safety alert symbol. It is used to alert you to potential physical injury hazards. Obey all safety messages that follow this symbol to avoid possible property damage, serious injury or death. Do not remove any permanent instructions, labels, or the data plate from either the outside of the water heater or on the inside of the access panels. Keep this manual near the water heater.</p>
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 DANGER	<p>DANGER indicates hazardous situation that, if not avoided, will result in death or serious injury.</p>
 WARNING	<p>WARNING indicates a hazardous situation that, if not avoided, could result in death or serious injury.</p>
 CAUTION	<p>CAUTION indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.</p>
NOTICE	<p>NOTICE indicates practices not related to physical injury.</p>

This product is certified to comply with a maximum weighted average of 0.25% lead content as required in some areas.

Important information to keep

Fill out this section and keep this manual in the pocket of the water heater for reference.

Date Purchased:

Model number:

Serial number:

Maintenance performed:* Date:

*Drain and flush tank, clean air filter, clean condensate pan, and remove and inspect anode rod after first six months of operation and at least annually thereafter. Operate the Temperature and Pressure Relief Valve (T&P) annually and inspect T&P valve every 2-4 years (see the label on the T&P valve for maintenance schedule). If no label is attached to the T&P Relief Valve, follow the instructions in the T&P Relief Valve Maintenance section of this manual. See the Maintenance section for more information about maintaining this water heater.

IMPORTANT SAFETY INFORMATION

To reduce the risk of property damage, serious injury or death, read and follow the precautions below, all labels on the water heater, and the safety messages and instructions throughout this manual.

RISKS DURING INSTALLATION AND MAINTENANCE



Electric Shock Risk

Contact with the electrical parts in the junction box, behind the access doors and inside the top shroud can result in severe injury or death from the electrical shock.

- Disconnect power by opening the circuit breaker or removing the fuses before installing or servicing.
- Use a non-contact circuit tester to confirm that power is off before working on or near any electrical parts.
- Replace the junction box cover and access doors after servicing.



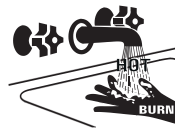
Lifting Risk

▲ WARNING! The water heater is heavy. Follow these

precautions to reduce the risk of property damage, injuries from lifting or impact injuries from dropping the water heater.

- Use at least two people to lift the water heater.
- Be sure you both have a good grip before lifting.
- Unit is top heavy, use an appliance dolly (with strap) to move the water heater.

RISKS DURING OPERATION



Scalding Risk

This water heater can make water hot enough to cause severe burns instantly, resulting in severe injury or death.

Feel water before bathing or showering.

To reduce the risk of scalding, install Thermostatic Mixing Valves (temperature limiting valves) at each point-of-use. These valves automatically mix hot and cold water to limit the temperature at the tap. Mixing valves are available from your local plumbing supplier. Follow manufacturer's instructions for installation and adjustment of the valves.

The Control Assembly on this water heater has been factory set to approximately 120°F/49°C to reduce the risk of scalding. Higher temperatures increase the risk of scalding, but even at 120°F/49°C, hot water can scald. If you choose a higher temperature, Thermostatic Mixing Valves located at each point-of-use are particularly important to help avoid scalding.

Temperature	Time to Produce a Serious Burn
120°F (49°C)	More than 5 minutes
125°F (52°C)	1½ to 2 minutes
130°F (54°C)	About 30 seconds
135°F (57°C)	About 10 seconds
140°F (60°C)	Less than 5 seconds
145°F (63°C)	Less than 3 seconds
150°F (66°C)	About 1½ seconds
155°F (68°C)	About 1 second

For more information about changing the factory thermostat setting(s), refer to the "Adjusting the Temperature" section in this manual (see page 18).

Regardless of the water heater Control Assembly setting, higher temperatures may occur in certain circumstances:

- In some cases, repeated small draws of water can cause the hot and cold water in the tank to "stack" in layers. If this happens, the water can be as much as 30°F/15°C degrees hotter than the thermostat setting. This temperature variation is the result of your usage pattern and is not a malfunction.
- Water temperature will be hotter if someone adjusted the thermostat(s) to a higher setting.
- Problems with the thermostat(s), or other malfunctions may result in higher than expected water temperatures.
- If the water heater is in a hot environment, the water in the tank can become as hot as the surrounding air, regardless of the thermostat setting.
- If the water supplied to the water heater is pre-heated (for example, by a solar water heating system) the temperature in the tank may be higher than the water heater's thermostat setting.

To reduce the risk of unusually hot water reaching the fixtures in the house, install Thermostatic Mixing Valves at each point-of-use.

IMPORTANT SAFETY INFORMATION

If anyone in your home is at particular risk of scalding (for example, the elderly, children, or people with disabilities) or if there is a local code or state law requiring a certain water temperature at the hot water tap, then these precautions are particularly important.

According to the national standard American Society of Sanitary Engineering (ASSE 1070) and most local plumbing codes, the water heater's thermostat should not be used as the sole means to regulate water temperature to avoid scalds.

Properly adjusted Thermostatic Mixing Valves installed at each point-of-use allow you to set the tank temperature to a higher setting without increasing risk of scalds. A higher temperature setting allows the tank to provide much more hot water and can help provide proper water temperatures for appliances such as dishwashers and washing machines. Higher tank temperatures (140°F/60°C) also kill bacteria that cause a condition known as "smelly water" and can reduce the levels of bacteria that cause water-borne diseases.

Water Contamination Risk

Do not use chemicals that could contaminate the potable water supply. Do not use piping that has been treated with chromates, boiler sealer, or other chemicals.



Fire Risk

To reduce the risk of a fire that could destroy your home and

seriously injure or kill people:

- Do not store things that can burn easily such as paper or clothes next to the water heater.

- Be sure the junction box cover and the element access door covers are in place. These covers keep debris from entering and potentially being ignited, and help keep any internal fires from spreading.
- Keep the water heater from becoming wet. Immediately shut the water heater off and have it inspected by a qualified person if you find that the wiring, thermostat(s) or surrounding insulation have been exposed to water in any way (e.g., leaks from plumbing or leaks from the water heater itself can damage property and could cause a fire risk). If the water heater is subjected to flood conditions or the thermostat(s) have been submerged in water, the entire water heater must be replaced.
- Make electrical connections properly, according to the instructions on page 17. Use 10 gauge solid copper wire. Use a UL listed or CSA approved strain relief. Connect the ground wire to the green ground screw.



Explosion Risk

High temperatures and pressures in the water heater tank can cause an

explosion resulting in property damage, serious injury or death. A new Temperature and Pressure (T&P) Relief Valve is included with your water heater to reduce the risk of explosion by discharging hot water. Additional temperature and pressure protective equipment may be required by local codes.

A nationally recognized testing laboratory maintains periodic inspection of the valve production process and certifies that it meets the requirements for Relief Valves for Hot Water Supply Systems, ANSI Z21.22.

The T&P Relief Valve's relief pressure must not exceed the working pressure rating of the water heater as stated on the rating plate.

Maintain the T&P Relief Valve properly. Follow the maintenance instructions provided by the manufacturer of the T&P Relief Valve (label attached to T&P Relief Valve). If no label is attached to the T&P Relief Valve, follow the instructions in the T&P Relief Valve Maintenance section of this manual.

An explosion could occur if the T&P Relief Valve or discharge pipe is blocked. Do not cap or plug the T&P Relief Valve or discharge pipe.

Fire and Explosion Risk if Hot Water is Not Used for Two Weeks or More

▲ CAUTION! Hydrogen gas builds up in a hot water system when it is not used for a long period (two weeks or more). Hydrogen gas is extremely flammable. If the hot water system has not been used for two weeks or more, open a hot water faucet for several minutes at the kitchen sink before using any electrical appliances connected to the hot water system. Do not smoke or have an open flame or other ignition source near the faucet while it is open.

GETTING STARTED

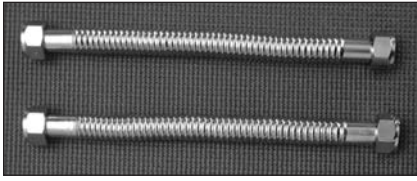


Figure 1 - Flexible connectors use compression fittings and do not require soldering.



Figure 2 - Use a non-contact circuit tester to insure that the power is off before you work on a circuit.



Figure 3 - Install a Pressure Reducing Valve if required.

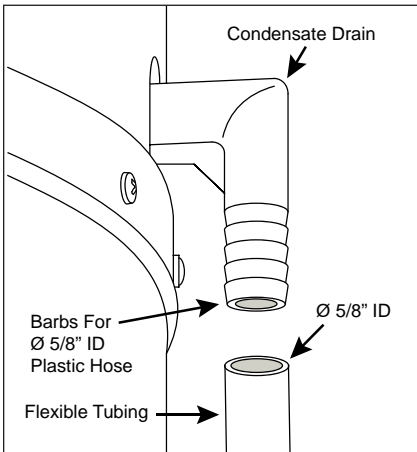


Figure 4 - Condensate drain connection

1 Review all of the instructions before you begin work. If you aren't sure that you can safely and properly do this work yourself, call a qualified person of your choice, such as a licensed plumber or electrician, to have the work done. Improper installation can damage the water heater, your home and other property, and can present risks of serious injury or death.

2 Check with your local and state authorities for any local or state codes that apply to your area. In the absence of local and state codes, follow National Fire Protection Association (NFPA-70) and the current editions of the National Electric Code (NEC) and the International Plumbing Code (IPC). The instructions in this manual comply with national codes, but the installer is responsible for complying with local codes.

Massachusetts code requires this water heater to be installed in accordance with Massachusetts 248-CMR 2.00 and 248-CMR 5.00: State Plumbing Code. Other local and state authorities may have similar requirements or other codes applicable to the installation of this water heater.

3 Before you start, be sure you have, and know how to use, the following tools and supplies:

- Plumbing tools and supplies appropriate for the type of water pipes in your home
- Threaded connections (Figure 1) for the cold and hot water pipes
- For homes plumbed with plastic pipe, use threaded connectors

suitable for the specific type of plastic pipe used: CPVC and PEX (cross-linked polyethylene). Do not use PVC pipe

- For homes with copper pipes, you may purchase connector kits with compression fittings that don't require soldering (Figure 1). Compression fittings are easier to install than soldering copper pipes
- Thread sealant tape or pipe joint compound approved for potable water
- Tools to make electrical connections (for example, screwdrivers and wire strippers)
- Non-Contact circuit tester to check for power (Figure 2)
- Water Pressure Gauge (Figure 5 on page 7)

Recommended Accessories:

- Suitable drain pan (Figure 7 on page 8)
- Shut-off device (kit available)
- Pressure Reducing Valve (Figure 3)
- Thermal Expansion Tank (Figure 6 on page 7)
- Point-of-use Thermostatic Mixing Valves (Figure 8 on page 8)

INSTALLATION

IMPORTANT: Follow these steps for proper installation.

Step 1:

✓ Verify that Your Home is Equipped and Up-to-Date for Proper Installation

Installing a new water heater is the perfect time to examine your home's plumbing system and make sure the system is up to current code standards. There have likely been plumbing code changes since the old water heater was installed. We recommend installing the following accessories and make any other changes to bring your home up to the latest code requirements.

Use this checklist and inspect your home. Install any devices you need to comply with codes and assure that your new water heater performs at its best. Check with your local plumbing official for more information.

✓ Water Pressure

We recommend checking your home's water pressure with a pressure gauge (Figure 5). Most codes allow a maximum incoming water pressure of 80 psi/551 kpa. We recommend a working pressure no higher than 50-60 psi/345-414 kpa.

HOW: Purchase an inexpensive water pressure gauge available at your local plumbing supplier. Connect the Water Pressure Gauge to an outside faucet and measure the maximum water pressure experienced throughout the day (highest water pressures often occur at night).

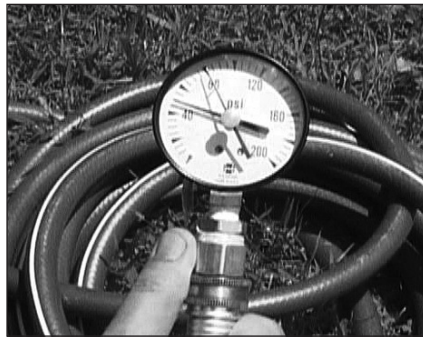


Figure 5 - Use a Water Pressure Gauge to make sure your home's water pressure is not too high.

To limit your home's water pressure: Locate your home's Pressure Reducing Valve (PRV) on the main incoming (cold) water supply line and adjust the water pressure control between 50 and 60 psi. If your home does not have a Pressure Reducing Valve, install a PRV on the home's main water supply line and set it to between 50 and 60 psi. Pressure Reducing Valves are available at your local plumbing supplier.

BACKGROUND: Over the years, many utilities have increased water supply pressures so they can serve more homes. In some homes today, pressures exceed 100 psi/689 kpa. High water pressures can damage water heaters, causing premature leaks. If you have replaced toilet valves, had a water heater leak, or had to repair appliances connected to the plumbing system, pay particular attention to your home's water pressure. When purchasing a PRV, make sure the PRV has a built-in bypass.

✓ Water Pressure Increase Caused by Thermal Expansion

Verify that you have a properly sized Thermal Expansion Tank (Figure 6). We recommend installing an expansion tank if your home does not have one. Codes require a properly pressurized, properly sized Thermal Expansion Tank in all homes that have backflow, check or pressure reducing valves (see illustration on inside front cover).



Figure 6 - A Thermal Expansion Tank helps protect the home's plumbing system from pressure spikes.

HOW: Connect the Thermal Expansion Tank (available at your local plumbing supplier) to the cold water supply line near the water heater. The expansion tank contains a bladder and an air charge. To work properly, the Thermal Expansion Tank must be sized according to the water heater's tank capacity and pressurized to match the home's incoming water pressure. Refer to the installation instructions provided with the Thermal Expansion Tank for installation details.

BACKGROUND: Water expands when heated, and the increased volume of water must have a place to go, or thermal expansion will cause large

INSTALLATION

increases in water pressure (despite the use of a Pressure Reducing Valve on the home's main water supply line). The Safe Drinking Act of 1974 requires the use of backflow preventers and check valves to restrict water from your home reentering the public water system. Backflow preventers are often installed in water meters and may not be readily visible. As a result, most all plumbing systems today are now "closed," and almost all homes now need a Therma Expansion Tank.

A Therma Expansion Tank is a practical and inexpensive way to help avoid damage to the water heater, washing machine, dishwasher, ice maker and even toilet valves. If your toilet occasionally runs for no apparent reason (usually briefly at night), that may be due to thermal expansion increasing the water pressure temporarily.

✓ Water Pipe and Tank Leaks

Leaks from plumbing pipes or from the water heater itself can damage property and could cause a fire risk.

- Install the provided leak detection sensor (see "Step 15" on page 18). An automatic cold water shut-off valve is also available for purchase (kit p/n 100345338). If an automatic cold water shut-off valve has been purchased, see "Step 9" on page 13 for installation instructions. These devices can detect water leaks and can shut off the water heater's water supply if a leak occurs.



Figure 7 - A suitable drain pan piped to an adequate drain can help protect flooring from leaks and drips.

- Install a suitable drain pan (available at your local plumbing supplier) under the water heater (Figure 7) to catch condensation or leaks in the piping connections or tank. Most codes require, and we recommend, installing the water heater in a drain pan that is piped to an adequate drain. The drain pan must be at least 2" (50 mm) wider than the diameter of the water heater. Install the drain pan so the water level would be limited to a maximum depth of 1-3/4" (45 mm).

✓ Water Temperature Regulation



Figure 8 - Thermostatic Mixing Valves installed at each point-of-use can help prevent scalds.

Install Thermostatic Mixing Valves (Figure 8) to regulate the temperature of the water supplied to each point-of-use (for example, the kitchen sink, bathroom sink, bath and shower). Consult the valve manufacturer's instructions or a qualified person.

▲ WARNING! Even if the water heater thermostat is set to a relatively low temperature, hot water can scald. Install Thermostatic Mixing Valves at each point-of-use to reduce the risk of scalding (see page 4 and Figure 8).

BACKGROUND: A Thermostatic Mixing Valve, installed at each point-of-use, mixes hot water from the water heater with cold water to more precisely regulate the temperature of hot water supplied to fixtures. If you are not sure if your plumbing system is equipped with properly installed and adjusted Thermostatic Mixing Valves, at each point of use where hot water is used, contact a qualified person for more information.

Step 2:

Verify that the Location is Appropriate

Before installing your water heater, ensure that:

- 1 The water heater will be:
 - Installed indoors close to the center of the plumbing system.
 - In a suitable drain pan piped to an adequate floor drain or external to the building (Figure 7).
 - In an area that will not freeze.
 - In an area that is suitable for installing the water heater vertically and on a level surface.
 - Installed where a typical home placement sound would not cause a disturbance.
 - Not used for space heating.

NOTICE: Water heater must be level!

INSTALLATION

2 The location has adequate space (clearances) for periodic servicing. For optimal water heater efficiency in unvented applications, the unit must have unrestricted airflow and requires a minimum installation space of 450 ft³ (12.7 m³). As an example, a room that has an 8 ft (2.4 m) tall ceiling and is 7-3/4 ft (2.3 m) long by 7-1/4 ft (2.2 m) wide would contain 450 ft³ (12.7 m³).

NOTICE: This Heat Pump Water Heater may be located within a required minimum of 6"/152 mm clearance from the front side and 12"/305 mm clearance from the top of the water heater. However, for future service considerations, a minimum of 3 ft/.9 m from any obstruction on the front side is recommended.

