

BALBIRNIE

PARK

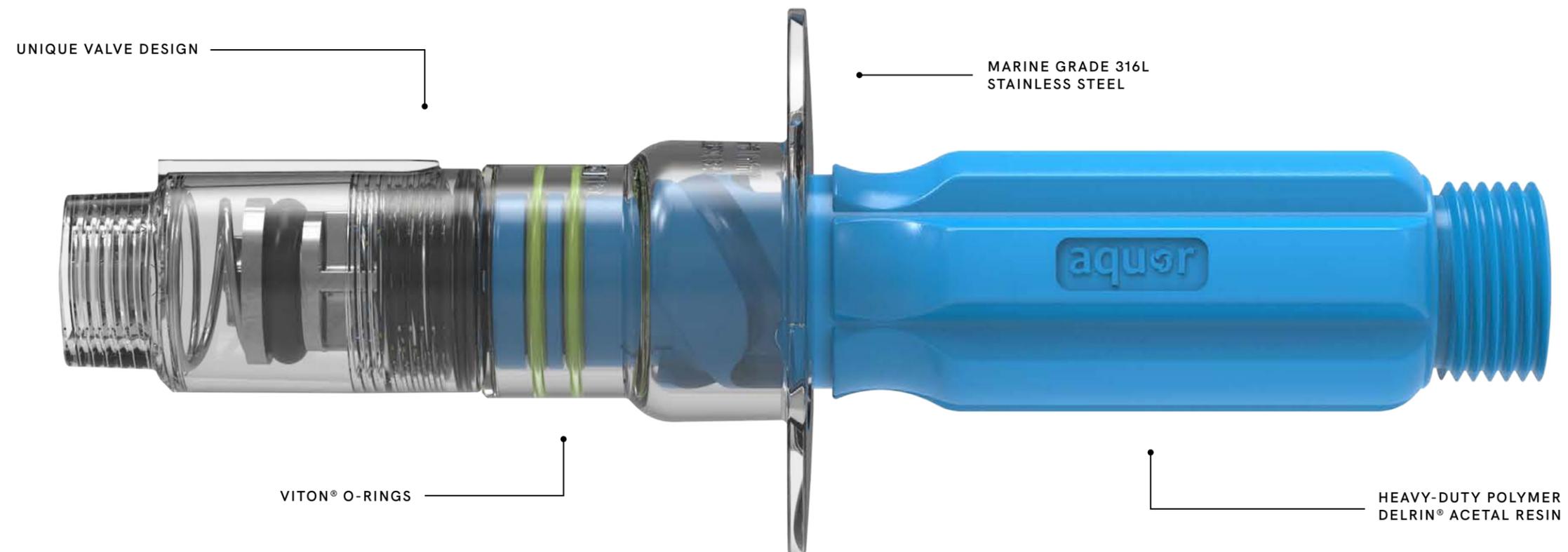


Meet the next generation of water valves.

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.





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.





BRADFORD WHITE[®]

W A T E R H E A T E R S

Heat Pump Water Heater

INSTALLATION & OPERATION INSTRUCTION MANUAL



RE2H50S*-1NCWT
RE2H65T*-1NCWT
RE2H80T*-1NCWT

For your family's comfort, safety, and convenience we recommend this water heater be installed and serviced by a plumbing professional.



As required by the state of California Proposition 65.

ECO 8384-1
Effective: Sept 2020

238-52169-00A 9/20

CONGRATULATIONS!

You have purchased one of the finest water heaters on the market today!

This installation, operation and instruction manual will explain in detail the installation and maintenance of your new Heat Pump Water Heater. We strongly recommend that you contact a plumbing professional for the installation of this water heater.

We require that you carefully read this manual, as well as the enclosed warranty, and refer to it when questions arise. If you have any specific questions concerning your warranty, please consult the plumbing professional from whom your water heater was purchased. For your records we recommend that you write the model, serial number and installation date of your water heater in the maintenance section in the back of this manual.

This manual should be kept with the water heater.

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General Information

READ ALL INSTRUCTIONS BEFORE USING THE APPLIANCE

For your safety, the information in this manual must be followed to minimize the risk of fire or explosion, electric shock, and/or to prevent property damage, personal injury, or loss of life.

The warranty on this water heater is in effect only when the water heater is installed and operated in accordance with local codes and these instructions. The manufacturer of this heater will not be liable for any damage resulting from failure to comply with these instructions. Read these instructions thoroughly before starting.

This water heater must be installed in accordance with local codes. In the absence of local codes, install this water heater in accordance with the latest edition of the National Electrical Code.

⚠ WARNING

Incorrect operation of this appliance may create a hazard to life and property and will nullify the warranty.

Do NOT use this appliance if any part has been submerged in water. The plumbing professional responsible for the installation of this water heater should be contacted to inspect the appliance and to replace any part of the control system, including thermostat(s), that has been submerged in water.

⚠ WARNING

If the water heater has been subjected to flood, fire, or physical damage, turn off power and water to the water heater. Do NOT operate the water heater again until it has been thoroughly checked by qualified service personnel.

- Turn **OFF** power to water heater if it has been subjected to overheating, fire, flood, or physical damage.
- Do **NOT** turn on water heater unless it is filled with water.
- Do **NOT** turn on water heater if cold water supply shut-off valve is closed.

NOTE: Flammable vapors may be drawn by air currents from surrounding areas to the water heater.

Make sure that the rating plate on the water heater is referenced for certainty that the correct voltage is being supplied to the water heater.

⚠ WARNING

DO NOT store or use gasoline or other flammable, combustible, or vapors and liquids in the vicinity of this water heater or any other appliance. Keep rags and other combustibles away.

A sacrificial anode(s) is used to extend tank life. Removal of any anode, except for inspection and/or replacement, will nullify the warranty. In areas where water is unusually active, an odor may occur at the hot water faucet due to a reaction between the sacrificial anode and impurities in the water. If this should happen, an alternative anode(s) may be purchased from the supplier that installed this water heater. This will minimize the odor while protecting the tank. Additionally, the water heater should be flushed with appropriate dissolvers to eliminate any bacteria.

IMPORTANT!

Before proceeding, please inspect the water heater and its components for possible damage. **DO NOT** install any damaged components. If damage is evident, please contact the supplier where the water heater was purchased, or the manufacturer listed on the rating plate for replacement parts.

For Installations in the State of California

For California installation this water heater must be braced, anchored, or strapped to avoid falling or moving during an earthquake. See instructions for correct installation procedures. Instructions may be obtained from DSA Headquarters Office, 1102 Q Street, Suite 5100, Sacramento, CA 95811.

Water Heater Capacity

Water Heater Capacity and Increasing Temperature Setpoint:

The water heater temperature setting strongly impacts the amount of usable hot water available for showers and baths.

- Energy consumption/savings and efficiency testing of water heaters is performed according to the Department of Energy (DOE) requirements specified at the date of manufacture.
- Safety regulations require a factory setting no greater than 125°F (52°C) for all new water heaters. Therefore, if your old water heater was set to a hotter temperature than your new water heater with a factory set setpoint of 120°F (49°C), the new water heater may seem to provide lower capacity than your old water heater. This can be corrected by increasing the temperature setpoint.
- If more hot water capacity is desired, increasing the temperature from 120°F to 135°F (49°C to 57°C) will enable the same tank of hot water to last about 25% longer, as less hot water is mixed in at the shower or faucet.
- Increasing the water temperature setpoint may improve the cleaning performance of dishwashers and washing machines.
- The user can adjust the temperature setting to meet their needs. Always read and understand the safety instructions contained in the Installation and Operation Manual before adjusting the temperature setpoint.

Mixing Valves

- Mixing valves for reducing point-of-use water temperature by mixing hot and cold water in branch water lines are commercially available. Contact a licensed plumber or the local plumbing authority for further information.

Specifications

Capacity.....	50/65/80 US gal
Tank Max Working Pressure.....	150 PSI
Water Temperature Set Point Range	100°F-140°F
Electrical.....	240/208 VAC 60 Hz 1-PH
Circuit Breaker.....	25 Amp minimum recommended*
Upper Element Wattage 240/208 VAC	4500/3380
Lower Element Wattage 240/208 VAC	4000/3004

*see branch circuit guide

Refrigeration System

Compressor.....	500 W
Refrigerant Charge (R134a).....	29.1/30.9 oz (50/80 gal)
Compressor LRA.....	14.0A
Compressor RLA.....	2.56A

About the Control Panel

Displaying Temperature Setpoint

The water heater control will display the temperature setpoint anytime a button on the control is pressed. After 30 seconds of inactivity, the display will go blank. However, the LED indicating the selected operation mode will remain lit. To wake the control at any time to see the temperature setpoint, press any button on the control.

Turning on the Water Heater

There is no power button for this unit. Once the water heater is wired and power is supplied, it will be on. The display will show the current water temperature setting and an LED will illuminate, indicating the current operating mode.

To comply with safety regulations, the controls are factory preset to 120°F (49°C) and Hybrid Mode. It is recommended that the unit be set to Heat Pump (Only) Mode to maximize energy savings. Operating in Hybrid Mode provides a balance of energy savings and hot water use convenience.

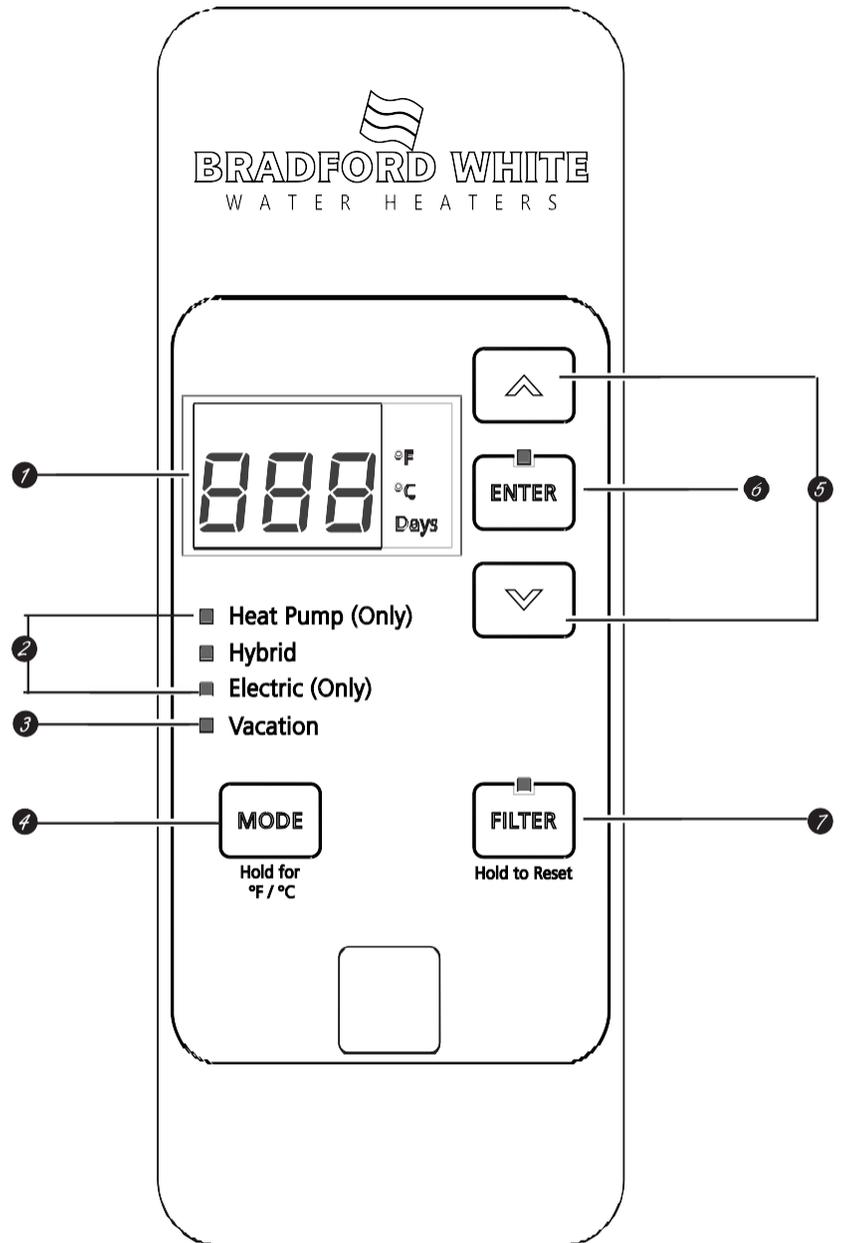
Reported energy consumption is based on operating the unit in Hybrid Mode at required Department of Energy (DOE) test conditions. Operating at lower temperature settings or in Heat Pump (Only) Mode will provide even greater energy savings.

To Adjust the Temperature

Follow these steps:

1. Press the UP or DOWN arrow on the control panel keypad to the desired temperature.
2. Press ENTER to accept the new setting.

Note: To change between °F and °C, press and hold MODE.



Control Features

- 1 Display**
Displays the current temperature or the number of days for vacation mode. To display setpoint if display has gone blank, press any button.
- 2 Operating Modes**
(see page 6 for description)
- 3 Vacation**
(see page 6 for description)
- 4 Mode Selector**
Press this button to toggle through the various heating modes. Press and hold to switch between °F and °C.
- 5 Arrow Pads**
Use these buttons to manually change the water temperature, or to select days for Vacation Mode.
- 6 Enter Key**
Use this button to confirm temperature setting following adjustment.
- 7 Filter Reset**
The filter is dirty and requires cleaning when the **red** light is illuminated. Filter is located on top of the water heater. Press the button and hold for 5 seconds to reset filter alarm.

Operational Modes

This water heater defaults to the Hybrid operating mode.

To select available modes listed below:

1. Press the MODE button until the LED next to the desired Operating Mode is illuminated.

In Hybrid Mode, the Electric (Only) Mode LED will flash anytime the heating elements are active, such as during the initial recovery from a large draw. This is normal and does not indicate an operating issue.

Cold Climate Efficiency

The 10 year warranty heat pump water heater is compliant with the Tier 3 Advanced Water Heater Specification, v7.0 (formerly known as the Northern Climate Specification) and may qualify for rebates in some regions. 6yr only Tier 1 compliant). Compliance with the specification does not require a Cold Climate Efficiency (CCE) setting for models produced after 2015 and as a result the CCE setting may not be available on your model. Check with your local utility for available rebates and requirements. A ducting kit is available for use with your heat pump water heater if desired (see www.bradfordwhite.com for ducting kit details). Ducting kits may be installed to achieve directed flow of inlet and outlet air for heat pump operation, or to allow water heater installation in rooms less than 700 ft³ (19.8 m³) or without louvered doors, as specified in the installation instructions.

Heat Pump (Only) Mode—RECOMMENDED FOR MAXIMUM SAVINGS

Heat Pump (Only) is the most energy-efficient mode for this water heater. It takes heat from the surrounding air to heat the water. It takes more time to heat the water in this mode, so it may not be sufficient if you have a high-demand situation, such as a large household or company.

Hybrid Mode

Hybrid Mode combines the energy efficiency of Heat Pump (Only) with the recovery speed and power of the Electric (Only) Mode in most water usage situations. Hybrid Mode will allow the unit to perform like a standard electric water heater while providing significant energy savings.

NOTE: Energy Guide unit performance, energy consumption, and savings are based on non-ducted installations in Hybrid Mode at required Department of Energy (DOE) test conditions. Operating in Heat Pump (Only) Mode may provide greater savings in energy and operating costs than the claimed savings.

Electric (Only) Mode

Electric (Only) Mode uses only the upper and lower heating resistance elements to heat the water, stopping the cool air discharge during heat pump operation. It takes less time to heat the water in this mode, but it is the LEAST energy-efficient mode.

Follow these steps to set Electric (Only) Mode:

1. Select Electric (Only) Mode using the MODE button.
2. Input the total days to remain in Electric (Only) Mode using the UP arrow. The default is 3 days, maximum is 99 days.
3. Press ENTER.

At the end of the selected time period, the unit will switch back to the previously selected more energy-efficient mode.

Note: In this mode the green LED light will flash after 48 hours as an indication that the unit is not operating in the most energy efficient mode. The unit will continue to operate in this mode and does not indicate an operating issue.

Vacation Mode

This feature is recommended when you will be away from the home for an extended period of time and hot water is not needed. In this mode, the unit will reduce the water temperature setting to 50°F (10°C) and will use the most efficient heating mode to conserve energy while the heater is sitting idle. The unit will automatically resume heating one day before your return, so that hot water will be available.

To set Vacation Mode:

1. Select Vacation by pressing the MODE button.
2. Input the total number of days you will be gone by pressing the UP arrow. The default is 7 days, maximum 199, or the water heater will remain in Vacation Mode indefinitely by selecting “---”.
3. Press ENTER.

For example, if you will be gone 14 days, set Vacation Mode for 14 days using the steps above. The temperature setting will automatically reduce to 50°F (10°C) for 13 days. At the end of the 13th day, the previous operating mode and temperature setting will reset to ensure hot water is available upon your return.

Extended Shutdown Periods

If the water heater is to remain idle for an extended period of time, the power and water to the appliance should be turned OFF and the water heater drained to conserve energy and prevent a buildup of dangerous hydrogen gas.

General Information cont.-

This unit has no power button. The power can only be shut off at the circuit breaker or disconnect switch.

After a long shutdown period, the water heater's operation and controls should be checked by qualified service personnel. Make certain the water heater is completely filled again before placing it in operation.

⚠ WARNING

Hydrogen gas can be produced in a hot water system served by this water heater when there has been no usage for a long period of time (generally two weeks or more). **HYDROGEN GAS IS EXTREMELY FLAMMABLE.** To reduce the risk of injury under these conditions, it is recommended that the hot water faucet be opened for several minutes at the kitchen sink before using any electrical appliance connected to the hot water system. If hydrogen is present, there will probably be an unusual sound, such as air escaping through the pipe, as the water begins to flow. There should be **NO** smoking or open flame near the faucet at the time it is open.

For information on Service Mode Functions and Thermistors, reference the mini-manual for this model.

Temperature Adjustment

⚠ CAUTION

Increasing the thermostat setting above the preset temperature may cause severe burns and consume excessive energy. Hotter water increases the risk of scald injury.

This water heater can deliver scalding temperature water at any faucet in the system. Be careful whenever using hot water to avoid scalding injury. Certain appliances, such as dishwashers and automatic clothes washers, may require increased temperature water. By setting the thermostat on this water heater to obtain increased temperature water required by these appliances, you may create the potential for scald injury. To protect against injury, you should install an ASSE approved mixing valve in the water system. This valve will reduce the point of discharge temperature by mixing cold and hot water in branch supply lines. Such valves are available from the manufacturer of this water heater or a local plumbing supplier. Please consult with a plumbing professional.