3 The floor can support the weight of a full water heater.

Capacity	Filled Weight (lbs.)
50 Gallon	573
66 Gallon	796
80 Gallon	921

4 Your area is not prone to earthquakes. If it is, use specific straps as required by local building codes.

NOTICE: The state of California requires bracing, anchoring or strapping the water heater to avoid its moving during an earthquake. To contact local utilities for code requirements in your area visit <http://www.dsa.dgs.ca.gov>, or call 1-916-445-8100 and request instructions. Other locations may have similar requirements. Check with your local and state authorities.

5 The location is not prone to physical damage by vehicles, flooding, or other risks.

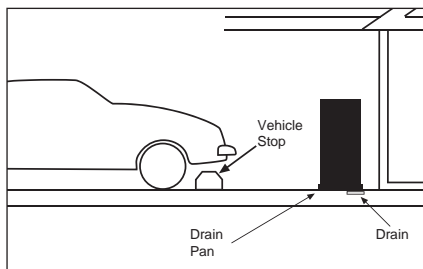


Figure 9 - In a garage, install a vehicle stop to avoid water heater damage.

6 Avoid locations such as attics, upper floors, or where a leak might damage the structure or furnishings. Due to the normal corrosive action of water, the tank will eventually leak. To minimize property damage from leaks, inspect and maintain your water heater in accordance with this manual's instructions. Inspect the drain pan, pipes, and surrounding area regularly and fix any leaks found. Drain pans are available at your local plumbing supplier. Leaks are frequently in the plumbing system itself and not the water heater.

7 The unit cannot be placed into any type of closet or small enclosure (less than 450 ft³), unless adequate provisions are made for air exchange (vented or louvered doors, wall grilles, ducting, etc.). Wall grilles shall be a minimum size of 22 inches by 6 inches, or provide the equivalent area of airflow (a minimum net free area of 130 in²).

For small enclosures with a minimum installation space of 84 ft³ to 449 ft³ (2.3 m³ to 12.7 m³), the following methods of ventilation are acceptable:

- A fully louvered door.
- One wall grille located a minimum of 12 inches from the ceiling, and a second wall grille located a minimum of 12 inches from the floor.

- One wall grille located a minimum of 12 inches from the ceiling, and an undercut door providing 3/4" of clearance (or a minimum net free area of 18 in²).

8 To ensure optimal performance and serviceability, a minimum clearance of 6"/152 mm must be maintained from the front side and 12"/305 mm from the top for access and serviceability.

9 Water heaters located in unconditioned spaces (i.e., garages, basements, etc.) may require the water piping, condensate piping, and drain piping to be insulated to guard from freezing.

10 The air filter, condensation drain and controls must be easily accessible for operation and service.

11 The site location must be free from any corrosive elements in the atmosphere such as sulfur, fluorine, sodium and chlorine. These elements are found in aerosol sprays, detergents, bleaches, air fresheners, paint and varnish removers, refrigerants and many other household products. In addition, excessive dust and lint may affect the operation of the unit (see "Air Filter Maintenance" on page 36).

12 The ambient air temperature must also be considered when installing this unit. In Heat Pump Mode, the air temperature needs to be above 37°F/3°C and below 120°F/49°C for heat pump operation. If the air temperature falls outside these upper and lower limits, the electrical elements will activate to meet the hot water demand. In this scenario, the heat pump will not operate in either Heat Pump Mode or Hybrid Mode.

INSTALLATION

Step 3:

Removing the Old Water Heater

1 Read each installation step and decide if you have the necessary skills to install the water heater. Only proceed if you can safely perform the work. If you are not comfortable, have a qualified person perform the installation.

2 Locate the water heater's circuit breaker and turn it OFF (or remove the circuit's fuses).

3 On the old water heater, remove the electrical junction box access panel. Using a non-contact circuit tester, check the wiring to make certain the power is OFF.

▲ WARNING! Working on an energized circuit can result in severe injury or death from electrical shock.

4 Disconnect the electrical wires.

5 Open a hot water faucet and let the hot water run until it is cool (this may take 10 minutes or longer).



Figure 10 - Let the hot water run until it is cool.

▲ WARNING! Be sure the water runs cool before draining the tank to reduce the risk of scalding.

6 Connect the garden hose to the drain valve and place the other end of the hose in a drain, outside, or a bucket. (Note that sediment in the bottom of the tank may clog the valve and prevent it from draining. If you cannot get the tank to drain, contact a qualified person.)

7 Turn the cold water supply valve OFF.

8 Open the drain valve on the water heater.



Figure 11 - Draining the old water heater.

9 Also open a hot water faucet to help the water in the tank drain faster.

10 When the tank is empty, disconnect the Temperature & Pressure (T&P) Relief Valve discharge pipe. You may be able to reuse the discharge pipe, but do not reuse the old T&P Relief Valve. A new T&P Relief Valve comes installed on your water heater (or on some models, is in the cabinet with the water heater).



Figure 12 - Removing the T&P Relief Valve discharge pipe.

11 Disconnect the water pipes. Many water pipes are connected by a threaded union which can be disconnected with wrenches. If you must cut the water pipes, cut the pipes close to the water heater's inlet and outlet connections, leaving the water pipes as long as possible. If necessary, you can make them shorter later when you install the new water heater.

12 Remove the old water heater.

▲ WARNING! Use two or more people to remove or install the water heater. Failure to do so can result in back or other injury.

INSTALLATION

Step 4:

Installing the New Water Heater

1 Completely read all instructions before beginning. If you are not sure you can complete the installation, seek assistance from any of the following sources:

- Schedule an appointment with a qualified person to install your water heater.
- Call our Technical Assistance Hotline which is listed on the water heater's warranty sheet.

2 Install a suitable drain pan (if required) that is piped to an adequate drain.

3 Set the water heater in place taking care not to damage the drain pan.

NOTICE: Most codes require setting the water heater in a suitable drain pan piped to an adequate drain. The drain pan helps avoid property damage which may occur from condensation or leaks in the piping connections or tank. The drain pan must be at least 2" (50 mm) wider than the diameter of the water heater. Install the drain pan so the water level is limited to a maximum depth of 1-3/4" (45 mm).

4 Verify that the water heater is set in place properly. Check that:

- The T&P Relief Valve will not be in contact with any electrical parts.
- There is adequate space to install the T&P Relief Valve discharge pipe and that it can be piped to a separate drain (and not into the drain pan).

- There is adequate space to install proper condensate drain tubing.
- There is adequate access and space around the water heater for future maintenance. A minimum clearance of 6"/152 mm must be maintained from the front side of the water heater.
- Unit is level to allow proper condensate drainage. An unlevel unit may lead to condensate draining improperly, resulting in property damage.

DO NOT CONNECT ELECTRICAL WIRING UNTIL YOU ARE INSTRUCTED TO DO SO

NOTICE: Connecting electrical power to the tank before it is completely full of water (the water must run FULL STREAM from a hot water tap for a full three minutes) may cause the upper heating element to burn out.

Step 5:

Connecting the Condensate Pump When Required

NOTICE: If no floor drain is available, or the drain is above the level of the condensate line, a condensate pump must be installed.

Follow condensate drain pump manufacturer's instructions for installation.

Step 6:

Connecting the Condensate Pump Optional Overflow Shut-Off Switch

1 Locate the wiring loop next to the condensate drain connection and remove label (Figure 13). Cut the loop and strip insulation off the two ends (Figure 14).

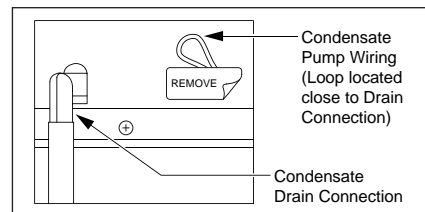


Figure 13 - Condensate Pump wiring.

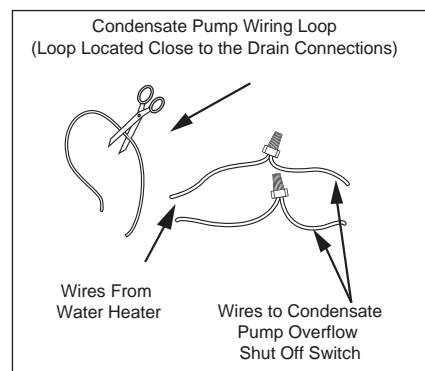


Figure 14 - Wiring Loop for connection to Condensate Pump.

2 Measure the distance from the wiring loop to the condensate pump. Cut two 22 AWG wires to correct length and strip the insulation at both ends.

3 Connect the two 22 AWG wires to the two wires on the water heater using wire connectors or other approved means to make the power connections.

INSTALLATION

- 4 Connect the free ends of the two 22 AWG wires to the shut-off switch on the condensate pump in accordance with the condensate pump manufacturer's recommendations.

Step 7:

Install Condensate Drain Line:

NOTICE: Barbed drain and flexible tubing for condensate drain line come pre-installed from the factory.

- Flexible tubing must be used to connect the condensate drain to a suitable drain or condensate pump.
- Condensate drain line should be installed in conditioned areas only. Install approved insulation on the condensate drain line to prevent condensation from forming on the outside of the drain line. Condensation drain lines installed in areas that are subject to freezing temperatures should be wrapped with a nationally recognized heat tape. Install per manufacturer's instructions.
- Do not connect condensate drain line with other drain or discharge lines into a single (common) pipe or line. Each line (condensate drain line, temperature and pressure relief valve discharge pipe, etc.) should be independently run to an adequate drain.
- Slope the condensate drain line toward the inside floor drain or condensate pump.
- The condensate drain line and connections to the drain piping must comply with all local codes.

- If a condensate pump is installed, it should be wired to shut off the heat pump in the event the condensate pump fails or the float switch in the pump activates (see "Connecting the Condensate Pump Optional Overflow Shut-Off Switch" on page 11).
- Allow enough length on the 5/8" ID flexible plastic tubing (pre-installed from the factory) to access an adequate drain.

Step 8:

Connect the Temperature and Pressure (T&P) Relief Valve/Pipe

Most T&P Relief Valves are pre-installed at the factory. In some cases, they are shipped in the carton and must be installed in the opening marked and provided for this purpose and according to local codes.

▲ WARNING! To avoid serious injury or death from explosion, install a T&P Relief Valve according to the following instructions:

If your water heater does not have a factory installed T&P Relief Valve, install the new T&P Relief Valve that came with your water heater. Do not reuse an old T&P Relief Valve. Install a T&P Relief Valve discharge pipe according to local codes and the following guidelines:

- 1 The discharge pipe should be at least 3/4" (19 mm) inside diameter and sloped for proper drainage. Install it to allow complete drainage of both the T&P Relief Valve and the discharge pipe.

- 2 The discharge pipe must withstand 250°F/121°C without distortion. Use only copper or CPVC pipe. Most homes use copper water pipes, but some use CPVC or cross-linked polyethylene (PEX). Use fittings appropriate for the type of pipe in your home. Do not use any other type of pipe, such as PVC, iron, flexible plastic pipe, or any type of hose.



Figure 15 - The T&P Relief Valve discharge pipe must be installed properly and piped to an adequate drain.

- 3 Terminate the discharge pipe a maximum of 6" (15 cm) above a floor drain, or outside the building. Do not drain the discharge pipe into the drain pan; instead pipe it separately to an adequate drain. In cold climates, terminate the discharge pipe inside the building to an adequate drain. Outside drains could freeze and obstruct the drain line. Protect the drain from freezing.
- 4 Do not place any valve or other restriction between the tank and T&P Relief Valve. Do not cap, block, plug, or insert any valve between the T&P Relief Valve and the end of the discharge pipe. Do not insert or install any reducer in the discharge pipe.

INSTALLATION

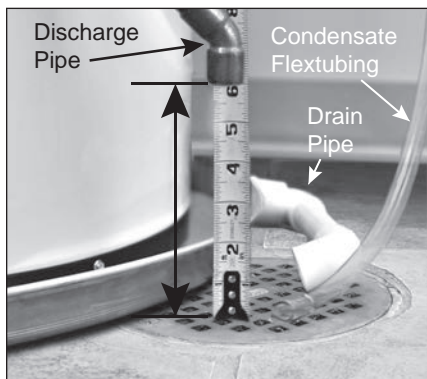


Figure 16 - The end of the T&P Relief Valve discharge pipe must stop no more than 6" (15 cm) above a floor drain or outside.

Step 9:

Install Shut-Off and Tempering Valves

1 Install a manual shut-off valve (available at your local plumbing supplier) on the cold water line that supplies the water heater. Install the shut-off valve near the water heater so that it is readily accessible. Only use valves that are compatible with potable water. Use only full-flow ball or gate valves. Other types of valves may cause excessive restriction to the water flow.

NOTICE: An automatic cold water shut-off valve is available for purchase (see the "Repair Parts" section of this manual). This is to be installed on the cold water line near the water heater. Make sure the module can be easily plugged into the Control Assembly (within 30"/76 cm). See included kit instructions found with the automatic cold water shut-off valve for further installation instructions.

2 Install Thermostatic Mixing Valves at each point-of-use (for example, the kitchen sink, bathroom sink, bath or shower). Consult the valve manufacturer's instructions or a qualified person.

▲ WARNING! Even if the water heater's thermostat(s) are set to a relatively low temperature, hot water can scald. Install Thermostatic Mixing Valves at each point-of-use to reduce the risk of scalding (see page 4 and Figure 8).

3 For water heaters that are fed by a solar water heating system (or any other pre-heating system), always install a Thermostatic Mixing Valve or other temperature limiting device in the inlet water supply line to limit water supply inlet temperature to 120°F/49°C. Solar water heating systems can supply water with temperatures exceeding 170°F/77°C and may result in water heater malfunction.

▲ WARNING! Hot water provided by solar heating systems can cause severe burns instantly, resulting in severe injury or death (see page 4).

Step 10:

Connect the Water Supply

1 Determine the type of water pipes in your home. Most homes use CPVC or cross-linked polyethylene (PEX). Use fittings appropriate for the type of pipe in your home. Do not use iron or PVC pipe – they are not suitable for potable water.

2 The water heater can be plumbed to either the top or side connections, however, only one option shall be chosen (neither top nor side connections may be used in combination). The unused connections must be capped with the caps provided.

3 Connect the cold water supply using 3/4 inch National Pipe Thread "NPT" to the BLUE cold water connection on either the top or side of the water heater.

To avoid damaging gaskets in the flex lines, use a second wrench at the hot and cold nipples to counter torque when installing or removing water connections. **DO NOT** overtighten.

For ease of removing the water heater for service or replacement, connect the water pipes with a coupling called a union. We recommend using a dielectric-type union (available at your local plumbing supplier). Dielectric unions can help prevent corrosion caused by tiny electric currents common in copper water pipes and can help extend the life of the water heater.

NOTICE: This water heater model contains an optional side outlet connection (J-tube) that has an orientation mark that must line up with arrow (in a 12 o'clock position).

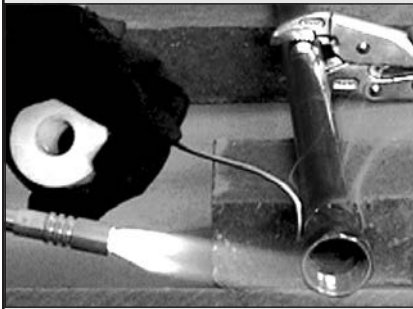
4 Connect the hot water supply using 3/4 inch NPT to the corresponding RED hot water connection. Follow the same connection guidelines as for the cold water supply.

IMPORTANT: DO NOT use top and side connections in conjunction. Plumb the water heater using the hot and cold connections located on the top of the water heater, or the hot and cold connections located on the side of the water heater.

INSTALLATION

IF YOU HAVE COPPER PIPES:

If your home has copper water pipes, you can solder the water pipe connections or use compression fittings which do not require soldering. Compression fittings are easier to install than soldering pipe. Check with local plumbing officials to determine what types of pipe materials are suitable for your location. Do not use lead-based solder.



NOTICE: Do not solder pipes while they are attached to the water heater. The water heater's inlet and outlet connections contain non-metallic parts which could be damaged. The proper way to connect the water heater to copper water pipes is as follows:

Solder a short length of pipe (about a foot or so) to a threaded pipe using only 95/5 tin-antimony or equivalent solder. Attach the threaded pipes to the water heater's connections (using thread sealant tape or pipe joint compound). Connect the home's water pipes by soldering, keeping the connections at the water heater cool with wet rags.

NOTICE: Do not over apply joint compound.

5 Install insulation (or heat tape) on the water pipes especially if the indoor installation area is subject to freezing temperatures. Insulating the hot water pipes can increase energy efficiency.

6 Double check to make sure the hot and cold water pipes are connected to the correct hot and cold water fittings on the water heater. Ensure unused hot and cold connections are plugged and capped.

7 If needed, install (or adjust) the home's Pressure Reducing Valve to 50-60 psi and install a Thermal Expansion Tank.



Figure 17 - A Pressure Reducing Valve is required if your home's water pressure is above 80 psi.



Figure 18 - The Thermal Expansion Tank should be pressurized with air to match the home's incoming water pressure.

Recirculating Loop

A recirculation loop is sometimes provided in a hot water system where it is desirable to have on demand hot water at the fixtures.

A smaller diameter size pipe with an inline circulation pump is plumbed to a location near the furthest fixture and to a location near the water heater. The pump can run continuously or intermittently circulating enough tempered water to keep heat loss in the plumbing system, during low or no demand, within an acceptable limit.