Safety, energy conservation, and hot water capacity are factors to be considered when selecting the water temperature setting of the water heater. Water temperatures above 125°F can cause severe burns or death from scalding. Be sure to read and follow the warnings outlined on the label pictured below. This label is also located on the water heater near the top of the tank.

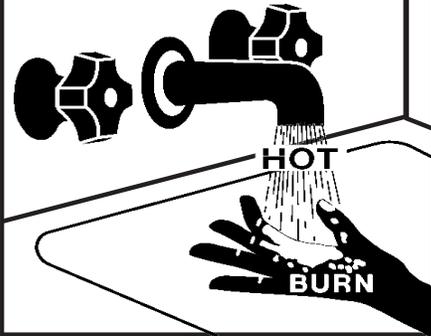
The thermostat has been set at the factory to 120°F (49°C) to reduce the risk of scald injury. This is the recommended starting temperature setting, but it can be adjusted to any temperature between 100°F and 140°F (38°C and 60°C).

To adjust the temperature, follow these steps:

1. Press the UP or DOWN arrow on the control panel keypad to the desired temperature.
2. Press ENTER to accept the new setting.

Note: To change between °F and °C, press and hold MODE.

⚠ DANGER



Water temperature over 125°F can cause severe burns instantly or death from scalds.

The electronic temperature control setting usually approximates tap water temperature. However, factors could cause water temperature to reach 160°F regardless of the control setting. Always feel water before bathing and showering.

Children, disabled and elderly are at highest risk of being scalded. See instruction manual before setting temperature at water heater.

Feel water before bathing or showering.

Temperature limiting valves are available; see manual.

Temperature Adjustment cont.-

APPROXIMATE TIME/TEMPERATURE RELATIONSHIPS IN SCALDS	
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

The chart shown above may be used as a guide in determining the proper water temperature for your home.

Water Heater Temperature Setpoint

The water heater temperature setting strongly impacts the amount of usable hot water available for showers and baths.

- Energy consumption/savings and efficiency testing of water heaters is performed according to the Department of Energy (DOE) requirements specified at the date of manufacture.
- Safety regulations require a factory setting of 120°F to 125°F (49°C to 52°C) maximum for all new water heaters. Therefore, if the water heater is currently set at 130°F (54°C) or above and the new water heater is installed with a factory set setpoint of 120°F (49°C), the new water heater may seem to provide lower capacity than the existing water heater.
- The user can adjust the temperature setting to meet their needs.
- Always read and understand the safety instructions contained in the Installation and Operation Manual before adjusting the temperature setpoint.

Installation Instructions

Local Installation Regulations

This water heater must be installed in accordance with these instructions, local codes, and utility company requirements or, in the absence of local codes, the latest edition of the National Electrical Code. It is available from some local libraries or can be purchased from the National Fire Protection Association, Batterymarch Park, Quincy, MA 02169 as booklet ANSI/NFPA 70.

Power Requirements

Check the markings on the rating plate of the water heater to be certain the power supply corresponds to the water heater requirements. **Note:** 208V installations may experience lower recovery performance.

Locating the Water Heater

⚠ WARNING

Water heaters are heat producing appliances. To avoid damage or injury, there shall be no material stored against the water heater and proper care shall be taken to avoid unnecessary contact (especially by children) with the water heater.

UNDER NO CIRCUMSTANCES SHOULD FLAMMABLE MATERIALS, SUCH AS GASOLINE OR PAINT THINNER BE USED OR STORED IN THE VICINITY OF THIS WATER HEATER OR ANY LOCATION FROM WHICH FUMES COULD REACH THE WATER HEATER.

This water heater **MUST** be installed indoors out of the wind and weather.

The water heater should **NOT** be located in an area where leakage of the tank or connections will result in damage to the area adjacent to it or to lower floors of the structure. Where such areas cannot be avoided, it is recommended that a suitable catch pan, adequately drained, be installed under the water heater.

Installation Instructions cont.-

The location of this water heater is to be installed is of utmost importance. Before installing this water heater, consult the installation section of these instructions. After reading these installation and operating instructions, select a location for the water heater where the floor is level and is easily accessible to a power supply and water connections. The water heater and water lines should be protected from freezing temperatures and highly corrosive atmospheres. Locate the water heater in a clean, dry area. It is recommended that the water heater be located near the center of greatest hot water usage to prevent heat loss through pipes.

Do NOT locate the water heater where water lines could be subjected to freezing temperatures. Locate the water heater so that access panels and drain valves are accessible.

NEVER OPERATE THE WATER HEATER WITHOUT FIRST BEING CERTAIN IT IS FILLED WITH WATER.

Note: Before proceeding with installation, close the main water supply valve.

Water heater corrosion and component failure can be caused by the heating and breakdown of airborne chemical vapors. Examples of some typical compounds that are potentially corrosive are: spray can propellants, cleaning solvents, refrigerator and air conditioning refrigerants, swimming pool chemicals, calcium or sodium chloride, waxes, and process chemicals. These materials are corrosive at very low concentration levels with little or no odor to reveal their presence.

Note: Damage to the water heater caused by exposure to corrosive vapors is not covered by the warranty. Do NOT operate the water heater if exposure has or will occur. Do NOT store any potentially corrosive compounds in the vicinity of the water heater.

This water heater must be located in an area where leakage of the tank or water line connections and the combination temperature and pressure relief valve will not result in damage to the area adjacent to the water heater or to lower floors of the structure. When such locations cannot be avoided, a suitable drain pan must be installed under the water heater. Refer to Catch Pan Installation for more information (pg 12).

This unit is designed for any common indoor installation in a space with at least 700 ft³ (19.8 m³) including: garage, utility room, attic, closet, etc. It can be installed in rooms smaller than 700 ft³ (19.8 m³) with the installation of a louvered door, or two louvered sections (one at the top and one at the bottom of the door or wall for airflow). A ducting kit is also available, for more information see www.BradfordWhite.com. Louvers should have 240 in² (0.15 m²) of open airflow area or greater. Servicing the water heater requires proper installation so that the air filter, covers, trim ring, and front panels can be removed to permit inspection and servicing. Reference installation instructions found in this manual.

The heat pump operating range is 35°F to 120°F (2°C to 49°C). If the ambient temperature is outside of this range, the heat pump will turn off and the electric elements will be used until the ambient temperature returns to within the operating range.

Attic installations require access stairs and solid flooring with no exposed floor joists up to the installation location.

Note: Moving the water heater or other appliances to provide service to the water heater is not covered under warranty.

To comply with NSF requirements this water heater is to be:

- a) Sealed to the floor with sealant, in a smooth and easily cleanable way, or
- b) Installed with an optional leg kit that includes legs and/or extensions that provide a minimum clearance of 6" beneath the water heater.

Note: For California installation this water heater must be braced, anchored, or strapped to avoid falling or moving during an earthquake. See instructions for correct installation procedures. Instructions may be obtained from DSA Headquarters Office, 1102 Q Street, Suite 5100, Sacramento, CA 95811.

Installation Instructions cont.-

Air Exchange Efficiency

Required and recommended minimum clearances listed in this Installation and Operations Manual are for the optimum performance, efficiency, and serviceability of the water heater.

Installing the water heater in a manner that does not provide sufficient air exchange will result in increased energy consumption. Ensure that the rear of the water heater is open and **not** discharged against a wall. A ducting kit may be required in order to achieve optimum efficiency. Bradford White is not liable or responsible for any additional energy consumption or warranty implications.

Note: If the air temperature in the installed location drops more than 15°F (8°C) during heating, air circulation is insufficient for optimum operation. Utilize the ducting kit to direct cold exhaust air to another location.

Recommended Clearances

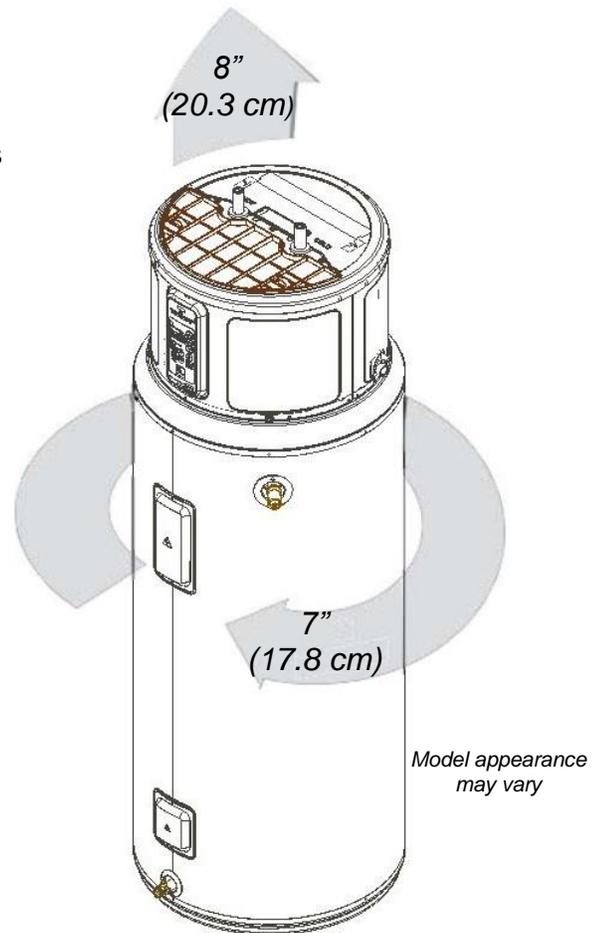
NOTE: Installations in a confined space, or installations where the recommended service clearances are not met, will lead to higher power consumption (increased use of resistance heating elements and/or heat pump efficiency reduction).

It is recommended to have a 7" (17.5 cm) clearance between any object and the rear and right side of the water heater in the event service is needed. A minimum 8" (20.3 cm) clearance above the water heater to remove the filter for cleaning and for service access, and clear access to the front of the water heater, is recommended. Installations that require less than 7" (17.5 cm) clearance on the right side or rear of the water heater for earthquake straps are also acceptable (see *Minimum Required Clearances* section below for more information). **In these cases, it is recommended to provide additional clearance on the opposite side of the unit to allow for service access.** The hot and cold water plumbing and electrical connections must not interfere with the removal of the filter.

If a separate ducting kit is purchased (refer to www.bradfordwhite.com for ducting kit part number), additional space is required above and to the rear of the water heater for installation. Consult the ducting kit manual for specific instructions. See www.bradfordwhite.com for details.

The clearances shown are recommended for optimal performance (best possible efficiency) as well as adequate service room. Reducing these clearances may impact the overall performance compared to what is displayed on the water heater. A ducting kit may need to be used – refer to the Service Manual or ducting kit instructions for installation information.

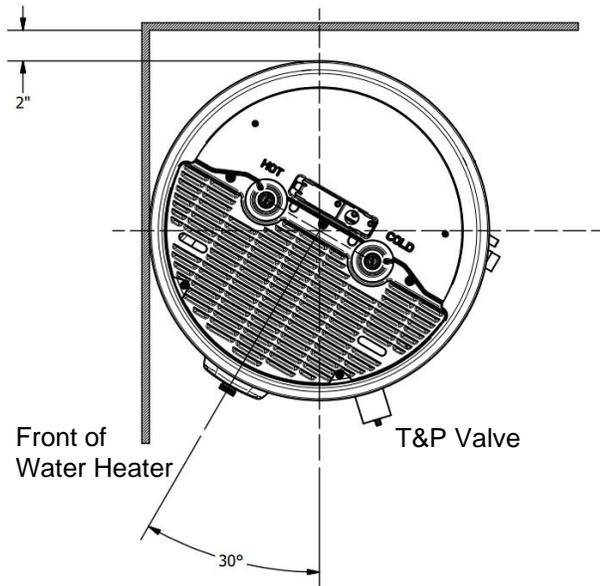
Insufficient air exchange will result in increased energy consumption levels.



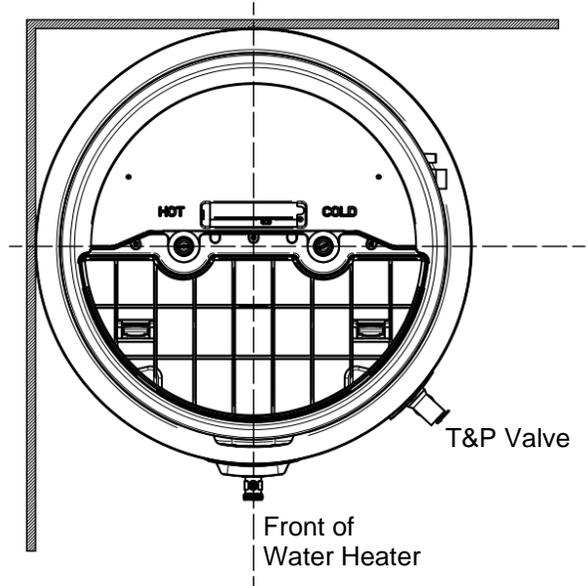
Minimum Required Clearances

NOTE: Installations in a confined space, or installations where the recommended service clearances are not met, will lead to higher power consumption (increased use of resistance heating elements and/or heat pump efficiency reduction).

Corner Installation

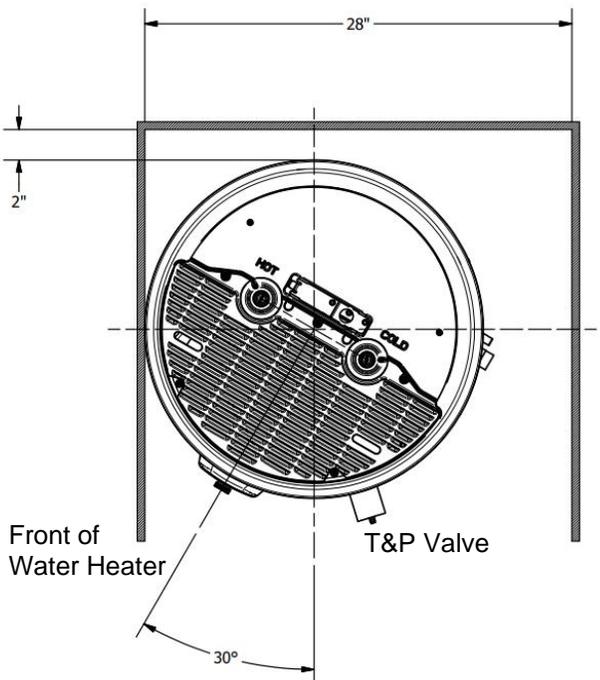


Model RE2H50S

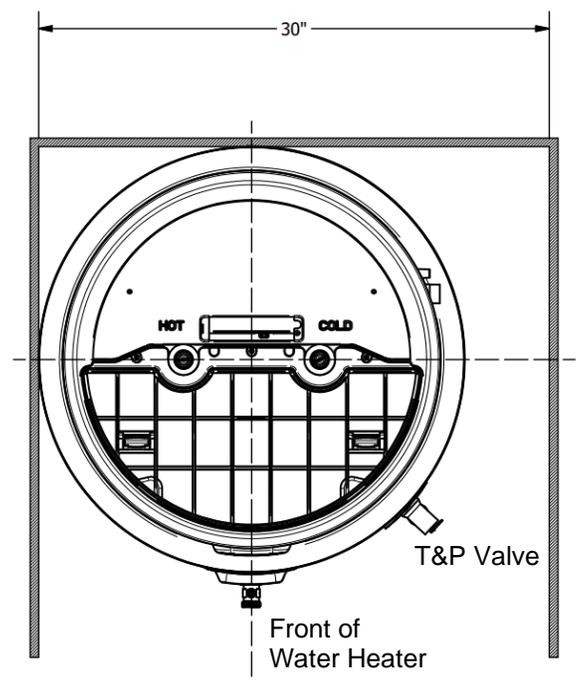


Model RE2H65T & RE2H80T

Alcove Installation



Model RE2H50S

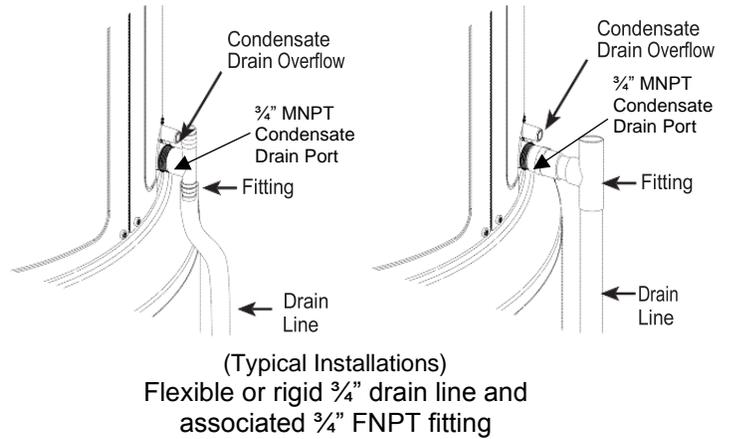


Model RE2H65T & RE2H80T

Installation Instructions cont.-

Condensate Drain Connection

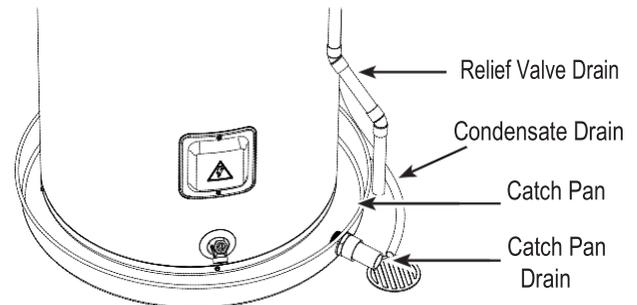
This unit has a condensate drain; therefore, a floor or other drain no higher than 36 in (91.4 cm) above the floor must be available. It must be in close proximity to the water heater to allow for the shortest possible drain line with minimal turns. The drain must meet state and local codes. It is important to install a $\frac{3}{4}$ " FNPT fitting suitable for either rigid or flexible drain line to the primary drain port coming off the side of the unit. Diameter reductions from a $\frac{3}{4}$ " drain line are discouraged.



Ensure that the rigid or flexible drain line maintains a downward slope to allow for proper gravity drainage of condensate to the drain and to allow for proper function of the condensate drain blockage sensor. If no drain is available, then a common condensate pump with a capacity no less than 1 gallon/day (3.8 L/day) must be purchased and installed. It is important to route the flexible or rigid drain line so that the discharge water cannot contact live electrical parts or cause water damage.