A recirculation loop in your home provides on demand hot water to your fixtures quickly and helps mitigate the amount of wastewater sent down the drain while you wait, but hot water may be continuously flowing through your plumbing system. If your recirculation pipes are not insulated well enough to prevent heat energy loss, then your pipes will radiate heat throughout the surrounding areas of your home. The heat energy lost can cause your heat pump water heater to work continuously to maintain the heat in the pipes.

This heat pump water heater is programmed with proprietary software to ensure the water heater operates at peak efficiency. Demand for hot water in the plumbing system will draw hot water from the tank causing a heating cycle as the supply water temperature is much cooler than the water in the tank. You should consider alternatives to installing a heat pump water heater in conjunction with a residential recirculation loop to prevent the water heater from running continuously due to the lower input

INSTALLATION

of these types of units, potentially causing a “no hot water” condition.

We do not recommend this heat pump water heater for use in conjunction with recirculation loop systems due to the wide variety of applications and variability in installation and performance of these systems. We can provide the following guidance that you may use to determine if this heat pump water heater will operate at peak efficiency in your specific application.

If your recirculation loop or pump is designed to help provide on demand hot water to sinks, showers, etc., and does not present a significant continuous heating load, this heat pump water heater can generally be used with on demand recirculation systems or with those specifically programmed to operate only for short periods of the day when demand is expected.

Energy savings from this heat pump water heater could be significantly impacted depending on conditions associated with the specific application. The heat energy lost in a recirculation loop system can cause your water heater to run excessively. This heat pump water heater may not be able to accommodate demand.

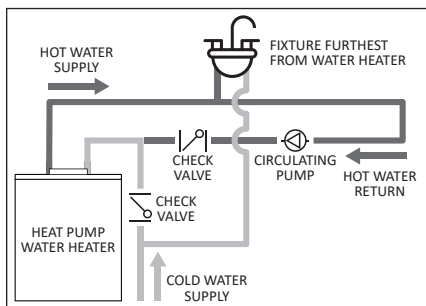


Figure 19 - Recirculation Loop Diagram

Step 11: Ducting Requirements (optional)

Heat is absorbed from air entering the intake side of the compressor unit on top of the water heater and transferred to the water inside the storage tank. Cooler dehumidified air exiting the exhaust side of the compressor unit is a normal by-product of operation. In unvented applications, a minimum installation space of 450 ft³/12.7 m³ is required, however, if adequate provisions are made for air exchange, this water heater may be installed in small enclosures with a minimum installation space of 84 ft³/2.3 m³ (see “Verify that the Location is Appropriate” section in this manual for more information about required ducting and vented or louvered doors). The factory installed duct adaptors can be used to redirect intake and/or exhaust air from or to other locations to permit installation in confined spaces, improve performance and maintain comfort in occupied areas of the home.

INSTALLATION LIMITATIONS

There are two duct adaptors; one connects to the air exhaust side of the top shroud (near the back of the water heater) and one to the air intake side of the top shroud (near the front of the water heater). The two cannot be interchanged. The inlet and outlet duct adaptors on the water heater accept 8” diameter ducting. No additional adaptors are needed.

7”, 6” and 5” diameter ducting is supported. The table below lists the total feet of ducting allowed. For duct

diameters smaller than 8” diameter, the table takes into account the duct reducer(s) and up to 10 feet of 8” inch rigid ducting (two elbows) before the duct reducer(s) at the unit. Duct reducers must be installed within 10 feet (two elbows) of the unit or within 2 feet of the duct termination.

IMPORTANT: A minimum length of 12” flexible ducting (8” diameter) must be installed between the duct adaptors and any rigid ducting.

Air can be drawn from or expelled to the outdoors, an attic space, or to another room inside the home.

INSTALLATION CONSIDERATIONS

The compressor unit on the water heater is disabled when the temperature of the air flowing to the intake is lower than 37°F/3°C or higher than 120°F/49°C. These operational parameters must be considered when determining if a location to duct air from/to will be suitable.

NOTICE: If the compressor unit is disabled for long periods of time due to air intake temperature being too hot or too cold, the potential energy savings a heat pump water heater is able to provide may be significantly reduced.

AIR INTAKE

Outdoor air temperatures will often be lower than 37°F/3°C in many regions during fall and winter months. Attic temperatures will often exceed 120°F/49°C in many regions during spring and summer months. For units installed in conditioned spaces, ducting outdoor air to the intake of the unit may place additional load on space heating and cooling equipment

INSTALLATION

Duct Type / Diameter	8”	7”	6”	5”
Flexible	100’	50’	24’	—
Rigid	300’	155’	65’	20’

INSTALLATION

unless the air from the exhaust is also ducted to an alternate location.

Air being drawn from an alternate location inside the home may cause a negative pressure condition inside that area. As a result, cold or hot air from outdoors may be drawn into the structure and place additional load on the space heating and cooling equipment.

AIR EXHAUST

The air exhaust from a unit installed in a garage or any area where solvents or other chemicals that emit potentially harmful fumes are stored or automobiles are located must never be ducted to any other space inside the building structure. This would include all occupied and unoccupied spaces such as attics or basements. Potentially harmful fumes and vapors from solvents and cleaners or automobile exhaust gases could be introduced into living spaces.

Cold air blowing from the air exhaust into an alternate location inside the home may cause cooling discomfort and be objectionable. Cold air blowing from the air exhaust into an alternate location inside the home may place additional load on space heating equipment during fall and winter months.

Ducting only exhaust air to an alternate location may cause a negative air pressure in the installed space. As a result, cold or hot air from outdoors may be drawn into the structure and place additional load on the space heating and cooling equipment.

Step 12:

Ducting Installation (optional)

- 1 Read each installation step and decide if you have the necessary skills to install intake and exhaust ducting to and from the heat pump water heater. Only proceed if you can safely perform the work. If you are not comfortable, have a qualified person perform the installation.
- 2 After the desired length of 8" flexible duct has been determined, carefully cut completely around and through the duct insulation jacket with a pair of scissors. Using a pair of wire cutters, cut the wire inside the core duct. Fold the duct insulation jacket back away from the core duct.
- 3 Slide the core duct over the air exhaust duct adaptor and secure with a cable tie. Seal core duct with at least two wraps of insulation tape over cable tie.
- 4 Slide duct insulation jacket back over the core duct and the air exhaust duct adaptor. Use insulation tape to secure the duct insulation jacket to the air exhaust duct adaptor. Additionally, secure duct insulation jacket with cable tie. Repeat procedure for the air intake duct adaptor.
- 5 Add support to the duct work as necessary with ducting tube hooks or as required by local codes. Special attention must be given to prevent large droops in the duct work which could allow moisture to pool.

6

The appropriate duct termination shall be added to the termination end of the duct. This termination shall prevent any debris or rodents from entering the duct work and shall minimally restrict airflow through the ducting. In addition, the termination shall be designed to prevent rain from entering the duct work if terminated to the outside.

7

The flow area termination must be at least 40 sq. in. to avoid overloading the heat pump water heater fan.

Step 13:

Verify Connections and Completely Fill Tank

To remove air from the tank and allow the tank to fill completely with water, follow these steps:

- 1 Remove the flow restrictor at the nearest hot water faucet. This allows any debris in the tank or plumbing system to be washed out.
- 2 Turn the cold water supply back on and ensure any shut-off valves installed on the cold water supply line are open.



Figure 20 - Fully open the cold water supply valve (full-flow ball valve pictured above).

INSTALLATION

- 3 Open a hot water faucet and allow the water to run until it flows with a full stream.
- 4 Let the water run full stream for three full minutes.
- 5 Close the hot water faucet and replace the flow restrictor.
- 6 Check inlet and outlet connections and water pipes for leaks. Dry ball pipes so that any drips or leaks will be prevented. Repair any leaks. Almost all leaks occur at connections and are not a tank leak.

Step 14:

Make Electrical Connections

▲ WARNING! Working on an energized circuit can result in severe injury or death from electrical shock.

NOTICE: Do not turn electrical power on unless you are sure that the tank is out of the tank and the tank is completely full of water. Although this water heater is equipped with “Dry-Fire” protection, be certain all air is purged from the tank before making any electrical connections.

- 1 Be sure the electrical power to the water heater is turned OFF at the circuit breaker panel (or remove the circuit’s fuses).
- 2 Using a non-contact circuit tester, check the wiring to make certain the power is OFF and the circuit is not energized.
- 3 This water heater requires a 208/240 VAC single phase 30 amp power supply, at 50Hz or 60Hz. Check the water heater’s data plate (Figure 22) and ensure that the home’s voltage, wiring size (ampacity)

and circuit breaker rating and type are correct for this water heater. Refer to the wiring diagram located on the water heater, and on page 38 of this manual, for the correct electrical connections. Ensure that wire sizes, type, and connections comply with all applicable local codes. In the absence of local codes, follow NFPA-70 and the current edition of the National Electric Code (NEC).

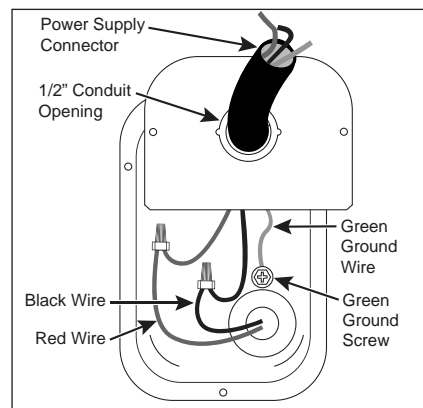


Figure 21 - Connecting the electrical wires (bottom cover to electrical junction box removed for clarity).

If metal conduit is used for the grounding conductor:

- The grounding electrode conductor shall be 10 gauge solid copper wire. The copper wire shall be of one continuous length without a splice or joint.
- Rigid metal conduit, intermediate metal conduit, or electrical metallic tubing may be used for the grounding means if conduit or tubing is terminated in fittings approved for grounding.
- Flexible metal conduit or flexible metallic tubing shall be permitted for grounding if all the following conditions are met:
 - I. The length in any ground return path does not exceed 6 feet/1.8 m.

- II. The circuit conductors contained therein are protected by overcurrent devices rated at 30 amperes.
- III. The conduit or tubing is terminated in fittings approved for grounding.

For complete grounding details and all allowable exceptions, refer to the current edition of the National Electric Code NFPA-70.

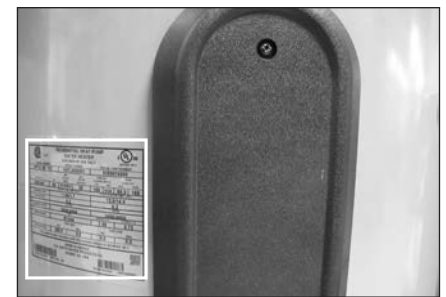


Figure 22 - The water heater’s electrical requirements can be determined from the data plate.

- 4 Remove the top and bottom covers on the electrical junction box on the side of the water heater.
- 5 Install wiring in an approved conduit (if required by local codes). Use a UL listed or CSA approved strain relief to secure the electrical wiring to the water heater.
- 6 Connect the ground wire to the green ground screw. Connect the home’s two power wires to the water heater’s two power wires. Use suitable wire connectors or other approved means to make the power connections.
- 7 Replace the junction box covers and secure with the screws provided.

▲ WARNING! Be sure cover is secured to reduce the risk of fire and electric shock.

INSTALLATION

Step 15:

Installing the Leak Detection Sensor

The Leak Detection Sensor (LDS) does not provide protection against a water leak, it only provides notification that water is present in the location of the sensor. When a leak is detected, the Control Assembly will display an error code accompanied by a flashing light and audible signal. If the presence of water is indicated, disconnect power to the water heater, turn off the incoming water and address the source of the leak before returning the unit to service. See included kit instructions found with the LDS for detailed installation instructions.

- 1 Plug the LDS into the connection port next to the lower element access panel.
- 2 Attach the LDS to the heater or drain pan using the tape on the back of the LDS. Ensure the metal probes point down.
- 3 Use the included wire clamps to organize the wires.

Step 16:

Adjusting the Temperature

With the installation steps completed, you may adjust the water heater's temperature setting if desired.

- 1 Turn the electric power back on. Remove/pull out the battery protective tab from the left side of the Control Assembly.
- 2 Set the thermostat to the desired temperature on the Control Assembly (see

"Adjusting the Control Assembly's Operational Modes" on page 21). The set point on this water heater has been factory set to approximately 120°F/49°C to reduce the risk of scald injury. You may wish to set a higher temperature to provide hot water for automatic dishwashers or laundry machines, to provide more hot water capacity, and to reduce bacteria growth. Higher tank temperatures (140°F/60°C) kill bacteria that cause a condition known as "smelly water" and can reduce the levels of bacteria that cause water-borne diseases.

▲ WARNING! Higher temperatures increase the risk of scalding, but even at 120°F/49°C, hot water can scald (see page 4 and Figure 23).

If you increase the water heater's temperature setting, install Thermostatic Mixing Valve(s) at each point-of-use to reduce the risk of scalding.



Figure 23 - Adjust Thermostatic Mixing Valves at each point-of-use to 120°F/49°C or lower.

- 3 Wait for the water to heat up. It may take several hours for a tank of cold water to heat up. If you have no hot water after two hours, refer to the "Troubleshooting" section (beginning on page 25).

▲ WARNING! If you have increased the temperature setting and the Thermostatic Mixing Valves are not set properly (or not installed) you could scald yourself while checking the temperature.

- 4 Check water temperature at several points in your home (for example, the bathtub faucet, shower, or lavatory sink) and adjust the Thermostatic Mixing Valves as needed. If you are not sure how to adjust the Thermostatic Mixing Valve settings, or are not sure if you have Thermostatic Mixing Valves, contact a qualified person.

Post Installation Review

- 1 Understand how to use the Control Assembly to set the various modes and functions.
- 2 Hybrid Mode is the recommended Operating Mode. Understand the various Operating Modes and which mode may be best, based on ambient temperature and hot water demands.
- 3 Understand the importance of routine inspection/maintenance of the condensate drain pan and line. This is to prevent any possible drain line blockage resulting in the condensate drain pan overflowing.
- 4 To maintain optimal operation, check, remove and clean the air filter as needed.
- 5 The installation Instructions and Use and Care Guide should be kept with the water heater for reference.

OPERATION

Start-up and Operation

NOTICE: The default operating mode is Hybrid Mode. To select a different mode, see “Adjusting the Control Assembly’s Operational Modes” on page 21.

1 Turn the electric power on at the circuit breaker panel, or fuse box. Power to the water heater will allow the water heater to run a system diagnostic. This typically takes several minutes.

NOTICE: The water heater will conduct a system diagnostic (approximately seven (7) to ten (10) minutes) each time power is applied from an off state. Normal operation will begin after the system diagnostic has been completed. If the system diagnostic yields any codes, reference the diagnostic codes section in this manual.

2 The diagnostic sequence typically takes seven (7) to ten (10) minutes. During this period the Control Assembly will display a series of single, alternating dashes repetitively. Once the diagnostic sequence has finished, the fan will turn on.

NOTICE: The heat pump’s fan will not turn on if the incoming water temperature is less than 55°F/13°C and/or the ambient air temperature is above 120°F/49°C, or below 37°F/7°C. Should the internal diagnostics detect the heat pump is out of operational range, the Control Assembly will display the code **HPO**.

3 Set the desired operational mode. For typical installations, the factory default mode (Hybrid Mode) offers the best combination of efficiency and hot water delivery.

Operating Mode Descriptions

The operating modes can be changed by pressing the button for any desired mode (Figure 24 on page 21). The Operation Mode Indication Light will turn on when the relevant mode is selected.

This unit is equipped with technology that senses the hot water demand from the unit. While in Heat Pump or Hybrid Mode, during normal usage, the unit will operate the heat pump for maximum efficiency. In Hybrid Mode, during periods when the water usage is above normal, this unit has the ability to use one element (upper or lower) and the heat pump simultaneously to help improve recovery. This transition is seamless and will go unnoticed.

General Operation

IMPORTANT: On the initial start-up of the unit, the water heater will go through a seven (7) to ten (10) minute diagnostic period prior to heating the water.

NOTICE: If the water is warm/hot, the unit will not go through the diagnostic period.

The primary function of the Control Assembly is to heat the water in the tank until it reaches the temperature set point. The water heater has three means of heating the water: the elements, the heat pump, and a combination of the elements and heat pump.

The control logic of the Control Assembly is designed so that the heat pump will always have priority over the elements. The temperature regulation will not be performed

until after Dry-Fire detection testing indicates that there is sufficient water in the tank.

Vacation Mode

To save energy, select Vacation Mode to lower the temperature setting on the thermostat if you plan to be away for an extended time.

NOTICE: Vacation Mode has a fixed set point of 50°F/10°C.

When Vacation Mode is selected, the vacation timer will be displayed. The default vacation days are preset at 7 days. Press the Up and Down buttons to modify the timer to desired number of vacation days (setting range: 1 to 99 days or permanently ON). The vacation timer will blink on the display; press the Enter button to confirm the vacation timer. To deactivate Vacation Mode, press the Vacation Mode button to return to the previous operating mode or press the button for any other desired mode.

When the vacation days decrease to 9 hours remaining, the Control Assembly will automatically switch to the previously selected mode.

NOTICE: Normally, the display will only show the remaining vacation days.

▲ WARNING! Hydrogen gas builds up in a hot water system when it is not used for a long period (two weeks or more). Hydrogen gas is extremely flammable. If the hot water system has not been used for two weeks or more, open a hot water faucet for several minutes at the kitchen sink before using any electrical appliances connected to the hot water system. Do not smoke or have an open flame or other ignition source near the faucet while it is open.