Catch Pan Installation (if required)

Auxiliary catch pan MUST conform to local codes. Catch pan kits are available from the distributor where the water heater was purchased or any water heater supplier. The catch pan should be at minimum 4 in (10.2 cm) larger than the water heater base diameter. To prevent corrosion and improve drain valve access it is recommended that the water heater be placed on risers inside the catch pan.



Thermal Expansion

Determine if a check valve exists in the inlet water line. It may have been installed in the cold water line as a separate backflow preventer, or it may be part of a pressure-reducing valve, water meter, or water softener. A check valve located in the cold water inlet line can cause what is referred to as a "closed" water system. A cold water inlet line with no check valve or backflow prevention device is referred to as an "open" water system. As water is heated, it expands in volume and creates an increase in the pressure within the water system. This action is referred to as thermal expansion."

In an "open" water system, expanding water which exceeds the capacity of the water heater flows back into the city main where the pressure is easily dissipated. A "closed" water system prevents the expanding water from flowing back into the main supply line, and the result of thermal expansion can create a rapid and dangerous pressure increase in the water heater and system piping. This rapid pressure increase can quickly reach the safety setting of the relief valve, causing it to operate during each heating cycle.

Thermal expansion, and the resulting rapid and repeated expansion and contraction of components in the water heater and piping system, can cause premature failure of the relief valve, and possibly the heater itself. Replacing the relief valve will NOT correct the problem.

The suggested method of controlling thermal expansion is to install an expansion tank in the cold water line between the water heater and the check valve. The expansion tank is designed with an air cushion built in that compresses as the system pressure increases, thereby relieving the over-pressure condition and eliminating the repeated operation of the relief valve. Other methods of controlling thermal expansion are also available. Contact a qualified service provider for additional information regarding this subject.

Water Supply Connections

Note: BEFORE PROCEEDING WITH THE INSTALLATION, CLOSE THE MAIN WATER SUPPLY VALVE.

After shutting the main water supply valve, open a faucet to relieve the water line pressure to prevent any water from leaking out of pipes while making the water connections to the water heater. After the pressure has been relieved, close the faucet. Refer to the typical installation illustration below for suggested set-up. The HOT and COLD water connections are clearly marked and are 3/4" NPT on all models. When connecting to the inlet/outlet ports, the use of 3/4" female NPT tapered thread fittings with use of thread sealant is recommended. The installation of unions is recommended on the hot and cold water connections so that the water heater may be easily disconnected for servicing if necessary.

Note: Install a shut-off valve in the cold water line near the water heater. This will enable easier service or maintenance of the unit later.

⚠ CAUTION

Do NOT apply heat to the HOT or COLD water connections. If sweat connections are used, sweat tubing to adapter before fitting the adapter to the cold water connections on heater. Any heat applied to the hot or cold water connection will permanently damage the internal plastic lining in these ports.

IMPORTANT!

Failure to install and maintain a new, listed 3/4" x 3/4" temperature-pressure relief valve will release the manufacturer from any claim which might result from excessive temperature and pressures.

If this water heater is installed in a closed water supply system, such as the one having a back-flow preventer in the cold water supply, provisions shall be made to control thermal expansion. Do NOT operate this water heater in a closed system without provisions for controlling thermal expansion. Your water supplier or local plumbing inspector should be contacted on how to control this situation.

After installation of water lines, open the main water supply valve and fill the water heater. While the water heater is filling, open several hot water faucets to allow air to escape from the water system. When a steady stream of water flows through the faucets, close them, and check all water connections for possible leaks. NEVER OPERATE THE WATER HEATER WITHOUT FIRST BEING CERTAIN IT IS FILLED WITH WATER.

⚠ CAUTION

For protection against excessive temperatures and pressure, install temperature and pressure protective equipment required by local codes, but not less than a combination temperature and pressure relief valve certified by a nationally recognized testing laboratory that maintains periodic inspection of production of listed equipment or materials, as meeting the requirements for Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems, ANSI Z21.22. The combination temperature and pressure relief valve shall be marked with a maximum set pressure, not to exceed the maximum working pressure of the water heater. The combination temperature and pressure relief valve shall also have an hourly rated temperature steam BTU discharge capacity not less than the hourly input rating of the water heater.

Install the combination temperature and relief valve into the opening provided and marked for this purpose in the water heater.

Note: Some models may already be equipped or supplied with a combination temperature and pressure relief valve. Verify that the combination temperature and pressure relief valve is in compliance with the local codes. If the combination temperature and pressure relief valve does not comply with local codes, replace it with one that does. Follow the installation instructions above on this page.

Install a discharge line so that water discharged from the combination temperature and pressure relief valve will exit within 6 in (15.3 cm) above, or any distance below the structural floor and cannot contact any live electrical part. The discharge line is to be installed to allow for complete drainage of both the temperature and pressure relief valve and the discharge line. The discharge opening must not be subjected to blockage or freezing. Do NOT thread, plug, or cap the discharge line. It is recommended that a minimum of 4 in (10.2 cm) be provided on the side of the water heater for servicing and maintenance of the combination temperature and pressure relief valve.

Do NOT place a valve between the combination temperature and pressure relief valve and the tank.

⚠ WARNING

Hydrogen gas can be produced in a hot water system served by this water heater when there has been no usage for a long period of time (generally two weeks or more). **HYDROGEN GAS IS EXTREMELY FLAMMABLE.** To reduce the risk of injury under these conditions, it is recommended that the hot water faucet be opened for several minutes at the kitchen sink before using any electrical appliance connected to the hot water system. If hydrogen is present, there will probably be an unusual sound, such as air escaping through the pipe, as the water begins to flow. There should be NO smoking or open flame near the faucet at the time it is open.

⚠ DANGER

There is a hot water scald potential if the control water temperature is set too high. Households with small children, disabled, or elderly persons may require a 120°F (49°C) or lower thermostat setting to prevent contact with "HOT" water.

⚠ CAUTION

The cause of the high temperature condition must be investigated by a qualified service technician and corrective action must be taken before placing the water heater in service again.

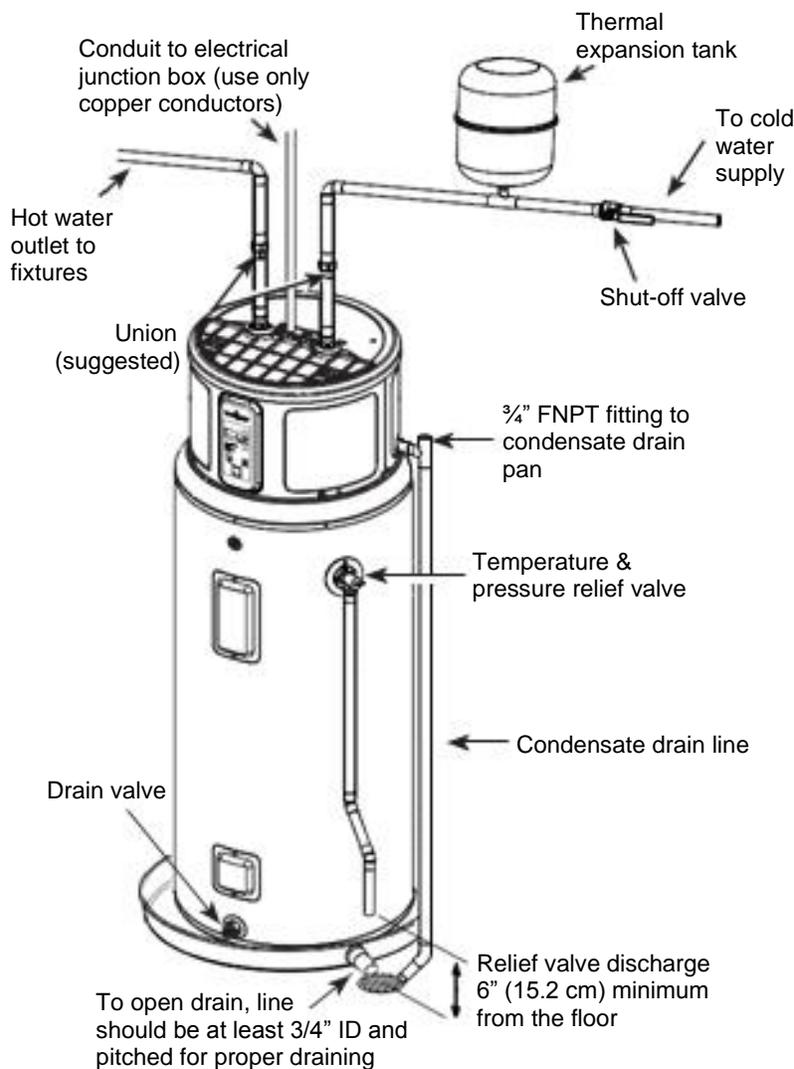
Safety Controls

The water heater is equipped with a temperature-limiting control (TCO) that is located above the heating element in contact with the tank surface. If for any reason the water temperature becomes excessively high, the temperature-limiting control (TCO) breaks the power circuit to the heating element. Once the control opens, it must be reset manually. Resetting of the temperature limiting controls should be done by a qualified service technician.

To reset the temperature-limiting control:

1. Turn OFF the power to the water heater.
2. Remove the jacket access panel(s) and insulation. The thermostat protective cover should NOT be removed.
3. Press the red RESET button.
4. Replace the insulation and jacket access panel(s) before turning on the power to the water heater.

Typical Installation



Temperature and Pressure Relief Valve

⚠ WARNING

The pressure rating of the relief valve must not exceed 150 PSI (1.03 kPa) or the maximum working pressure of the water heater as marked on the rating plate.

A new combination temperature and pressure relief valve, complying with the Standard for Relief Valves and Automatic Gas Shut-off Devices for Hot Water Supply Systems, ANSI Z21.22, is supplied and must remain installed in the opening provided and marked for this purpose on the water heater. **NO** valves of any type should be installed between the relief valve and the tank. Local codes shall govern the installation of relief valves. The BTUH rating of the relief valve must **NOT** be less than the input rating of the water heater as indicated on the rating label located on the front of the water heater (1 watt = 3.412 BTUH).

Connect the outlet of the relief valve to a suitable open drain so that the discharge water cannot contact live electrical parts or persons and to eliminate potential water damage.

Piping used should be of a type approved for hot water distribution. The discharge line must be no smaller than the outlet of the valve and must pitch downward from the valve to allow complete drainage (by gravity) of the relief valve and discharge line. The end of the discharge line should not be threaded or concealed and should be protected from freezing. No valve of any type, restriction, or reducer coupling should be installed in the discharge line.

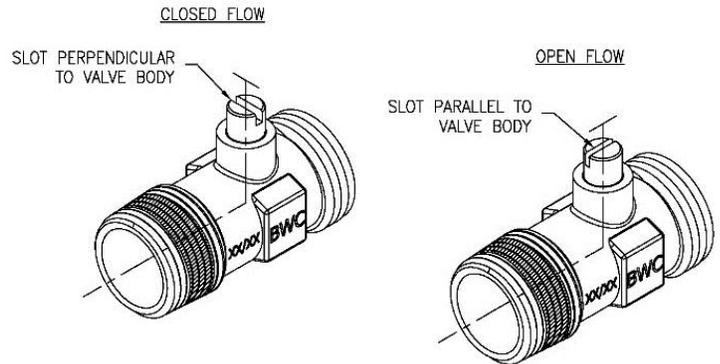
⚠ CAUTION

For protection against excessive temperatures and pressure, install temperature and pressure protective equipment required by local codes, but not less than a combination temperature and pressure relief valve certified by a nationally recognized testing laboratory that maintains periodic inspection of production of listed equipment or materials, as meeting the requirements for Relief Valves and Automatic Gas Shutoff Devices for Hot Water Supply Systems, ANSI Z21.22. The combination temperature and pressure relief valve shall be marked with a maximum set pressure, not to exceed the maximum working pressure of the water heater. The combination temperature and pressure relief valve shall also have an hourly rated temperature steam BTU discharge capacity not less than the hourly input rating of the water heater.

Install the valve into an opening provided and marked for this purpose in the water heater, and orient it or provide tubing so that any discharge from the valve exits only within 6 in (15.2 cm) above, or at any distance below the structural floor, and does **NOT** contact any live electrical part. The discharge opening must not be blocked or reduced in size under any circumstances.

To Fill the Water Heater:

1. Close the water heater drain valve. This water heater utilizes a ball valve; when closing the valve, the stem will spin indefinitely. Confirm it is closed by ensuring the slot on the stem is perpendicular to the valve body.
2. Open the cold water supply shut-off valve.
3. Open several hot water faucets to allow air to escape from the system.
4. When a steady stream of water flows from the faucets, the water heater is filled. Close the faucets and check for water leaks at the water heater drain valve, combination temperature pressure relief valve, and the hot and cold water connections.



“F11” Fault Code During Installation: If the unit is powered on without a full tank, the error code “F11” will appear. Turn the power OFF, finish filling the tank with water, then turn on the power back ON.

NOTE: The Dry Tank Detection feature on the tank is for the aid of the installer and should **NOT** be used as the primary control to prevent operation with an empty or partially filled tank. Power should **NEVER** be applied to the water heater until the installer has verified that the tank is filled, and all air has been purged from the system.

Electrical Notices: Do **NOT** incorrectly wire electrical connections. 240 VAC or 208 VAC must be applied across L1 and L2 wires. Failure to do so will void the warranty and can result in 120 VAC applied to water heater, which may damage the compressor or other electrical components. If the 4-conductor wire is supplied to the water heater, then cap the neutral, and connect the remaining wires.

NOTE: Regarding Utility Power-Management Devices (sometimes called Peak Load Reduction Switches) – Some power-management switching devices or even some basic timer switches exist that reduce voltage from 240 VAC to 120 VAC during high-electricity-demand periods. These devices must be removed from the circuit providing power to the water heater because of the potential water heater damage noted above. Switching devices which cut power from 240 VAC to 0 VAC on a periodic basis is acceptable.

“bAd line” Fault Code During Installation: If a “bAd line” is shown on the display, the water heater is not receiving the correct voltage as a result of incorrect wiring. To correct this fault, turn the power OFF to the water heater, correct the wiring issue, then turn the power back ON.

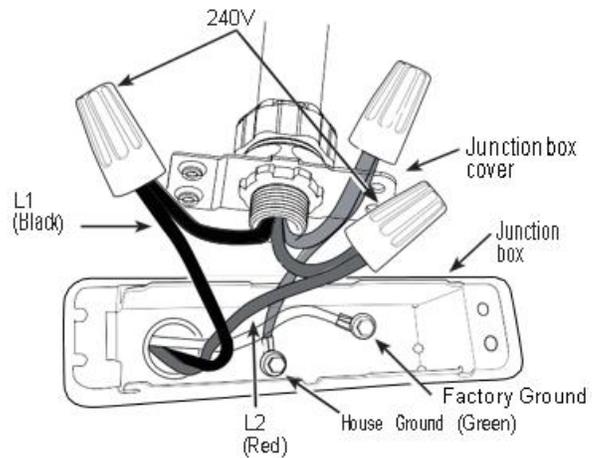
Electrical Connections

A separate branch circuit with copper conductors, overcurrent protective device, and suitable disconnect must be provided by a qualified electrician. All wiring must conform to local codes or latest edition of National Electrical Code ANSI/NFPA 70.

The water heater is completely wired to the junction box at the top of the water heater. An opening of 1/2" electrical fitting is provided for field wiring connections. The voltage requirements and wattage load from the water heater are specified on the rating label on the front of the water heater.

The branch circuit wiring should include either:

1. Metallic conduit or metallic sheathed cable approved for use as a grounding conductor and installed with fittings approved for the purpose.
2. Nonmetallic sheathed cable, metallic conduit, or metallic sheathed cable not approved for use as a ground conductor shall include a separate conductor for grounding. It should be attached to the ground terminals of the water heater and the electrical distribution box.



To connect power to the water heater:

1. Turn the power OFF.
2. Remove the screw(s) holding the junction box top cover.
3. Install L1 to L1, L2 to L2, and ground to the **green** ground wire connected to the bottom of the junction box.

Note: Install electric connections according to local codes or latest edition of National Electrical Code ANSI/NFPA 70.

⚠ WARNING

Proper ground connection is essential. The presence of water in the piping and water heater does NOT provide sufficient conduction for a ground. Nonmetallic piping, dielectric unions, flexible connectors, etc., can cause the water heater to be electrically isolated. Do NOT disconnect factory ground.

The manufacturer's warranty does NOT cover any damage or defect caused by installation, attachment or use of any type of energy-saving or other unapproved devices into, onto, or in conjunction with the water heater. The use of unauthorized energy-saving devices may shorten the life of the water heater and may endanger life and property. The manufacturer disclaims any responsibility for such loss or injury resulting from the use of such unauthorized devices.

If local codes require external application of insulation blanket kits, the manufacturer's instructions included with the kit must be carefully followed.

Application of any external insulation, blankets or water pipe insulation to this water heater will require careful attention to the following:

- **Do NOT** cover the temperature and pressure-relief valve.
- **Do NOT** cover access panels to the heating elements.
- **Do NOT** cover the electrical junction box of the water heater.
- **Do NOT** cover the operating or warning labels attached to the water heater or attempt to relocate them on the exterior of the insulation blanket.
- **Do NOT** block the air inlet/outlets in the top covers or rear of the unit.

Note: This guide recommends minimum branch circuit sizing based on the National Electric Code. Refer to wiring diagrams in this manual for field wiring connections.

Branch Circuit Sizing Guide

Total Water Heater Wattage	Recommended Over-Current Protection (fuse or circuit breaker amperage rating)				Total Water Heater Wattage	Copper Wire Size AWG Based on N.E.C. Table 310-16 (167°F/75°C.)			
	208V	240V	277V	480V		208V	240V	277V	480V
3,000	20	20	15	15	3,000	12	12	14	14
4,000	25	25	20	15	4,000	10	10	12	14
4,500	30	25	25	15	4,500	10	10	10	14
5,000	30	30	25	15	5,000	10	10	10	14
5,500	35	30	25	15	5,500	8	10	10	14
6,000	40	35	30	20	6,000	8	8	10	12
8,000	50	45	40	25	8,000	8	8	8	10
9,000	-	50	45	25	9,000	-	8	8	10
10,000	-	-	50	30	10,000	-	-	8	10
11,000	-	-	50	30	11,000	-	-	8	10
12,000	-	-	-	35	12,000	-	-	-	8

Installation Checklist

1. **Tank location:**
- Does room size require a louvered door, ducting kit, or similar ventilation? 10 ft x 10 ft x 7 ft or 700 ft³ (19.8 m³), or 240 in² (0.15 m²) open air-flow area needed.
 - 7 in (17.5 cm) clearance at the rear of the unit and at least 7 in (17.5 cm) clearance around the sides of the unit. 6 in (15.2 cm) clearance for earthquake strap installations, with additional clearance on the opposite side of the unit).
 - **Front** of unit is free and clear.
 - Is the water heater level? If no, add shims under the base of the unit to ensure proper function of sensors.
2. Verify Air Filter is installed (located in packaging).
3. **Plumbing connections:**
- Ensure that air filter removal is not prevented.
 - Check for leaks after filling the tank with water, when water is or isn't flowing.
4. **Condensate lines are in place:**
- Main flexible or rigid drain line must be installed and directed to a drain or condensate pump. Reducer fittings are **not** recommended.
5. **Temperature and pressure-relief valve** is working and drain line completed per local code.
6. **Electrical:**
- Verify 208/240 VAC to L1 and L2 at tank.
 - Ensure that the electrical connection does **not** prevent air filter removal.
7. Verify that the control panel displays 120°F (49°C) in Hybrid Mode. Assist user in how to adjust temperature and modes (see "Water Temperature Adjustment" section).