OPERATION

Heat Pump Mode

Provides the highest efficiency and lowest cost operation by using only the heat pump for heating. Recovery time and efficiency will vary with ambient temperature and relative humidity. Efficiency will be greatest, and recovery quickest, when both are high. At lower temperatures and relative humidity levels, efficiency will be lower and recovery will take longer. Heat pump operation is allowed between 37°F/3°C to 120°F/48.9°C ambient temperature. At ambient temperatures lower than 37°F/3°C and greater than 120°F/48.9°C, the heat pump will not operate. Similarly, if the water temperature in the tank is less than 55°F/13°C, the heat pump will not operate. The Control Assembly will display the code **HPO**, and the unit will operate in Electric Mode until ambient air and water temperatures return to the safe operating range of the heat pump.

Hybrid Mode

This is the default, recommended setting combining high energy efficiency with reduced recovery time. This mode uses the heat pump as the primary heating source. One of the heating elements (upper or lower) will provide supplementary heating if demand exceeds a predetermined level so that the set point temperature can be recovered more quickly.

Electric Mode

The water heater functions as a conventional electric unit, relying on only the elements for heat. This mode may be useful in periods of increased hot water demands. When Electric Mode is selected, the duration timer will be displayed. The default Electric Mode days are preset at 3 days. Press the Up and Down buttons to modify the timer to the desired number of Electric Mode days (setting range: 1 to 7 days). The timer will blink on the display; press the Mode/Enter button to confirm the Electric Mode timer.

NOTICE: Do not shut off power to the unit for extended periods of time. If power must be turned off for an extended period of time, turn OFF the power to the water heater at the circuit breaker/fuse box, and then drain the tank completely.

Other Controls

HEAT PUMP DEFROSTING INDICATION:

There will be frost accumulating on the evaporator when the heat pump is operated under low ambient temperatures. The controller will order the unit to enter defrosting cycle to optimize the heat pump operation performance. During the defrosting period, the Control Assembly will display **ICE** as an indication.

OUT OF HEAT PUMP OPERATION RANGE:

The Control Assembly will display **HPO** as an indication that the ambient and/or water temperature condition is out of the heat pump operation range.

NOTICE: The display will go into "Sleep Mode" for energy saving if there is no operation on any button for 15 minutes. All of the display LEDs will be turned off except for the "Operational Mode Indication Light," which will remain illuminated while the unit is powered on. The unit can be awakened by pressing any button.

Your Heat Pump Water Heater is equipped with an EcoPort CTA-2045 communication port. Contact your local electric utilities company for participation and plug in module availability and to learn more about potential energy savings opportunities.

OPERATION

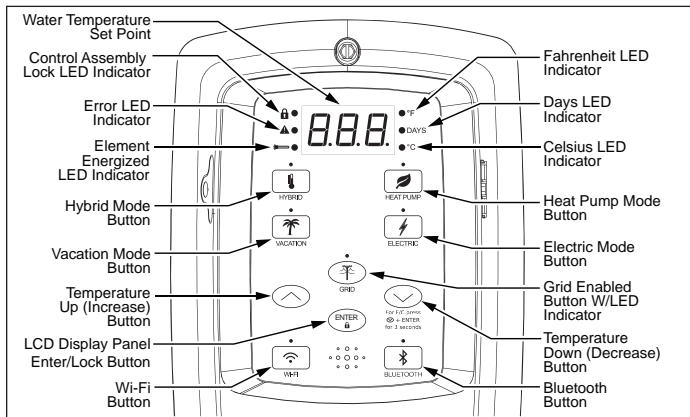


Figure 24 - Control Assembly

ADJUSTING THE CONTROL ASSEMBLY'S OPERATIONAL MODES

If locked, the operating modes can be changed by holding the button for approximately 3 seconds, then touching the desired mode icon on the Control Assembly (Figure 24).

WATER TEMPERATURE ADJUSTMENT

IMPORTANT: On the initial start-up of the unit, the water heater will go through a seven (7) to ten (10) minute diagnostic period prior to heating the water. Before attempting to adjust the thermostat, read the “Important Safety Information” section on page 4. If the instructions are not clear, contact a qualified service technician.

The water temperature can be adjusted from 95°F/35°C to 150°F/65°C by pressing followed by the button to set the desired temperature. The Control Assembly is unlocked by default. To lock the display after setting the parameters, hold the button for 3 seconds.

°F/°C SWITCH: Press and hold the “Temperature Down” button, in combination with the “Enter” button, for 3 seconds to switch temperature unit between Fahrenheit and Celsius.

	HYBRID MODE - System default mode. Pressing this button will allow high efficiency heat pump operation with supplementary heating from a backup heating element during periods of high demand.
	HEAT PUMP MODE - Provides the highest efficiency and lowest cost operation by using only the heat pump for heating while in safe operating range of the heat pump.
	VACATION MODE - The Control Assembly adjusts the temperature set point to approximately 50°F/10°C. This mode is recommended when the water heater is not in use for a long period of time. This mode minimizes energy consumption and prevents the water heater from freezing during cold weather.
	ELECTRIC MODE - The water heater functions as a conventional electric unit, relying on only the elements for heat. This mode may be useful in periods of increased hot water demand.
	SMART GRID CONTROL - Pressing this button will enable or disable a request for grid control (see page 24).
	CONTROL ASSEMBLY LOCK - Holding this button for more than 3 seconds switches the lock mode on or off.
	Wi-Fi - Press this button once to activate the Wi-Fi signal.
	BLUETOOTH - Press this button once to activate the Bluetooth signal.
	°F/°C - Press and hold the “Temperature Down” button, in combination with the “Enter” button, for 3 seconds to switch temperature unit between Fahrenheit and Celsius.
	HEATING CYCLE ICON - Indicates the water heater is in a heating cycle and the elements are energized.
	DAYS - Indicates the number of days (1 to 99+) the unit will be set in vacation mode.
	CAUTION INDICATOR - Indicates when there is a Warning/Fault.
	FAULT CONDITION - Will display a three digit fault code with Alert Icon Flashing (see Diagnostic code chart on page 25).
	LOCK - Indicates the control assembly is locked.

OPERATION

OPERATION

Wi-Fi (Control Assembly)

This water heater comes equipped with the iCOMM™ remote monitoring system. It allows users to monitor critical operations and diagnose issues remotely using the manufacturer's water heater app (available for iOS and Android).

The iCOMM system can automatically notify selected personnel via email and/or cellular phone text messages if operational problems occur.

It is recommended the water heater be installed on the homeowner's device prior to setting up the Wi-Fi function on this water heater.

IMPORTANT: By enabling and connecting your water heater to Wi-Fi, you are granting permission to the manufacturer to push "over-the-air" (OTA) updates to the water heater and to collect telemetry data regarding the water heater. The OTA updates may be pushed periodically to address bugs and provide security patches. Refer to the Terms and Conditions at www.aosmith.com/Utility-Pages/Terms-and-Conditions/ for more details. Also, refer to www.aosmith.com/Privacy-Policy/ for more information about how we collect and use data.

Wi-Fi Set Up:

The Wi-Fi signal is set to OFF by default and will not produce a signal until activated.

NOTICE: Have the router SSID and password ready.

- Download the iCOMM Utilities app for your smart phone.



- Launch the iCOMM Utilities app on your smart phone, then follow the

simple steps. The iCOMM Utilities app makes it easy to set up, program and control your water heater.

- Create an account or log in to your existing account and tap the "add a water heater" button.
- When the app prompts you to activate the Wi-Fi signal, proceed with the following steps:

- 1 To activate the Wi-Fi signal, press the Wi-Fi button once. The LED will blink on and off in 1/2 second intervals. Wi-Fi will activate pairing mode (Figure 25).

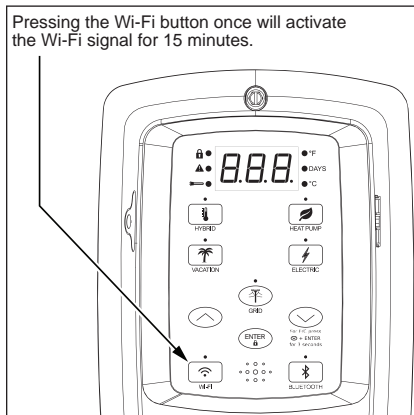


Figure 25 - Wi-Fi Control

- 2 The app will display a temporary Wi-Fi network to connect to your device.

Select the network that matches the water heater DSN value, and your device will connect to the Wi-Fi radio on the Control Assembly:

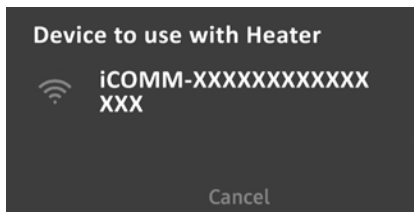


Figure 26 - Select Temporary Network

- 3 The app will begin the communication process of linking your water heater to your Wi-Fi router.

- 4 Select your preferred Wi-Fi network from the list on the app. The LED will pulse from dim to bright when attempting to connect to local network.

Choose Your Wi-Fi Network

Select your Wi-Fi network from the list below. If you don't see it, refresh the list.

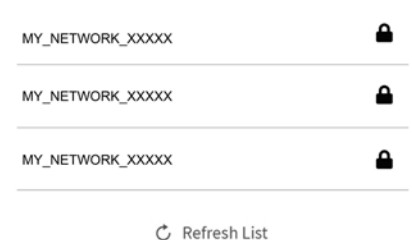


Figure 27 - Select Your Wi-Fi Network

NOTICE: If the app does not prompt you with a list of available Wi-Fi networks, access Wi-Fi settings on your device and select your preferred network.

- 5 The app will attempt to connect with your Wi-Fi network. We recommend connecting to a Wi-Fi network that has been secured with a password. The LED will hold solid when connected.
- 6 The app will display the water heater temperature set point.
- 7 Configure the water heater Set Point, Mode, and Time of Use Rate Plan if applicable.

NOTICE: If the Wi-Fi signal is to be terminated, press and hold the Wi-Fi button for 3 seconds. The Control Assembly will beep once. This will turn the Wi-Fi signal off. The Control Assembly resets and the LED display will turn off. Press and hold the Wi-Fi button for 9 seconds to remove the original connected network from the Control Assembly memory.

OPERATION

Bluetooth (Control Assembly)

This water heater comes equipped with the iCOMM™ remote monitoring system. It allows users to monitor critical operations and diagnose issues remotely using the manufacturer's water heater app (available for IOS and Android).

The iCOMM system can automatically notify selected personnel via email and/or cellular phone text messages if operational problems occur.

It is recommended the water heater be installed on the homeowner's device prior to setting up the Bluetooth function on this water heater.

IMPORTANT: By enabling and connecting your water heater to Bluetooth, you are granting permission to the manufacturer to push "over-the-air" (OTA) updates to the water heater and to collect telemetry data regarding the water heater. The OTA updates may be pushed periodically to address bugs and provide security patches. Refer to the Terms and Conditions at www.aosmith.com/Utility-Pages/Terms-and-Conditions/ for more details. Also, refer to www.aosmith.com/Privacy-Policy/ for more information about how we collect and use data

Bluetooth Set Up:

The Bluetooth signal is set to OFF by default and will not produce a signal until activated.

NOTICE: Have the device SSID and password ready.

- Download the iCOMM Utilities app for your smartphone.



- Launch the iCOMM Utilities app on your smartphone, then follow the simple steps. The iCOMM Utilities app makes it easy to set up, program and control your water heater.
- Create an account or log in to your existing account and tap the "add a water heater" button.
- When the prompt prompts you to activate the Bluetooth signal, proceed with the following steps:

- 1 To activate the Bluetooth signal, press the Bluetooth button once. The LED will blink on and off in 1/2 second intervals. Bluetooth will activate pairing mode (Figure 28).

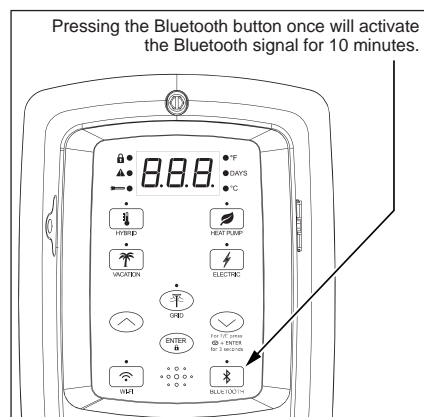


Figure 28 - Bluetooth Control

NOTICE: Once activated, the Bluetooth signal will automatically terminate after 10 minutes if no attempt to pair your device is made.

- 2 Select the option in the app to begin linking your device with the Bluetooth radio on the Control Assembly.
 - 3 The app will begin the communication process of linking your water heater to your Bluetooth device.
 - 4 The app will attempt to connect with your Bluetooth device. We recommend connecting to a Bluetooth device that has been secured with a password. The LED will hold solid when connected.
- NOTICE:** Once connected, the Bluetooth signal will automatically terminate after 30 minutes of inactivity.
- 5 The prompt will display the water heater temperature set point.
 - 6 Configure the water heater Set Point, Mode, and Time of Use Rate Plan if applicable.

NOTICE: If the Bluetooth signal is to be terminated, press and hold the Bluetooth button for 3 seconds. The Control Assembly will beep once. This will turn the Bluetooth signal off. The Control Assembly resets and the LED display will turn off. The original connected device has been removed from the memory of the water heater Control Assembly.

OPERATION

Smart Grid Technology

The electric Smart Grid will enable significant improvements in electric power reliability and quality through reduction of peak power demand, while providing consumers the knowledge and ability to manage their energy consumption and utility costs. According to the Department of Energy (DOE), since 1982 the growth in peak electricity demand has exceeded power transmission growth. This has caused more frequent blackouts and service interruptions, as well as an increase in the costly reserve capacity the power grid requires to meet higher peak demands. The increased demand for electrical power across the nation has also led to higher peak utility costs.

Smart appliances are one way to help mitigate this problem. By using advanced digital communication technologies, smart appliances will be able to communicate with local power companies or home energy systems, and react accordingly to save energy and money. For example, during peak demand periods, the water heater may pause or delay its power consumption and thus reduce the load on the smart utility grid. Additionally, smart appliances will be able to communicate with consumers to let them know how much energy they are consuming. This will eventually allow consumers to control their appliances, manage energy usage, and ultimately save money.

EcoPort CTA-2045, Smart Grid Control (Where Available)

Where available, grid communication adaptors called Universal Communication Modules (UCM) may be supplied by the local power company or purchased from leading retailers. A UCM is a direct digital thermostat that provides integrated control of the unit's thermostat. Please contact your local power company for more information.

▲ WARNING! Electrical Shock Hazard. Disconnect power before servicing. Replace all parts and panels before operating. Failure to do so can result in death or electrical shock.

To activate Smart Grid Control, turn off electric power to the water heater at the circuit breaker or fuse box. Using a non-contact circuit tester, check the power wires to make certain the power is OFF. Remove the cover over the grid connection pins and plug in the UCM grid communication adaptor and return power to the water heater at the circuit breaker or fuse box (Figure 29).

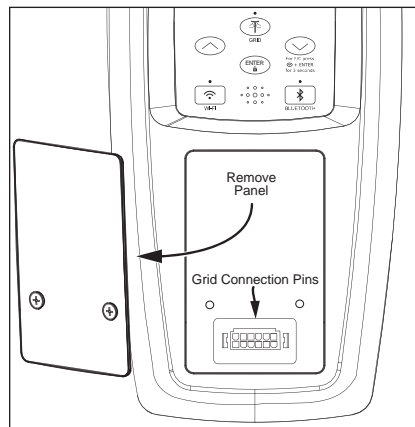


Figure 29 - Accessing EcoPort CTA-2045 communication port.

NOTICE: Use only approved grid communication adaptors. This will enable the power company to communicate the peak demand periods for the water heater's power usage.

After this connection is made, the grid control is automatically enabled. Press the "Enter" button to confirm UCM is present. This action will be followed by a solid LED from the grid indicator (Figure 30).

Enabling this feature will allow acceptance of the power company communication grid management requests.

NOTICE: The LED will blink when the power company has control of the unit.

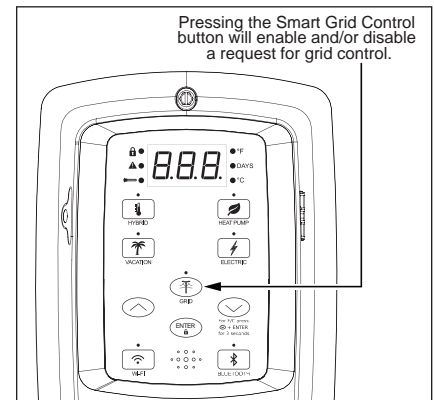


Figure 30 - Smart Grid Control Button

To disable (override) grid control, press the "Smart Grid Control" button (Figure 30). This action will be followed by a 72 hour timer. Remove CTA 2045 UCM. Press the "Enter" button to confirm the disconnection. The LED will turn off.

NOTICE: If the CTA 2045 UCM is not removed followed by pressing the "Enter" button, the grid will be enabled automatically once the 72 hour timer has expired.

TROUBLESHOOTING

CONTROL ASSEMBLY DIAGNOSTIC CODE CHART

IMPORTANT: Before attempting to adjust the thermostat, read the “Important Safety Information” section on page 4. If the instructions are not clear, contact a qualified person.