What to Expect for “Normal Startup” in Hybrid Mode

After the unit has been installed, with all electrical and water connections secure and checked, then the unit should be filled with water (vent tank by opening a hot water faucet somewhere in home to allow tank to fully fill with water). Once the tank is full and power is energized, you may experience the following:

Elapsed Time	Water Heater Actions	Comments
0 to 2 minutes	Unit will go through self-check and display countdown. Fan will turn on after 1 minute.	This 2-minute off-time prevents compressor damage. A clicking noise may be heard during startup.
2 to 22 minutes	Compressor turns on. Fan continues to run.	This 20-minute period is used to ensure the tank is full of water (dry-fire prevention algorithm).
22 minutes and beyond	Compressor turns off (fan will run for 20 minutes after any compressor operation). Normal heating operation resumes.	The water heater is operating in Hybrid mode. Quickly provides initial amount of hot water with heating elements, then switches to efficient heat pump for majority of heating.

Note: The heat pump operating range is 35°F to 120°F (2°C to 49°C). If the ambient temperature is outside of this range, the heat pump will turn off and the electric elements will be used until the ambient temperature returns to within the operating range. During commissioning, a self-test countdown number will be displayed indicating the time remaining before the unit begins normal operation.

General Operation

Before closing the switch to allow electric current to flow to the water heater, make certain that the water heater is full of water and that the cold water inlet valve is open. Complete failure of the heating element(s) will result if they are not totally immersed in water at all times. Failure of the element(s) due to dry-firing is NOT covered by warranty.

When the switch is closed, the operation of this electric water heater is automatic. The thermostats are preset to the “HOT” setting to provide a water temperature of approximately 120°F (49°C) to reduce the risk of scald injury.

⚠ CAUTION

Scalding may occur within 5 seconds at a temperature setting of 140°F (60°C).

Care must be taken whenever using hot water to avoid scalding injury. Certain appliances require high temperature hot water (such as dishwashers and automatic clothes washers).

To Fill the Water Heater:

1. Close the water heater drain valve. This water heater utilizes a ball valve; when closing the valve, the stem will spin indefinitely. Confirm it is closed by ensuring the slot on the stem is perpendicular to the valve body.
2. Open the cold water supply shut-off valve.
3. Open several hot water faucets to allow air to escape from the system.
4. When a steady stream of water flows from the faucets, the water heater is filled. Close the faucets and check for water leaks at the water heater drain valve, combination temperature pressure relief valve, and the hot and cold water connections.

To Drain the Water Heater:

Should it become necessary to completely drain the water heater, make sure you follow the steps below.

1. Turn OFF the power to the unit. The electric heating elements will become damaged if operated without water.
2. Attach a hose to the drain valve located at the bottom of the unit and direct the hose to a drain.
3. Turn OFF the cold water supply.
4. Admit air to the tank by opening a hot water faucet or lifting the handle on the relief valve.
5. Open the drain valve with a flat screwdriver.

Maintenance

IMPORTANT!

The water heater should be inspected annually at minimum by a qualified service technician for damaged components. Do **NOT** operate this water heater if any part is found damaged.

Shut off the electric power whenever the water supply to the water heater is off. Shut off the electric power and water supply, drain the water heater completely to prevent freezing whenever the building is left unoccupied during the cold winter months. In order to ensure efficient operation and long tank life, drain the water heater at least once a month through the drain valve until the water runs clear. Failure to do this may result in noisy operation and lime and sediment buildup in the bottom of the tank. Check the temperature pressure relief valve to ensure that the valve has not become encrusted with lime. Lift the lever at the top of the valve several times until the valve seats properly without leaking and operates freely.

⚠ WARNING

When lifting the temperature pressure relief valve lever, hot water will be released under pressure. Be certain that any released water does not result in bodily injury or property damage. The magnesium anode rod should be inspected periodically and replaced when necessary to prolong tank life.

Note: If the temperature and pressure-relief valve on the hot water heater discharges periodically, this may be due to thermal expansion in a closed water system. Contact the water supplier or your plumbing contractor on how to correct this. Do **not** plug the relief valve outlet.

Properly maintained, your water heater will provide years of dependable trouble-free service. It is suggested that the following yearly preventive maintenance program be established.

1. Inspect Temperature & Pressure Relief Valve
 - a. Once a year, it is recommended to lift and release the lever handle on the temperature and pressure-relief valve, located on the front-right side of the water heater, to make certain the valve operates freely. Allow several gallons to flush through the discharge line to an open drain.
2. Inspect heating elements, TCO, and wiring to each.
 - a. Once a year, it is recommended to inspect the heating elements, TCO, and wiring to each. Inspection should be completed by service personnel qualified in electrical appliance repair.
 - b. Most electrical appliances, even when new, make some sound when in operation. If the hissing or singing sound level increases excessively, the electric heating element may require cleaning. Contact a qualified installer or plumber for inspection.
3. Drain and flush the water heater tank.
4. Clean the air filter.
5. Clear the condensate drain pan the drain lines.
6. Anode rod(s) must be removed and inspected.

⚠ CAUTION

For your safety, do **NOT** attempt to repair the water heater or any of its parts. Refer any repairs to a qualified service technician.

Maintenance cont.-

Draining and Flushing the Water Heater

⚠ DANGER

Shut **OFF** power to the water heater before draining water to avoid risk of shock.

⚠ DANGER

Before manually operating the relief valve, make certain no one will be exposed to the danger of coming in contact with the hot water released by the valve. The water may be hot enough to scald person(s) nearby. The water should be released into a suitable drain to prevent injury or damage.

A water heater's tank can act as a settling basin for solids suspended in the water. It is therefore not uncommon for hard water deposits to accumulate in the bottom of the tank. To clean the tank of these deposits, it is recommended to drain and flush the water heater tank once a year.

Draining the Water Heater

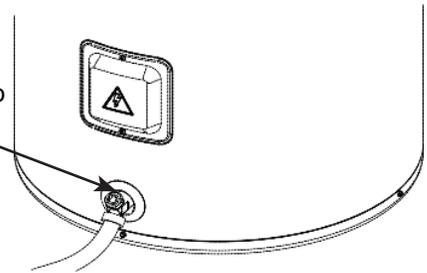
1. Turn OFF the power to the unit. The electric heating elements will become damaged if operated without water.
2. Attach a hose to the drain valve located at the bottom of the unit and direct the hose to a drain.
3. Turn OFF the cold water supply.
4. Admit air to the tank by opening a hot water faucet or lifting the handle on the relief valve.
5. Open the drain valve with a flat screwdriver.

Flushing the Tank

Flushing should be done with an empty tank to promote additional removal of sediment.

1. Follow the steps above to drain the water heater.
2. Once the water heater is empty, with the drain valve open and hose attached to the drain valve, turn on the cold water supply.
3. Allow several gallons to flush through the drain valve and hose to an open drain.
4. Turn OFF the water supply and allow any water remaining in the tank to drain.
5. Repeat steps 3 and 4 until the water runs clear.
6. Close the drain valve and fill the tank **BEFORE** returning power to the unit. The tank is full when water runs out of a nearby open hot water faucet.

Use a flat screwdriver to turn valve



Cleaning the Filter

In the Hybrid and Heat Pump (Only) modes, the water heater pulls air through the filter and out the back of the unit. The filter is in place to protect the evaporator from dirt and dust.

A clean air filter is important to get the highest efficiency. Occasionally this filter will need to be cleaned. When the filter requires cleaning, the **red** light above the FILTER button will illuminate and an alarm will sound.

IMPORTANT!

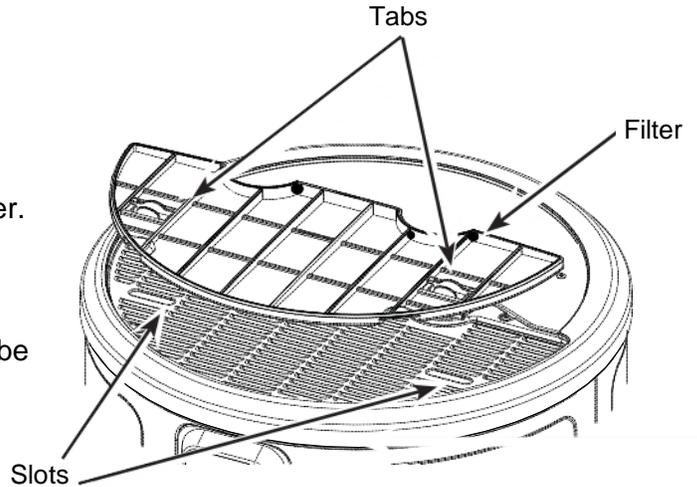
Filter must be cleaned when the alarm is displayed. A dirty filter will make the system work harder and result in a reduction of efficiency and cause possible damage to the system. In order to get the best energy efficiency available, make sure the filter is clean.