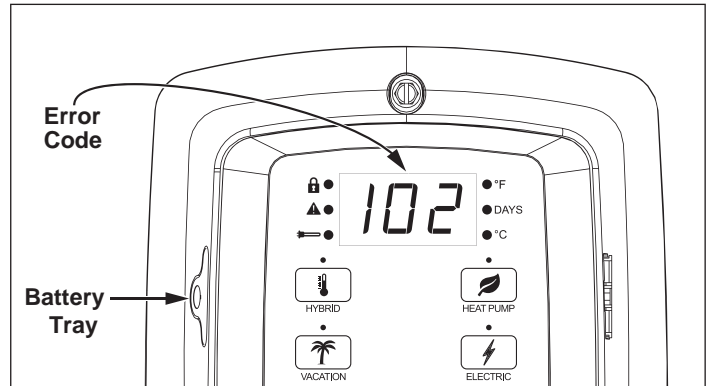


Figure 31 - Control Assembly Diagnostic Coding.

ERROR CODE	INDICATES	CORRECTIVE ACTION*
No Error Code Displayed Not Enough Hot Water	High usage, plumbing leak, operating mode adjustment	<ol style="list-style-type: none"> 1. Check for plumbing leak. 2. Adjust temperature; see related warnings on heater and in manual. 3. Contact a qualified person to perform a volume test.
No Error Code Displayed Water Too Hot	Water temperature set too high or grounded element	<ol style="list-style-type: none"> 1. Reduce temperature setting; or 2. Turn off electrical power at the breaker. 3. Check element circuits for resistance of 5-25 ohms (replace if required, see page 34). 4. Turn on electrical power at breaker. 5. If the error persists, contact a qualified person.
No Error Code Displayed No Hot Water	No power, control panel or thermostat operation	<ol style="list-style-type: none"> 1. Turn off electrical power at breaker. 2. Unplug and reconnect 24 pin connector. 3. Turn on electrical power at breaker. 4. Contact a qualified person to verify operation to unit. <p>NOTICE: If the control panel was not connected via Wi-Fi or Bluetooth, the time will need to be set.</p>
001 with an alert icon flashing. (also flashing red LED and beeper.)	Dry fire, electrical power on with the tank not completely full of water	<ol style="list-style-type: none"> 1. Turn off electrical power at breaker. Add water, open a hot water faucet to bleed all air until water flows without air burrs. 2. Turn on electrical power at breaker. 3. See “Important Safety Information” on page 4.
003 with an alert icon flashing. (also flashing red LED.)	Upper thermostat sensor failure NOTICE: Upper thermostat sensor is mounted to tank and located above upper element	<ol style="list-style-type: none"> 1. Turn off electrical power at the breaker. 2. Check electrical connections at Control Assembly board. 3. If there are no issues with the wiring, replace the thermostat. 4. Turn on electrical power at breaker. <p>NOTICE: The Control Assembly will go into Limp Mode until the failure is corrected. See page 28.</p>
004 with an alert icon flashing. (also flashing red LED.)	Lower thermostat sensor failure NOTICE: Lower thermostat sensor is mounted to tank and located above lower element	<ol style="list-style-type: none"> 1. Turn off electrical power at the breaker. 2. Check electrical connections at Control Assembly board. 3. If there are no issues with the wiring, replace the thermostat. 4. Turn on electrical power at breaker. <p>NOTICE: The Control Assembly will go into Limp Mode until the failure is corrected. See page 28.</p>
006 with an alert icon flashing. (also flashing red LED and beeper.)	Internal Processor Error - Frequency Fault - Standard AD Reference Fault - Non-Volatile Memory Fault - Critical Fault	<ol style="list-style-type: none"> 1. Turn off electrical power at the breaker. Now turn on electrical power to see if error clears. If error has not cleared, replace the control assembly. 2. Turn on electrical power at breaker.
009 with an alert icon flashing. (with flashing red LED.)	Power supply voltage is too low or too high	Check for loose electrical connections; refer to “Power Checking the Unit” on page 31.

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ERROR CODE	INDICATES	CORRECTIVE ACTION*
021 with an alert Icon flashing. (also flashing red LED.)	Upper element circuit failure NOTICE: Lower element is still operable	<ol style="list-style-type: none"> 1. Turn off electrical power at the breaker. 2. Check element circuits for resistance of 5-25 ohms (replace if required, see page 34). 3. Check wires at elements, thermostats and Control Assembly board for damage. 4. Turn on electrical power at breaker. 5. If the error persists, contact a qualified person. NOTICE: The Control Assembly will go into Limp Mode until the failure is corrected. See page 28.
022 with an alert Icon flashing. (also flashing red LED.)	Lower element circuit failure NOTICE: Upper element is still operable	<ol style="list-style-type: none"> 1. Turn off electrical power at the breaker. 2. Check element circuits for resistance of 5-25 ohms (replace if required, see page 34). 3. Check wires at elements, thermostats and Control Assembly board for damage. 4. Turn on electrical power at breaker. 5. If the error persists, contact a qualified person. NOTICE: The Control Assembly will go into Limp Mode until the failure is corrected. See page 28.
025 with an alert Icon flashing. (with flashing red LED.)	Heat Pump Coil Temperature Sensor is not functioning	<ol style="list-style-type: none"> 1. Power off ("Power Cycling the Unit," page 31). 2. Disconnect and reconnect the J9 connector from control board. 3. Inspect wire for damage. 4. Reinstall Control Assembly. 5. Reconnect power. 6. If error persists, replace temperature sensor.
026 with an alert Icon flashing. (with flashing red LED.)	Heat Pump Subcooling Temperature Sensor is not functioning	<ol style="list-style-type: none"> 1. Power off ("Power Cycling the Unit," page 31). 2. Disconnect and reconnect the J9 connector from control board. 3. Inspect wire for damage. 4. Reinstall Control Assembly. 5. Reconnect power. 6. If error persists, replace temperature sensor.
027 with an alert Icon flashing. (with flashing red LED.)	Heat Pump Discharge Temperature Sensor is not functioning	<ol style="list-style-type: none"> 1. Power off ("Power Cycling the Unit," page 31). 2. Disconnect and reconnect the J9 connector from control board. 3. Inspect wire for damage. 4. Reinstall Control Assembly. 5. Reconnect power. 6. If error persists, replace temperature sensor.
028 with an alert Icon flashing. (also flashing red LED and beeper.)	Ambient Temperature Sensor failure (Heat Pump Compressor is outside of operational temperature range)	<ol style="list-style-type: none"> 1. Turn off electrical power at the breaker. 2. Turn on electrical power at breaker to see if code clears. If error persists, call our Technical Assistance Hotline which is listed on the water heater's warranty sheet for further assistance.
031 with an alert Icon flashing. (also flashing red LED and beeper.)	Water Leak	<ol style="list-style-type: none"> 1. Turn off electrical power at the breaker, bleed all electrical connections and wiring for damage. 2. Check for plumbing leaks and correct accordingly. 3. If tank is leaking, replace the unit. 4. Turn on electrical power at breaker.
044 with an alert Icon flashing. (with flashing red LED.)	SAC anode depleted	<ol style="list-style-type: none"> 1. Turn off electrical power. Shut off the cold water valve at the main line and open a hot water faucet to release pressure from the water heater. 2. Remove anode rod (see page 33). 3. Inspect anode rod and replace if necessary.
046 with an alert Icon flashing. (also flashing red LED and beeper.)	Shut-off Valve (if applicable)	<ol style="list-style-type: none"> 1. Turn off electrical power. Shut off the cold water valve at the main line and open a hot water faucet to release pressure from the water heater. 2. Check the shut-off valve, making sure the valve is not stuck in the open or closed position (see instructions provided with shut-off valve). 3. Replace the shut-off valve, if needed. 4. Turn on electrical power at breaker. 5. Open the cold water valve to fill the heater with water, open a hot water faucet to bleed all air until water flows without airbursts.

TROUBLESHOOTING

ERROR CODE	INDICATES	CORRECTIVE ACTION*
048 with an alert icon flashing. (with flashing red LED.)	Battery Low Energy	<ol style="list-style-type: none"> Make sure the battery protection tab has been properly removed from the battery tray, located on the left side of the Control Assembly. Loosen the battery tray on the side of the control assembly. Remove the Phillips head screw, slide the battery tray out from the Control Assembly. Remove the old BR2032 battery and replace with a new Panasonic® BR2032 or Murata CR3032 battery. Reinsert all the battery tray with new battery and hand tighten the Phillips head screw to secure the battery tray in the Control Assembly. <p>NOTICE: If the control assembly was not connected via Wi-Fi, Bluetooth, or powered by a power source, the time will need to be set.</p>
080 with an alert icon flashing. (with flashing red LED.)	Air filter is dirty	<ol style="list-style-type: none"> Take the tab on the air filter and remove (slide) it from the air intake duct adaptor located on the top of the unit. If you are replacing the filter, be sure to step three. To clean the filter, use a vacuum with a hose attachment to remove any dust or debris. Place the new or cleaned filter into the water heater.
081 with an alert icon flashing. (with flashing red LED and beeper.)	Condensate management	<ol style="list-style-type: none"> Ensure unit is installed level. Check for blocked condensate drain line, clear drain line as necessary. If an auxiliary condensate pump was installed: Turn off power to the water heater at the breaker and block control wire connections to condensate pump. See "Connecting the Condensate Pump Optional Overflow Shut-Off Switch" on page 11. Reconnect power. Check to see if the auxiliary condensate pump is plugged in and has power. Ensure the pump is operating properly, block pump outlet tube for blockage. Repair or replace auxiliary condensate pump as necessary. If problem persists call our Technical Assistance Hotline which is listed on the water heater's warranty sheet.
083 with an alert icon flashing. (with flashing red LED and beeper**.)	Heat Pump Compressor start pressure is too low	Call our Technical Assistance Hotline which is listed on the water heater's warranty sheet for further assistance.
084 with an alert icon flashing. (with flashing red LED and beeper**.)	Heat Pump Compressor not functioning	Call our Technical Assistance Hotline which is listed on the water heater's warranty sheet for further assistance.
085 with an alert icon flashing. (with flashing red LED and beeper**.)	Heat Pump Compressor discharge temperature is too high	Call our Technical Assistance Hotline which is listed on the water heater's warranty sheet for further assistance.
086 with an alert icon flashing. (with flashing red LED and beeper***.)	Fan speed feedback	Call our Technical Assistance Hotline which is listed on the water heater's warranty sheet for further assistance.

*These instructions are brief and intended as guidance for a qualified person. If you lack the necessary skills to perform these procedures call the Technical Assistance Hotline which is listed on the water heater's warranty sheet for assistance.

**Audible alarm will beep if error code is triggered three (3) times in one (1) hour.

***Audible alarm will beep if error code is triggered three (3) times in seventy-two (72) hours.

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▲ WARNING! Working near an energized circuit can result in severe injury or death from electrical shock.

▲ WARNING! When you are finished, be sure all covers are secured to reduce the risk of fire and electric shock.

Troubleshooting & Maintenance

If you are not qualified or are not comfortable performing any of the troubleshooting, repair or maintenance procedures that follow, call our Technical Assistance Hotline for further assistance.

Limp Mode

The heater will continue operating with one failed heating method by switching into Limp Mode:

- If the Control Assembly determines that the lower thermistor or lower element has failed, the lower element call for heat will be canceled. The upper element call for heat will still allow the upper element to heat the water as needed.
- If the Control Assembly determines that the upper thermistor or upper element has failed, the lower element will be allowed to heat the water as needed.

NOTICE: The Control Assembly will operate in Limp Mode until the failure is corrected.

No Hot Water

The most likely reasons for an electric water heater to produce NO hot water are:

- No power to the water heater (no lights on the unit are activated).
- Unit in Vacation Mode.
- ECO tripped.
- Hot water usage pattern exceeds the capability of the water heater in current mode.
- Non-functioning upper temperature sensor.
- Faulty thermostatic mixing valve.
- Leak in plumbing system.

Follow these steps to diagnose and correct common electrical problems:

1 Check the Electrical Power to the Water Heater.

No hot water is often caused by a problem with the home's electrical wiring or circuit breakers. You will need a non-contact circuit tester. Follow these guidelines:

- Locate the water heater's circuit breaker and turn it off (or remove the circuit's disconnects).
- Locate the electrical junction box on the side of the water heater and remove the cover.
- Identify the two power wires. The power wires are usually black/blue or black/red. The green or copper wire is the ground wire.



Figure 32 - Use a non-contact circuit tester to check for electrical power.

- Turn the circuit breaker back on (or install the disconnects) and check

the power on both incoming power wires using a non-contact circuit tester.

- Turn the power off and replace the cover on the electrical junction box.

If the water heater is not getting power, contact a qualified person to have your home's wiring or circuit breakers checked.

2 Check the Upper Heating Element.

If the water heater is getting electrical power, check to see if the upper heating element is burned out. If the upper element is burned out, you will have no hot water. To check the upper element, you will need a multimeter capable of reading resistance.

- Turn the power OFF at the circuit breaker or remove disconnects.
- Remove the upper access panel.
- Move the insulation to access the ECO and heating element.

3 Check the Top Two Screws of the ECO Using a Non-Contact Circuit Tester and Confirm that Power is OFF (screw terminals 1 and 3 in photo on next page).

With the electrical power OFF, remove the two power wires from the upper heating element.

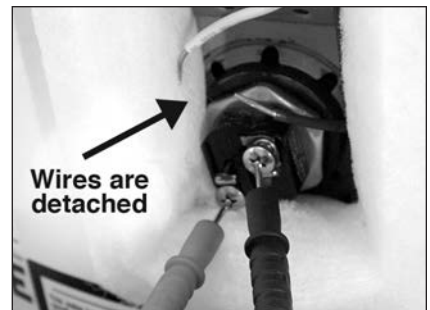


Figure 33 - Use a multimeter to check the resistance of the upper heating element.

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4

Check the Resistance of the Upper Heating Element Using a Multimeter.

Measure the resistance between the two screw terminals on the upper heating element. A good element will have a resistance ranging between 5 and 25 Ohms. If the resistance is:

Outside this Range. Replace the element (see “Replacing the Heating Element” on page 34). If the lower element is a concern, repeat the element check procedure for the lower element. The upper and lower elements should have the same resistance range.

Within this Range. Reattach the power wires, making sure the wires are in good condition and the connections are clean and tight.

Check/Reset Energy Cut Off (ECO) Button.

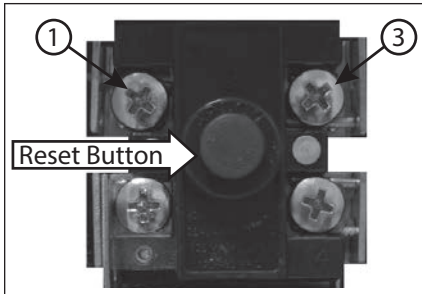


Figure 34 - Energy Cut Off (ECO) Button.

The Energy Cut Off (ECO) shuts off power to the water heater’s elements if the temperature of the water in the tank gets too hot. If the ECO has tripped, you will have no hot water. A tripped ECO can usually be reset, but you should have a qualified person investigate the cause of the overheating and repair the problem. Do not turn the power back on until the cause of the overheating has been identified and repaired.

To Check the Energy Cut Off (ECO):

- Turn off the power to the water heater.

▲ WARNING! Working near an energized circuit can result in severe injury or death from electrical shock. Check power wires in the electrical junction box with a non-contact circuit tester to make sure power is off.

- Press the red ECO reset button (Figure 34).
- The ECO was tripped if you hear a click when it is reset. In most cases, a tripped ECO indicates that the tank overheated due to a problem with one of the elements. Have a qualified person check the upper and lower elements and replace if necessary.
- The ECO was not tripped if you did not hear a click. In that case it should be checked by a qualified person.
- Replace the insulation and the upper access panel.
- Turn the power back on to the water heater.

▲ WARNING! Be sure all covers are secured to reduce the risk of fire and electric shock.

Drips from T&P Relief Valve Discharge Pipe

A small amount of water dripping from the Temperature and Pressure (T&P) Relief Valve usually means the home’s water pressure is too high or you need a properly sized and pressurized Thermal Expansion Tank (see “Step 1” on page 7 for more information). A large amount of hot water coming from the T&P discharge pipe may be due to the tank overheating.

▲ WARNING! Do not cap or plug the T&P Relief Valve or discharge pipe, and do not operate the water heater without a functioning T&P Relief Valve - this could cause an explosion.

Water Pressure too High. High water pressure can cause the T&P Relief Valve to drip. Install a Pressure Reducing Valve (PRV) on the main cold water supply line. Adjust the PRV to between 50-60 psi/345-414 kpa

Thermal Expansion Tank. Install a Thermal Expansion Tank. If a Thermal Expansion Tank is already installed and the T&P Relief Valve discharge pipe drips, the Thermal Expansion Tank may be pressurized to the wrong pressure or the internal bladder may be defective. Refer to the instructions that come with the Thermal Expansion Tank for more information.

Debris. In rare cases, debris can stick inside the T&P Relief Valve preventing the valve from seating fully. In that case, the T&P Relief Valve discharge pipe will drip. You may be able to clear debris from the T&P Relief Valve by manually operating the valve, allowing small quantities of water to flush out the debris. See the label on the T&P Relief Valve for instructions.

▲ WARNING! When manually operating the T&P Relief Valve, make sure that no one is in front of or around the discharge outlet. The water may be extremely hot and could cause severe burns. Also, ensure that the water discharge will not cause property damage.

If the water pressure is between 50-60 psi/345-414 kpa a Thermal Expansion Tank is installed and properly pressurized, the valve has been cleared of any debris, and it still drips, the valve may be broken – have a qualified person replace the T&P Relief Valve.

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Water Odor

Harmless bacteria normally present in tap water can multiply in water heaters and give off a “rotten egg” smell. A higher tank temperature setting of 140°F/60°C kills the bacteria that causes “smelly water” and can reduce the levels of bacteria that cause water-borne disease. A properly adjusted Thermostatic Mixing Valve should be installed at each point of use.

NOTICE: To protect the tank, an anode rod must be installed in the water heater at all times or the warranty is void.

▲ WARNING! Because higher temperatures increase the risk of scalding, if the temperature set point is higher than 120°F/49°C, Thermostatic Mixing Valves are particularly important (see page 4 and Figure 8).

Water Heater Sounds

During the normal operation of the water heater, sounds or noises may be heard. These noises are common and may result from the following:

- Normal expansion and contraction of metal parts during periods of heat-up and cool-down.
- Sediment buildup on or around the elements could create varying amounts of noise and may cause premature tank failure. Drain and flush the tank as directed (see “Draining and Flushing the Water Heater” on page 32).
- The heat pump compressor or fan running.

Temperature Too High

If the water temperature is too hot:

- Adjust the Control Assembly on the water heater (see “Adjusting the Control Assembly’s Operational Modes” on page 21).
- Install or adjust a Thermostatic Mixing Valve (see manufacturer’s instructions).

A non-functioning thermostat or a shorted heating element can cause extremely hot water. If the Temperature and Pressure (T&P) Relief Valve releases large amounts of very hot water, it is likely due to a shortened heating element, or more rarely a non-functioning thermostat, or the thermostat does not fit snugly against the tank. Very high water temperatures can also cause the Energy Cut Off (ECO) to trip (see “Replacing the ECO” on page 35). Turn power off until this problem is repaired.

Low Water Pressure

Check both the cold and hot water at a sink to determine if the lower pressure is only on the hot water side. If both hot and cold faucets have low pressure, call your local water utility. If the low pressure is only on the hot water side, the primary causes of this are:

- Melted PEX liner. Soldering copper pipes while they are connected to the water heater can melt the PEX liner inside of the hot and cold water connections. Melting the PEX liner can restrict the flow of hot and cold water. If that is the case, replace the nipples at the hot and cold water connections.
- Partially closed supply valve. Open the water heater’s supply valve fully.

Insufficient or No Hot Water, or Slow Hot Water Recovery

▲ WARNING! Because higher temperatures increase the risk of scalding, if the temperature set point is higher than 120°F/49°C, Thermostatic Mixing Valves are particularly important (see page 4 and Figure 8).

If the hot water is simply not warm enough, there are several possible causes:

- Thermostatic Mixing Valve faulty or set too low.
- Temperature set point too low.
- Hot water usage pattern exceeds the capability of the water heater in current mode (see “Operating Mode Descriptions” on page 19).
- Water connections to unit are reversed (disconnect and re-install correctly).
- Leak in plumbing system (check home for any leaks and repair).
- Lower heating element not functioning properly.
- No power to the water heater (no lights on the unit are on and display is blank).
- Unit is in Vacation Mode.
- ECO tripped.
- Non-functioning upper thermistor sensor (refer to code **003** in the “Diagnostic Codes” section on page 25).
- Air filter is dirty (see “Air Filter Maintenance” on page 36).

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- Out of position outlet j-tube. Assure orientation of line on tube is in top position (side connections only).

Thermostatic Mixing Valves. If the hot water is simply not warm enough, make sure the faucet you are checking does not have a defective Thermostatic Mixing Valve. If these devices fail, they can reduce the amount of hot water the shower or faucet delivers even though there is plenty of hot water in the tank. Always check the water temperature at several faucets to make sure the problem is not in a faucet or shower control.

Temperature Set Point Too Low. If the water temperature at several faucets is too cool, adjust the set point at the Control Assembly (see “Water Temperature Adjustment” on page 21).

Undersized Water Heater. If your water heater runs out of hot water too quickly, it may be too small for your needs. If the water heater is old, consider replacing it with a larger model. If the water heater is in good condition, you may be able to meet your family’s hot water needs with the existing water heater by installing a Thermostatic Mixing Valve and then setting the temperature to a higher set point on the Control Assembly (see “Water Temperature Adjustment” on page 21).

You can also reduce your home’s hot water needs by washing clothes in cold water, installing flow restrictors on shower heads, repairing leaky faucets, and taking other conservative steps.

Reversed Connections or Melted J-tube. Check the hot and cold connections and make sure your home’s hot water pipe is connected to the hot water outlet on the water heater. Usually, reversed connections

are found soon after the installation of a new unit. If copper pipes were soldered while they were attached to the water heater, the J-tube may have melted. The J-tube is a curved plastic tube inside the tank attached to the cold water inlet. If the J-tube has melted, it can be replaced by removing the old J-tube and installing a new one.

Plumbing Leak. Even a small leak in the hot water side of the home’s plumbing system can make it appear that the water heater is producing little or no hot water. Locate and repair the leak.

Lower Heating Element Not Working. If the lower heating element is not working, you will have some hot water but not as much as before. Because the lower element does most of the work, it usually wears out before the upper element. Replace the lower element if necessary (see “Replacing the Heating Element” on page 34).

Power Cycling the Unit

- 1 Find and turn off the water heater’s circuit breaker or remove disconnects.
- 2 Locate the electrical junction box on side of water heater, remove cover and identify the two (2) power wires.
- 3 Turn circuit breaker back on (or re-install the disconnects) and check for power on both incoming power wires using a multimeter.
- 4 Again, turn off the water heater’s circuit breaker, or remove the disconnects and replace the electrical junction box cover, before performing maintenance work.

NOTICE: When powered on, the unit will start to run a system diagnostic. The diagnostic sequence typically takes seven (7) to ten (10) minutes. During this period the Control Assembly will display a series of single, alternating dashes repetitively.

▲ WARNING! Working near an energized circuit can result in severe injury or death from electrical shock.

▲ WARNING! When you are finished, be sure all covers are secured to reduce the risk of fire and electric shock.

MAINTENANCE

Routine Maintenance

Routine maintenance will help your water heater last longer and work better. If you cannot perform these routine maintenance tasks yourself, contact a qualified person.

Water Heater Maintenance

After the first six months, drain and flush the water heater and inspect the anode rod. Depending on the hardness of your water, repeat this process at least annually, or more frequently if needed. From time to time you may need to replace a heating element or a thermostat. All three maintenance tasks are described below.

Draining and Flushing the Water Heater

Tap water contains minerals that can form lime deposits on heating elements or sediment in the bottom of the tank. The amount of lime deposits or sediment depends on the hardness of your tap water. The rate at which sediment builds up depends on water quantity and hardness in your area, the temperature settings, and other variables. We recommend draining and flushing the water heater after the first six months of operation to determine the amount of sediment buildup. Draining sediment extends the life of the tank, heating elements, and drain valves.

In areas with very hard water, remove and check the heating elements whenever you drain the tank. If you have heavy lime deposits on heating elements, you will need to replace them more often.

- Sediment may form large masses that can prevent the tank from draining. Have a qualified person use a deliming agent suitable for potable water to remove the sediment buildup.
- In most cases, it is easier and less expensive to replace lime-encrusted elements than trying to remove heavy lime deposits.

To Drain and Flush the Tank

- 1 Locate the water heater's circuit breaker and turn it OFF (or remove the circuit's fuses).



Figure 35 - Circuit Breaker.

- 2 Open a hot water faucet and let the hot water run until it is cool.



Figure 36 - Water Faucet.

▲ WARNING! Be sure the water runs cool before draining the tank to reduce the risk of scalding.

- 3 Connect a garden hose to the drain valve and place the other end of the hose in a drain, outside, or in buckets.
- 4 Turn the cold water supply valve OFF.

- 5 Open the drain valve on the water heater.



Figure 37 - Drain Valve.

- 6 Open a hot water faucet to help the water in the tank drain faster.

NOTICE: DO NOT turn electrical power back on unless the tank is completely full of water. This is an additional precaution to protect the elements against dry fire. Dry fire occurs when power is supplied to the electric elements without sufficient water in the heater. Dry firing the unit will result in immediate failure of the element. While this unit is equipped with dry fire protection, the recommended practice is to ensure the tank is filled with water prior to supplying power to the unit. For complete instructions on filling the tank, follow "Step 13" on page 16 in the installation section of this manual.

- 7 If sediment was present when the tank was drained, flush the tank by opening the cold water supply valve and letting the water run until no more sediment drains from the tank. Close the drain valve when you are done.

- 8 Refill the tank by opening the cold water supply valve. Make sure a hot water faucet is open and the drain valve is closed. Allow the hot water to run full for at least three minutes to make sure the tank has all the air removed and is completely full of water. Failure to perform this step can cause the upper heating element to burn out. Once

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you are certain the tank is completely full of water, close the hot water faucet.

9 Turn ON power to the water heater at the circuit breaker/fuse box. It may take two hours for the tank to heat up.

Replacing the Anode Rod

NOTICE: The Control Assembly will display error code **044** when the anode rod has been depleted.

1 To replace the anode rod if it is depleted: Turn the power off. Run hot water until it is cool. Turn cold water supply valve off. Open a hot water faucet to depressurize tank.

2 Remove ducting from unit. Disconnect cold water supply and hot water supply connections from top of unit if necessary to remove jacket cover.

To avoid damaging gaskets in flex lines, use a second wrench at the hot and cold nipples to counter torque when installing or removing water connections. **DO NOT** overtighten.

3 Remove the six (6) screws located around the perimeter of the jacket cover. Locate and remove the two (2) screws on top of the unit fastening the jacket cover to the heat pump evaporator. Lift the jacket cover up and away from the unit to gain access to the anode rod (see illustration on back cover for location of anode rod).

4 Once the anode rod is exposed, remove the top nut with a 10 mm hex socket wrench and remove the wire terminal (do not remove lower hex nut from

bolt). With the wire terminal removed, use a 1-1/16" socket wrench with an extension to remove the anode rod. Inspect the anode rod and replace if depleted. Apply thread sealant to pipe joint compound and reinstall the anode rod tightly. Connect the wire terminal and secure with hex nut.

5 Install jacket cover to water heater by following the instructions outlined in **Step 3** in reverse order.

6 Reconnect cold water supply and hot water supply connections at top of unit.

7 Refill the tank by opening the cold water supply valve. Make sure a hot water faucet is open and the drain valve is closed. Allow the hot water to run full for at least three (3) minutes to make sure the tank has been fully removed and is completely full of water. Failure to perform this step can cause the upper heating element to burn out. Once you are certain the tank is completely full of water, close the hot water faucet.

8 Remove the three (3) screws securing intake duct adaptor (closest to front side of water heater) to jacket cover. Lift intake duct adaptor up and away from jacket cover to visually inspect for leaks around the anode fitting and water connections. If there are no leaks, proceed to **Step 9**. If there is a leak, turn OFF water supply to the water heater, open a faucet to eliminate pressure, and tighten the anode rod further. Return to **Step 7**.

9 Install intake duct adaptor to jacket cover and secure with three (3) screws. Reconnect any ducting to the intake and exhaust ports.

10 Restore power to the water heater. It may take several hours for the tank to heat up depending on the tank size, temperature setting, and cold water supply temperature.

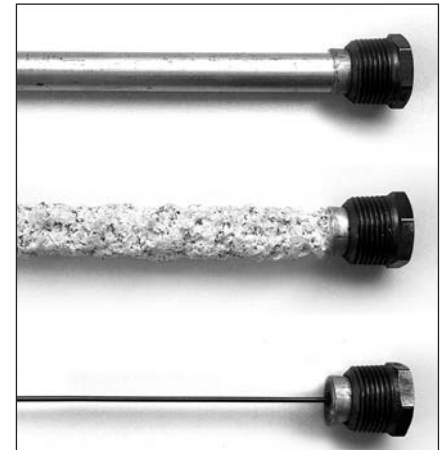


Figure 38 - Anode Rods from new (top) to partially depleted (middle) to fully depleted stages (bottom).

Anode Rod. The anode rod is a sacrificial metal rod that helps reduce corrosion and premature failure (leaks) in the tank. The anode rod is a consumable item. Inspect the anode rod after the first six months of operation when you drain and flush the tank. Replace the anode rod if it is substantially worn out or depleted. Thereafter, inspect the anode rod annually or more frequently if needed. If you use a water softener, your anode rod will deplete faster than normal. Inspect the anode rod more frequently, replacing the anode rod as needed. Obtain new anode rods from your local plumbing supplier or have a qualified person replace it (anode rods are a consumable item and are not covered under warranty).

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Replacing the Heating Element

▲ WARNING! Working near an energized circuit can result in severe injury or death from electrical shock. Turn power OFF. Check wires with a non-contact circuit tester to make sure power is OFF. When you are finished, be sure all covers are secured to reduce the risk of fire and electric shock.

If you are not comfortable replacing a heating element or thermostat yourself, have this work done by a qualified person. To replace the heating element, you will need the following tools and supplies:



Figure 39 - Non-Contact Circuit Tester.

- Always turn power OFF and check the power wires with a non-contact circuit tester before working on the water heater.



Figure 40 - Heating Element (with gasket).

- Check your water heater's data plate for the correct wattage and voltage. Heating elements are available at your local plumbing supplier.



Figure 41 - Element Wrench.

- Some regular sockets (1-1/2 inch) may work, but regular sockets

are often beveled and may slip. Inexpensive element wrenches are available at your local plumbing supplier.

- Garden hose to drain the tank.
- Hand dishwashing soap to lubricate the gasket.
- A clean cloth to clean the threaded opening.
- A flat blade and Phillips screwdriver.

Steps for Replacing the Heating Element:

NOTICE: A diagnostic code (see "Control Assembly Diagnostic Code Chart" on page 25) should indicate if the upper or lower element has failed.

- 1 Turn the power OFF at the circuit breaker or remove fuses.



Figure 42 - Circuit Breaker.

- 2 Open the electrical junction box on the side of the water heater. Using a non-contact circuit tester, check the power wires to make certain the power is OFF.



Figure 43 - Non-Contact Circuit Tester.

- 3 Open a hot water faucet and let the hot water run until it is cool.

▲ WARNING! Be sure the water runs cool before draining the tank to reduce the risk of scalding.

- 4 Connect a garden hose to the drain valve and place the other end of the hose in a drain or outside (or use buckets). Turn OFF the cold water valve that supplies the water heater. Open the drain valve on the water heater. Opening a hot water faucet will help the tank drain faster.

- 5 Remove the upper or lower access panel on the water heater, and then fold back the insulation and remove the plastic element/thermostat cover.



Figure 44 - Access Panel.

- 6 With the tank drained and the power OFF, remove the power wires from the element you intend to replace.
- 7 Remove the bad element using an element wrench.
- 8 Make sure the new element is the correct replacement by referring to the water heater's data plate for voltage and wattage information.
- 9 Clean the threads in the tank opening with a rag. Insert the new element equipped with a rubber gasket. Use a drop of hand dishwashing liquid to lubricate the gasket to help avoid damaging the gasket as it is being tightened. Tighten with an element wrench.

MAINTENANCE

NOTICE: DO NOT turn power back on until the tank is completely full of water. For complete instructions on filling the tank, follow “Step 13” on page 16 in the installation section of this manual.

10 Refill the tank by opening the cold water supply valve. Make sure a hot water faucet is open and the drain valve is closed. Allow hot water to run full for at least three minutes to make sure the tank has had the air removed and is completely full of water. Failure to perform this step causes the upper heating element to burn out. Once you are certain the tank is completely full of water, close the hot water faucet.



Figure 45 - Drain Valve.

11 Check the newly installed element for leaks. If a leak is present, tighten the element until the leak stops. If you cannot stop the leak, drain the tank and remove the element. Inspect the gasket for damage. If the gasket is damaged, replace the gasket and reinstall the element.

12 Once the element is successfully installed and there are no leaks, replace the power wires, thermostat cover, insulation, and access panel. Make sure all wire connections are tight. Replace the cover on the electrical junction box.

13 Turn ON power to the water heater at the circuit breaker/fuse box. It may take two hours for the tank to heat up.

Replacing the ECO

▲ WARNING! Working near an energized circuit can result in severe injury or death from electrical shock. Turn power OFF. Check wires with a non-contact circuit tester to make sure power is OFF. When you are finished, be sure all covers are secured to reduce the risk of fire and electric shock.

To replace the ECO, you will need the following tools and supplies:

- A non-contact circuit tester. Always turn power OFF and check with a non-contact circuit tester before working on the water heater.

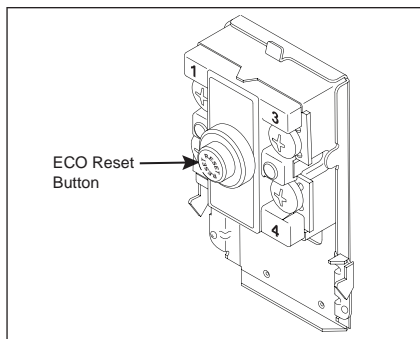


Figure 46 - ECO

- A replacement ECO (see the repair parts list on back cover).
- A business card to check the gap between the ECO and tank.
- Tape and a permanent marker to mark the wires.
- A flat blade and Phillips screwdriver

Steps for Replacing the ECO:

1 Turn the power OFF at the circuit breaker or remove fuses.

NOTICE: It is not necessary to drain the tank to replace an ECO.

2 Open the electrical junction box on the side of the water heater. Using a non-contact circuit tester, check the power wires to make certain the power is OFF.

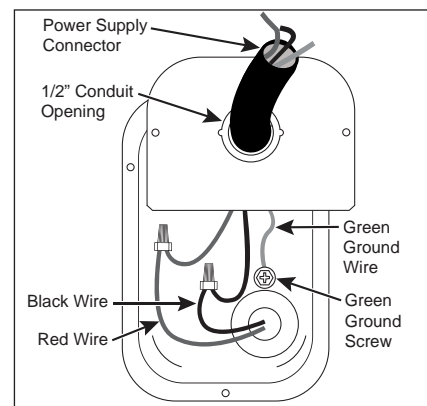


Figure 47 - Electrical Junction Box (bottom cover to electrical junction box removed for clarity).

3 Remove the upper access panel on the water heater and carefully fold back the insulation and plastic element/ECO cover (Figure 48).

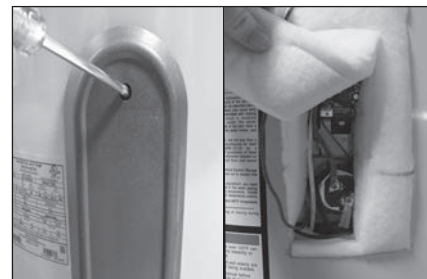


Figure 48 - Element Access Panel/ECO Component.

4 Make sure the replacement ECO matches the original ECO.

MAINTENANCE

- 5 Make the wires with tape so you will know how to put them back on.
- 6 Disconnect the wires from the back ECO and remove the ECO from the metal mounting clip.
- 7 Install the new ECO in the metal mounting clip.
- 8 Make sure the new ECO fits snugly against the tank. You should NOT be able to slip a business card between the ECO and the tank. If you can, bend the ECO mounting clip until the ECO fits tightly against the tank.
- 9 Attach the wires following the wiring diagram on the water heater's label. Make sure all wire connections are tight.
- 10 Replace the plastic element/ECO cover, insulation, and access panel.
- 11 Replace the cover on the electrical junction box.
- 12 Turn ON power to the water heater at the circuit breaker/fuse box.

T&P Relief Valve Maintenance

Read and follow the operating and annual maintenance instructions provided by the manufacturer of the T&P Relief Valve (yellow label attached to the T&P Relief Valve). If no label is attached to the T&P Relief Valve, follow the instructions in this section. Minerals in the water can form deposits that can cause the valve to stick or create blocked passages, making the T&P Relief Valve inoperative. Follow these guidelines:

- At least annually, operate the T&P Relief Valve manually to ensure the waterways are clear and the valve mechanism moves freely. Before operating the valve manually, check that it will discharge in a place for secure disposal. If the water does not flow freely from the end of the discharge pipe, turn OFF the power to the water heater. Call a qualified person to determine the cause.

▲ WARNING! Hot water will be released. Before operating the T&P Relief Valve manually, check that it will discharge in a safe place. If water does not flow freely from the end of the discharge pipe, turn the power to the water heater OFF. Call a qualified person to determine the cause.



Figure 49 - T&P Relief Valve.

- At least every five years, have a qualified person inspect the T&P Relief Valve and discharge pipe. Damage caused by corrosive water conditions, mineral deposits, or other problems can only be determined when a qualified person removes and inspects the valve and its components.
- Note that a dripping T&P Relief Valve is usually caused by the home's water pressure being too high or the lack of a Thermal Expansion Tank. If your T&P Relief Valve drips, see "Drips from T&P Relief Valve Discharge Pipe" on page 29.

Air Filter Maintenance

The heater will monitor the heat pump operation status and indicate whether the filter should be cleaned. If the Control Assembly displays the code **080**, this indicates the filter should be cleaned or replaced with the following process (see exploded view of the unit on page 39 for air filter location).

NOTICE: Before attempting to clean or replace the air filter, turn OFF the power to the water heater at the circuit breaker/fuse box.

- 1 Take the tab on the air filter and remove (slide) it from the top facing air intake duct port.
- 2 To clean the filter, use a vacuum with a hose attachment to remove any dust or debris.
- 3 Slide the new or cleaned filter into the air intake duct port.
- 4 Turn ON power to the water heater at the circuit breaker/fuse box.

NOTICE: The water heater may conduct a system diagnostic prior to operation.

MAINTENANCE

Condensate Drain Maintenance

NOTICE: Before attempting to clean the condensate drain pan or lines, turn OFF power to the water heater at the circuit breaker/fuse box.

- 1** Check the condensate drain pan and drain lines for any dirt or debris that might interfere with proper drainage.
- 2** Use a pipe cleaner to clear debris from condensate drain, condensate line, and condensate drain pan.
- 3** Once the condensate drain pan and lines have been inspected/cleaned, turn ON power to the water heater at the circuit breaker/fuse box.

NOTICE: The water heater will conduct a system diagnostic prior to operation.

Control Assembly Battery Maintenance

▲ CAUTION! Battery may explode if mistreated. DO NOT recharge, disassemble or dispose of in fire.

It is recommended to replace the battery in the Control Assembly every 5 years for reliability.

Locate the battery tray on the left side of the Control Assembly (Figure 50).

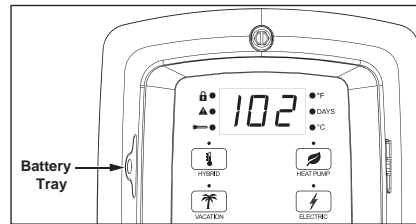


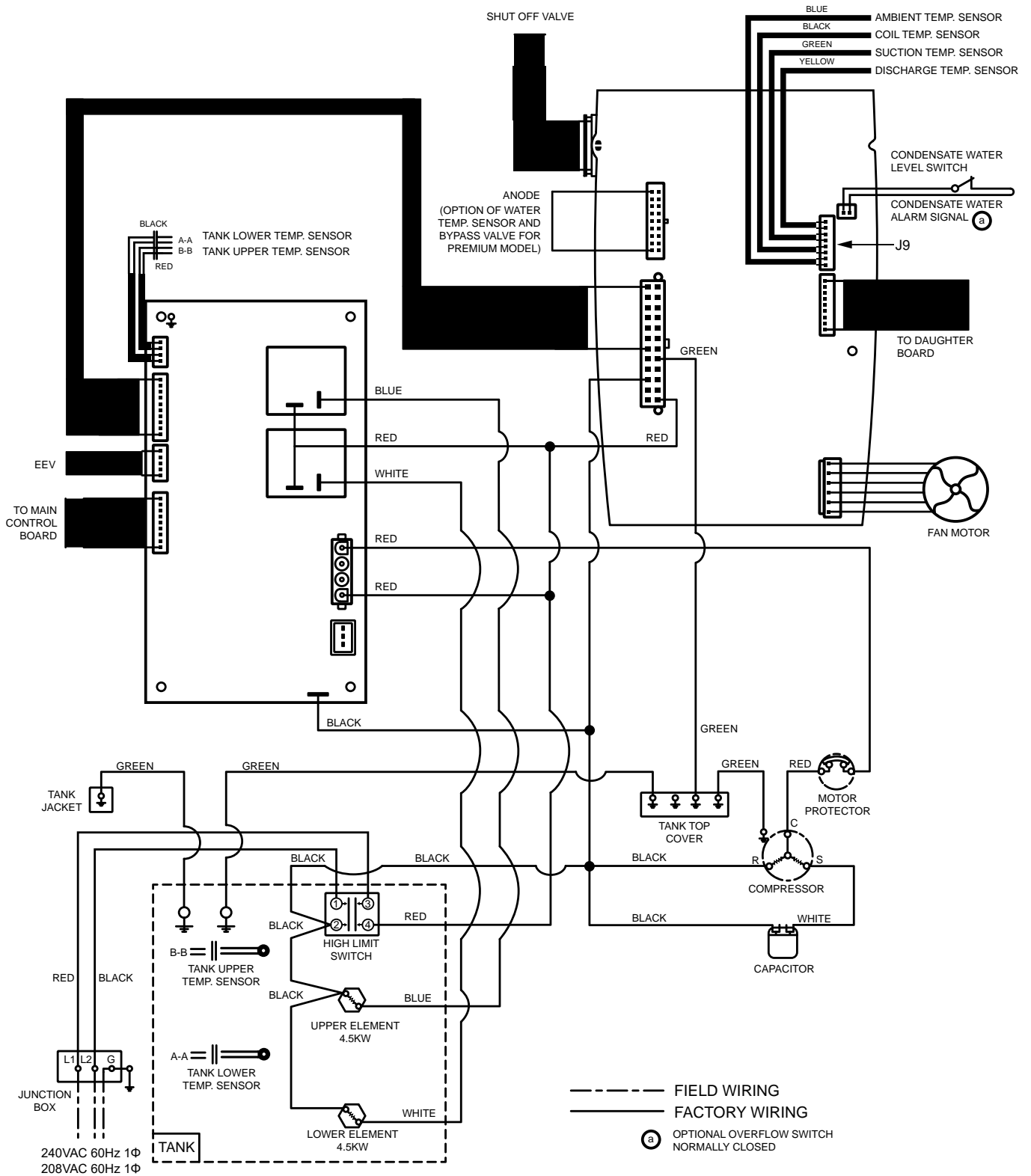
Figure 50 - Battery Tray location.

Replace the BR2032 or CR3032 battery by removing the Phillips head screw and sliding the battery tray with battery out from the Control Assembly. Insert the new Panasonic® BR2032 or Murata CR3032 battery into the tray and reinstall into the Control Assembly. Hand tighten the Phillips head screw to secure the tray in the Control Assembly.

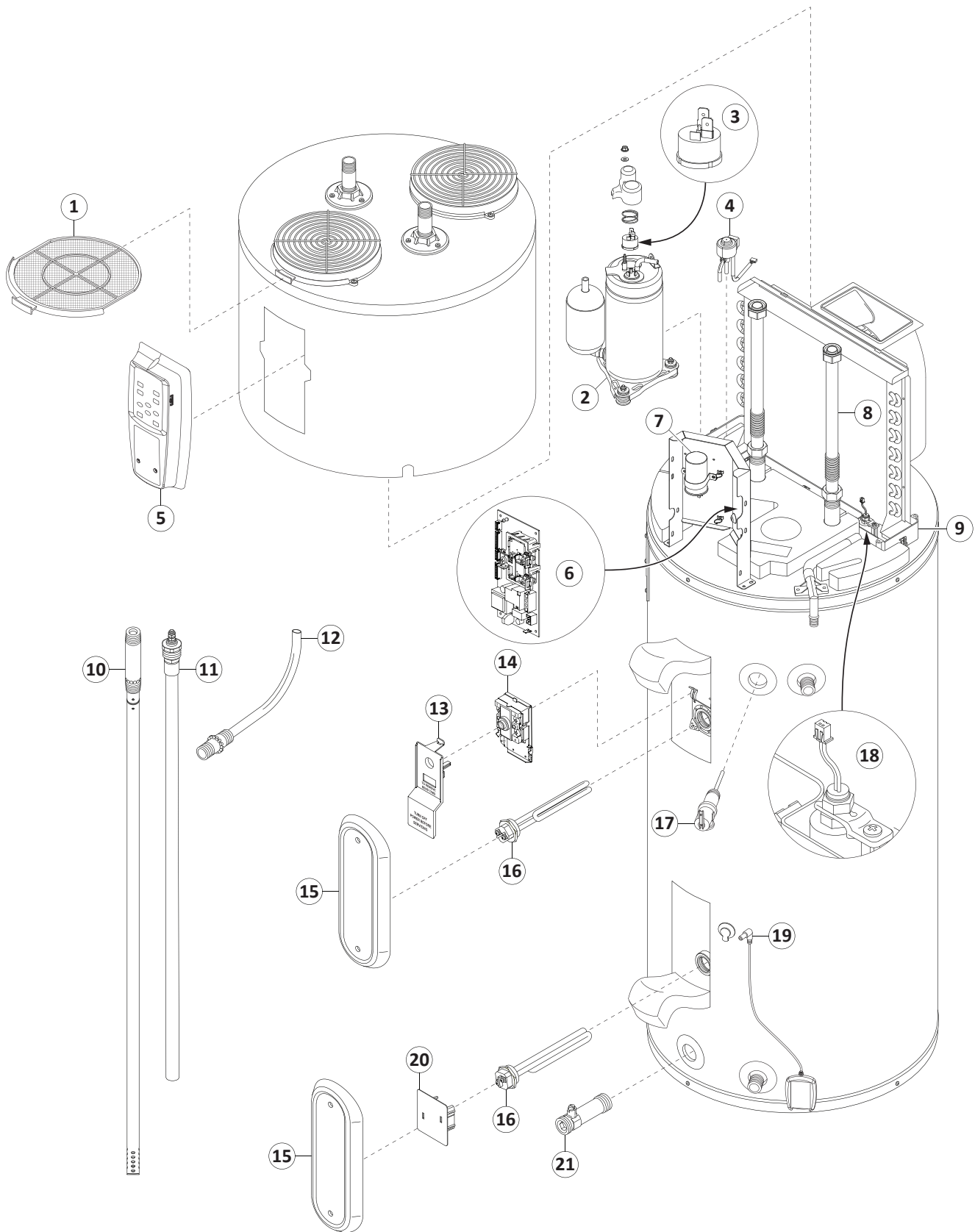
NOTICE: If the Control Assembly was not connected via Wi-Fi, Bluetooth, or powered by a power source, the time will need to be set.

DIAGRAMS

Control Assembly and Thermostat Wiring Diagram



REPAIR PARTS



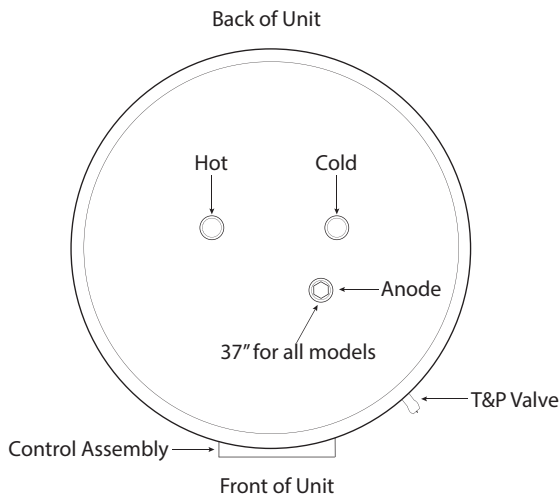
REPAIR PARTS

REPAIR PARTS

REPAIR PARTS

Repair parts may be ordered through your plumber, local distributor, home improvement center, or by calling our Technical Assistance Hotline which is listed on your warranty. When ordering parts, always give the following information:

1. Model, serial and product number
2. Item number
3. Parts description



ITEM NO.	PARTS DESCRIPTION
1	Air Filter
2	208V Compressor
3	Overload Protector
4	Electronic Expansion Valve Coil
5	Control Assembly
6	Control Board, 208V/240V
7	Run Capacitor
8	Hoses (2x), Gaskets
9	Condensate Drain Pan
10	Dip Tube, for 50 gallon
	Dip Tube, for 66 gallon
	Dip Tube, for 80 gallon
11	Anode Rod, 37" for all models
12	J-Tube, for 50 gallon
	J-Tube, for 66 and 80 gallon
13	Upper Element Personnel Protector
14	Energy Cut-Off (ECO) Switch
15	Element Access Panel
16	Element, 4500 Watts
17	Temperature & Pressure Relief Valve
18	Condensate Float
19	Leak Detection Sensor
20	Lower Element Personnel Protector
21	Drain Valve
22*	Automatic Cold Water Shut-Off Valve

*Part not shown.

For use with Security+ 2.0® products. All Security+ 2.0® Garage Door Openers have a yellow Learn button and two yellow antennas. The code between the remote control and the receiver changes with each use, randomly accessing over a billion new codes. Refer to your product manual for the location of the learn button.

NOTE: Your product may look different than the products illustrated in this manual.

Single Button Remote Control
Model 891LM



3-Button Remote Control
Model 893LM



⚠ WARNING

To prevent possible **SERIOUS INJURY** or **DEATH** from a moving gate or garage door:

- ALWAYS keep remote controls out of reach of children. NEVER permit children to operate, or play with remote controls.
- Activate gate or door **ONLY** when it can be seen clearly, is properly adjusted, and there are no obstructions to door travel.
- ALWAYS keep gate or garage door in sight until completely closed. NEVER permit anyone to cross path of moving gate or door.

⚠ WARNING: This product can expose you to chemicals including lead, which are known to the State of California to cause cancer or birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.

PROGRAM USING THE GARAGE DOOR OPENER

- Locate the Learn button.
- Press and immediately release the Learn button. The Learn LED will glow steadily for 30 seconds. Within 30 seconds...
- Press and hold the button on the remote control that you wish to use.

Release the button when the garage door opener lights blink **or** two clicks are heard. If programming to other products, press the button a second time to activate the product.

PROGRAM USING THE DOOR CONTROL

- Press the LEARN button on the door control to enter Programming Mode. The command LED will flash once.
- Press the LEARN button again, the LED will flash once. The command LED will flash once again.
- Press and hold the button on the remote control that you wish to use.

Release the button when the garage door opener lights blink **or** two clicks are heard. If programming to other products, press the button a second time to activate the product.

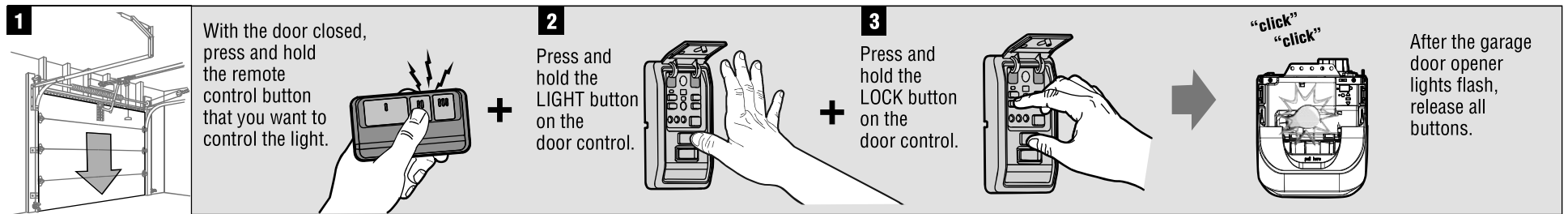
TO ERASE ALL CODES FROM MEMORY

When deactivating any unwanted remote control code, all previous codes will be erased.

- Press and hold the Learn button on garage door opener or other product until the learn LED goes out (approximately 6 seconds). All previous codes are now erased. Reprogram each remote control you wish to use.

TO CONTROL THE GARAGE DOOR OPENER LIGHTS

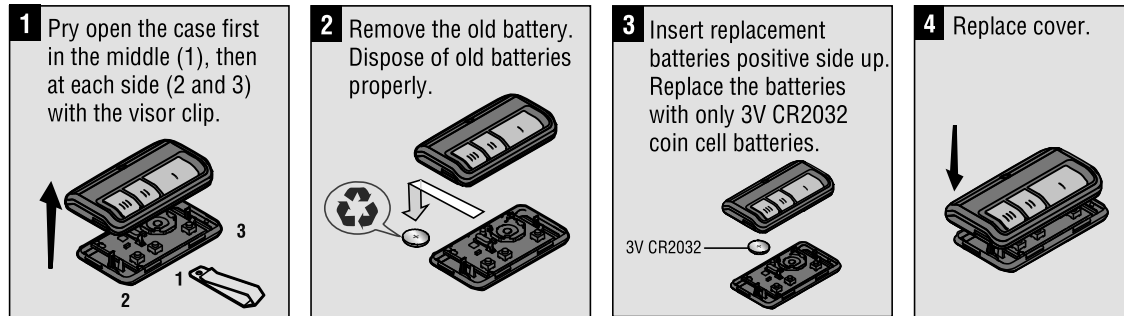
This feature is only available on garage door openers equipped with a multi-function door control and a remote control with more than one button. Not available with external receiver. A remote control button can be programmed to operate the garage door opener lights without opening the door.



Test by pressing the remote control button. The garage door opener lights should turn on or off but the door should not move.

THE REMOTE CONTROL BATTERY

The Lithium battery should produce power for up to 3 years. If the battery is low, the remote control's LED will not flash when the button is pressed. To replace battery:



Make: LiftMaster
Model: 891LM, 893LM
Description: Remote Control
Uses 1 3Vdc battery (CR2032)
Country of Origin: Mexico

Remote Control 893LM: IFT #: RCPLI8917-2064
Remote Control 891LM: IFT #: RCPLI8918-0755

Operation of this equipment is subject to the following two conditions: (1) This equipment or device may not cause harmful interference and (2) this equipment or device must accept any interference, including that which may cause undesired operation.

⚠ WARNING

To prevent possible SERIOUS INJURY or DEATH:

- NEVER allow small children near batteries.
- If battery is swallowed, immediately notify doctor.

To reduce risk of fire, explosion or chemical burn:

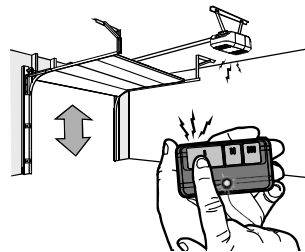
- Replace ONLY with 3V CR2032 coin batteries.
- DO NOT recharge, disassemble, heat above 212° F (100° C) or incinerate.

NOTICE: To comply with FCC and or Industry Canada rules (IC), adjustment or modifications of this receiver and/or transmitter are prohibited, except for changing the code setting or replacing the battery. THERE ARE NO OTHER USER SERVICEABLE PARTS.

Tested to Comply with FCC Standards FOR HOME OR OFFICE USE. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

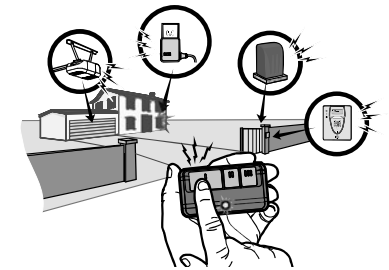
HOW TO USE THE REMOTE CONTROL

Press and hold the button down until the door or gate starts to move. The remote control will operate from up to 3 car lengths away on typical installations. Installations and conditions vary, contact an installing dealer for more information.



3-BUTTON REMOTE CONTROLS

Additional buttons on the remote control can be programmed to operate up to 3 devices such as additional garage door openers, light controls, gate operators or access control systems.



REPLACEMENT PARTS

3V CR2032 Lithium battery	10A20
Visor Clip	29B137

ONE YEAR LIMITED WARRANTY

LiftMaster warrants to the first consumer purchaser of this product that it is free from defect in materials and/or workmanship for a period of 1 year from the date of purchase.

À utiliser avec des produits Security+ 2.0®. Tous les ouvre-portes de garage Security+ 2.0® ont un bouton d'apprentissage (« Learn ») jaune et deux antennes jaunes. Le code entre la télécommande et le récepteur change avec chaque usage, accédant de manière aléatoire à plus de cent milliards de nouveaux codes. Reportez-vous au manuel de votre produit pour connaître l'emplacement du bouton « Learn » (apprentissage).

REMARQUE : Votre appareil peut être différent des illustrations de ce manuel.

Télécommande à bouton unique
Modèle 891LM



Télécommande à 3 boutons
Modèle 893LM



⚠ AVERTISSEMENT

Afin d'éliminer les risques de BLESSURES GRAVES ou de MORT découlant de l'actionnement d'une clôture ou d'une porte de garage :

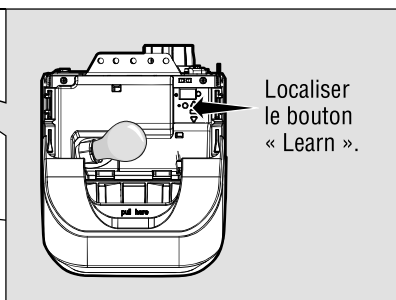
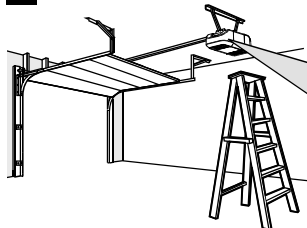
- TOUJOURS garder les télécommandes hors de la portée des enfants. Ne JAMAIS laisser un enfant manipuler une télécommande ni jouer avec elle.
- Actionner la clôture ou la porte UNIQUEMENT lorsqu'elle est clairement visible, correctement ajustée et que le mécanisme est libre de TOUTE entrave.
- TOUJOURS garder la clôture ou la porte de garage en vue jusqu'à sa fermeture complète. NE permettez à quiconque de passer lorsqu'une clôture ou une porte est en mouvement.



AVERTISSEMENT : Ce produit peut vous exposer à des produits chimiques comme le plomb, reconnu par l'État de la Californie comme cause de cancers, d'anomalies congénitales et d'autres problèmes liés à la reproduction. Pour plus d'informations, visitez www.P65Warnings.ca.gov.

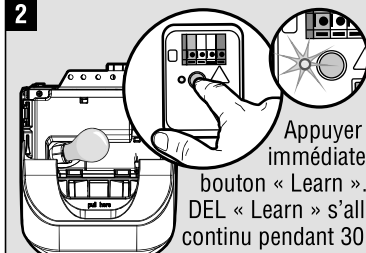
PROGRAMMATION À L'AIDE DE L'OUVRE-PORTE DE GARAGE

1



Localiser le bouton « Learn ».

2



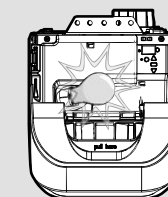
Appuyer et relâcher immédiatement le bouton « Learn ». Le voyant DEL « Learn » s'allumera en continu pendant 30 secondes. Dans un délai de 30 secondes...

3



Appuyer et maintenir enfoncé le bouton de la télécommande que vous désirez utiliser.

« clic »
« clic »

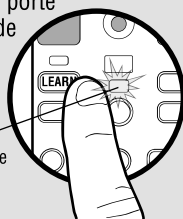


Relâcher le bouton lorsque les lumières de l'ouvre-porte du garage clignotent **ou** lorsque deux clics sont émis. Pour programmer d'autres produits, appuyer sur le bouton une seconde fois pour activer le produit.

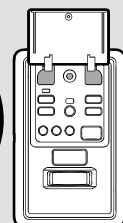
PROGRAMMATION À L'AIDE DE LA COMMANDE DE PORTE

1

Appuyer sur le bouton « LEARN » de la commande de porte pour passer en mode de programmation.

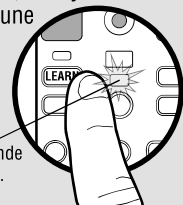


Le voyant DEL de commande va clignoter une seule fois.

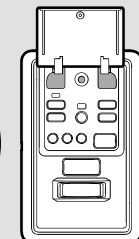


2

Appuyer à nouveau sur le bouton « LEARN », le voyant DEL va clignoter une seule fois.

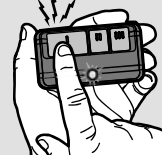


Le voyant DEL de commande va clignoter une seule fois.

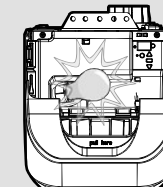


3

Appuyez sur le bouton de la télécommande qu'on désire utiliser.



« clic »
« clic »

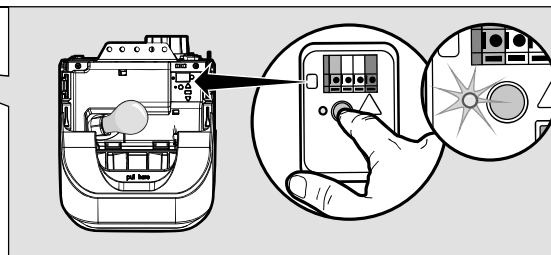
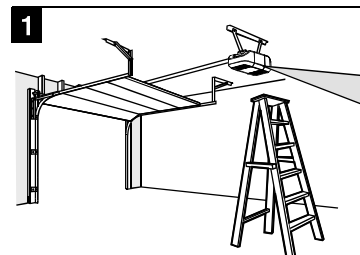


Relâcher le bouton lorsque les lumières de l'ouvre-porte du garage clignotent **ou** lorsque deux clics sont émis. Pour programmer d'autres produits, appuyer sur le bouton une seconde fois pour activer le produit.

POUR EFFACER TOUS LES CODES DE LA MÉMOIRE

En désactivant un code de télécommande non désiré, tous les codes précédents seront effacés.

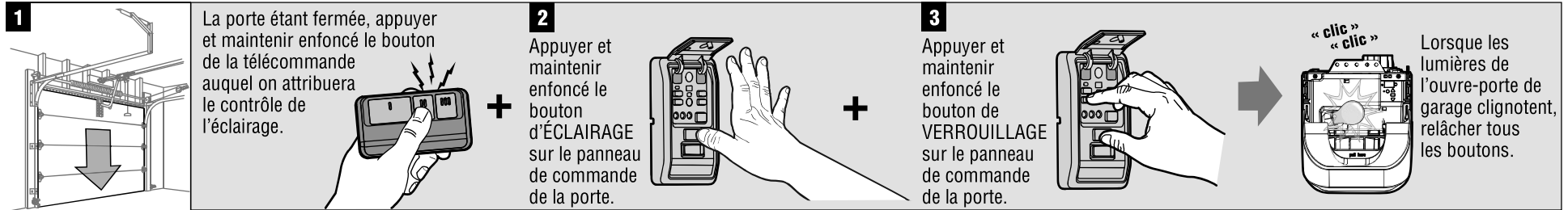
1



Appuyer et maintenir enfoncé le bouton « Learn » de l'ouvre-porte de garage ou d'un autre produit jusqu'à ce que la DEL « Learn » s'éteigne (environ 6 secondes). Tous les codes précédents sont maintenant effacés. Reprogrammer chaque télécommande que vous désirez utiliser.

POUR CONTRÔLER LES LUMIÈRES DE L'OUVRE-PORTE DE GARAGE

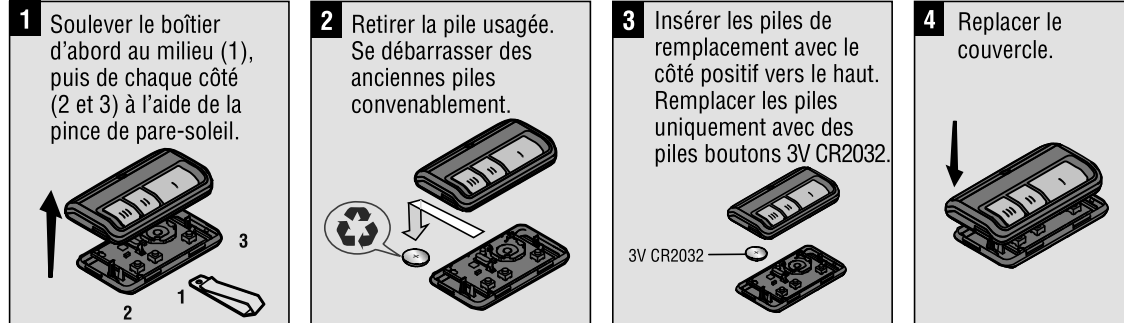
Cette fonction n'est offerte qu'avec les ouvre-portes de garage dotés d'une commande de porte multifonction et d'une télécommande à plusieurs boutons. Non disponible avec un récepteur externe. Un bouton de télécommande peut être programmé pour faire fonctionner les lumières de l'ouvre-porte de garage sans ouvrir la porte.



Pour procéder à un essai, appuyer sur le bouton de la télécommande. Les lumières de l'ouvre-porte de garage doivent s'allumer ou s'éteindre mais la porte ne doit pas se déplacer.

LA PILE DE LA TÉLÉCOMMANDE

La pile au Lithium devrait durer pendant une période allant jusqu'à 3 ans. Si la pile est faible, la DEL de la télécommande ne clignotera pas lorsque l'on appuiera sur le bouton. Pour remplacer la pile :



Marque : LiftMaster
Modèle 891LM, 893LM
Description : Télécommande
Utiliser une pile de 3 V c. c. (CR2032)
Pays d'origine : Mexique

Télécommande 893LM : RCPLI8917-2064
Télécommande 891LM : RCPLI8918-0755
L'utilisation est sujette aux deux conditions ci-après : (1) ce dispositif ne peut causer de brouillage nuisible, et (2) ce dispositif doit accepter tout brouillage reçu, y compris tout brouillage pouvant causer un fonctionnement indésirable.

AVERTISSEMENT

Pour prévenir d'éventuelles BLESSURES GRAVES ou la MORT :

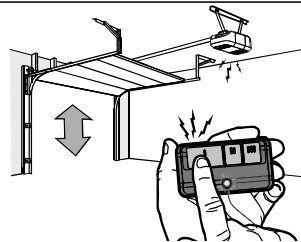
- Ne JAMAIS laisser de petits enfants à proximité des piles.
 - Aviser immédiatement un médecin en cas d'ingestion de la pile.
- Pour réduire le risque d'incendie, d'explosion ou de brûlure chimique :
- Remplacer les piles UNIQUEMENT par des piles capsules 3V CR2032.
 - NE PAS recharger, ni démonter, ni chauffer à une température supérieure à 100°C (212°F), ni incinérer.

AVIS : Les règles de la FCC ou d'Industrie Canada (IC), ou les deux, interdisent tout ajustement ou toute modification de ce récepteur et ou de cet émetteur, sauf pour modifier le code ou pour remplacer la pile. IL N'EXISTE AUCUNE AUTRE PIÈCE SUSCEPTIBLE D'ÊTRE ENTRETENUE PAR L'UTILISATEUR. Vérifié pour conformité avec les normes de la FCC POUR UTILISATION À LA MAISON OU AU BUREAU.

L'utilisation est sujette aux deux conditions ci-après : (1) ce dispositif ne peut causer des interférences nuisibles, et (2) ce dispositif doit accepter toute interférence reçue, y compris une interférence pouvant causer un fonctionnement non désiré.

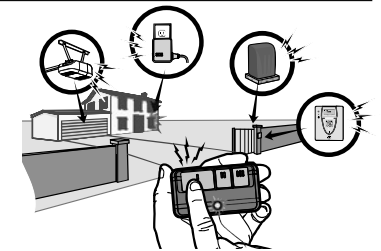
UTILISATION DE LA TÉLÉCOMMANDE

Appuyer sur le bouton et le maintenir enfoncé jusqu'à ce que la porte ou la barrière commence à bouger. La télécommande fonctionne habituellement jusqu'à une distance maximum de trois véhicules. Les installations et les conditions peuvent varier. Communiquer avec un revendeur-installateur pour plus de renseignements.



TÉLÉCOMMANDES 3 BOUTONS

Il est possible de programmer d'autres boutons de la télécommande pour faire fonctionner jusqu'à trois appareils tels que d'autres ouvre-portes de garage, commandes d'éclairage, actionneurs de barrière ou systèmes de contrôle d'accès.



PIÈCES DE RECHANGE

Pile au Lithium 3V CR203210A20
Pince de pare-soleil29B137

GARANTIE LIMITÉE D'UN AN

LiftMaster garantit à l'acheteur initial que le produit est exempt de tout défaut de matériaux ou de fabrication pendant une période d'un an à compter de la date d'achat.