Note: If the filter gets too dirty, the unit will automatically switch to Electric (Only) Mode and energy savings will be lost.

Maintenance cont.-

To clean the filter:

1. Leave the power ON.
2. Remove the filter from the top of the unit.
3. Squeeze the two tabs and lift to remove the air filter. Once it has been removed, the filter can be vacuumed or wiped clean with a damp cloth or rinsed with warm water.
4. Once the filter has been cleaned and dried, it can be replaced by aligning it into the slots into the top of the unit and pushing it down into place.
5. After the clean filter has been reinstalled, press and hold the FILTER button to reset the alarm.



The unit will automatically revert to the previously selected operating mode. If a heating cycle is active when the filter alarm is reset, it will continue in Electric (Only) mode to finish the cycle, then automatically revert to the previously selected mode.

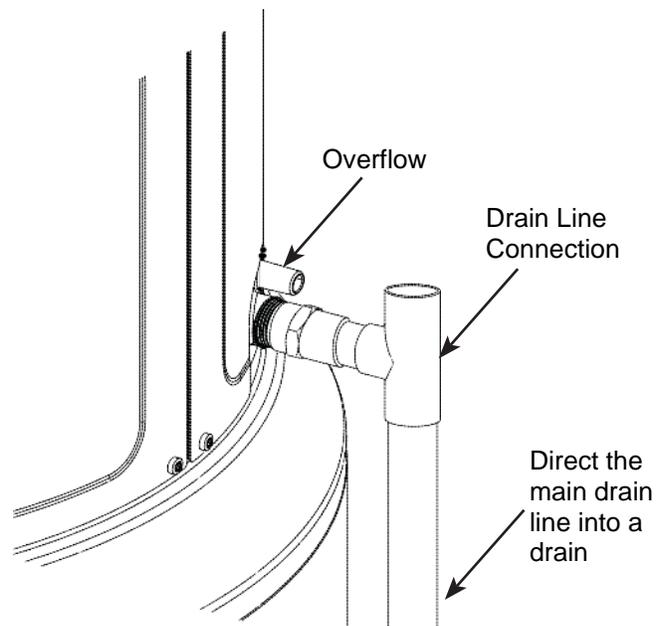
Note: If the dirty filter alarm returns within a few days after cleaning and resetting, it may be an indication of a refrigerant leak. Further diagnosis by a service technician is necessary.

Clearing the Condensation Drain Tube

The main drain is intended to remove all condensate. If it is clogged, the heat pump will stop operating, the display will show F20, and an alarm will sound. Press any button to silence the alarm, then clear the condensate drain by removing any drain lines and connections and clearing debris. Reattach drain lines and connections, then allow the water heater to run.

The water heater will continue to produce hot water using the backup resistance heating elements until the condensate drain has been cleared and is able to drain properly. Once the drain has been cleared, the unit will then be able to operate the heat pump again.

Periodically inspect the drain lines and clear any debris that may have collected in the lines.



Anode Rod

Anode rods are designed and installed to protect and extend the life of residential water storage tanks. The anode rod must be removed from the water heater's tank and inspected annually and replaced when more than 6 in (15.2 cm) of core wire is exposed at either end of the rod.* Artificially softened water will cause the anode rod to consume more rapidly.

Failure to replace the anode rod when consumed risks voiding the warranty for the tank. Warranty coverage for all other components remains intact and is unaffected by this maintenance requirement. The replacement anode rod, and the inspection for consumption are not covered by warranty.

Due to shock hazard and to prevent accidental water leaks, this inspection should be done by a qualified servicer or plumber and requires that the electric power and cold water supply be turned OFF before servicing the anode rod.

Do **NOT** remove the anode rod from the water heater's tank except for inspection and/or replacement, as operation with the anode rod removed will shorten the life of the glass-lined tank and will void warranty coverage.

Anode Rod Maintenance and Service

⚠ CAUTION

This information is intended to use by individuals possessing adequate background of electrical, electronic and mechanical experience. Any attempt to repair a major appliance may result in personal injury and property damage. The manufacturer or seller cannot be responsible for the interpretation of this information, nor can it assume any liability in connection with its use.

To Service the Anode Rod:

1. Disconnect power, shut OFF the water supply, and partially drain one or two gallons from the water heater through the lower drain valve.
2. Remove the filter, trim ring, and front top cover as shown in **Illustration A**.
3. Reinstall the trim ring and place a protective layer of tape on sheet metal edges as shown in **Illustration B**.
4. If present, remove insulation to uncover the anode rod as shown in **Illustration C**.
5. Using a 1 1/16" socket and extension, unscrew the anode rod, then lift out to inspect as shown in **Illustration D**.
6. To install the anode rod, seal the threads with soft set sealant, thread into the port using the torque wrench tighten to 50± 5ft-lbs of torque.
7. Turn water supply ON, open a tap to remove any air in the plumbing system, inspect for leaks, then reassemble the unit in reverse order as shown in **Illustration A** and turn the power ON.

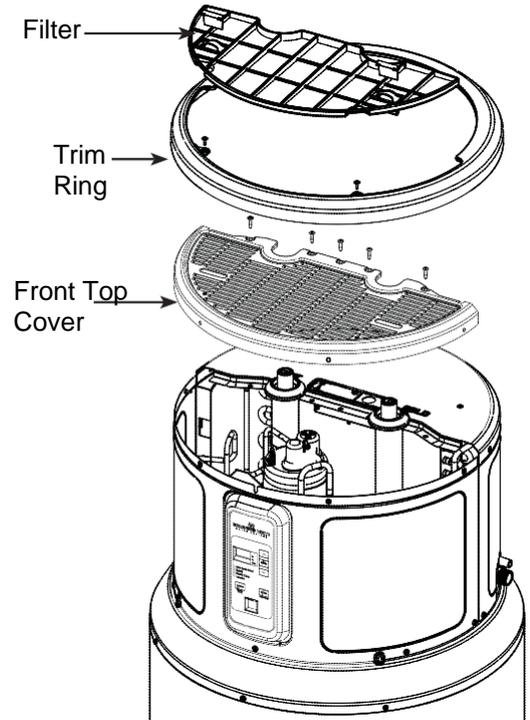


Illustration A

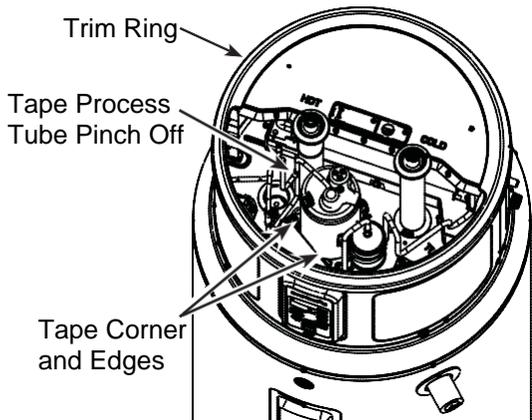


Illustration B

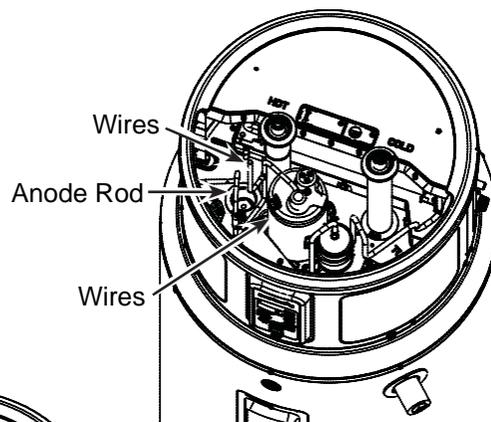


Illustration C

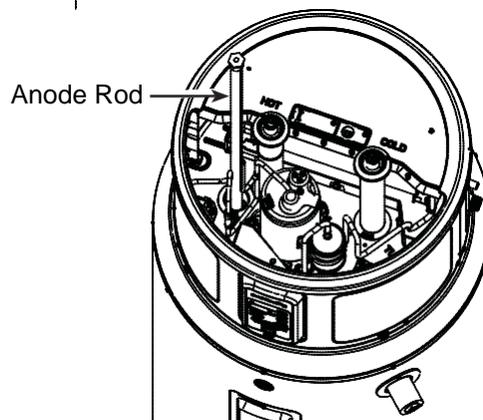


Illustration D

Maintenance cont.-

Contact your local plumbing supplier or plumbing professional for replacement parts or contact the company at the address displayed on the rating plater of the water heater.

For faster and better service, please provide the part name, model, and serial number(s) of the water heater(s) when ordering parts.

READ THE WARRANTY FOR A FULL EXPLANATION OF THE LENGTH OF TIME THAT PARTS AND THE WATER HEATER ARE WARRANTED.

Manufactured under one or more of the following U.S. Patents: 5,277,171; 5,341,770; 5,372,185; 5,485,879; 5,574,822; 5,596,952; 5,660,165; 5,682,666; 5,761,379; 5,943,984; 5,954,492; 5,988,117; 6,056,542; 6,142,216; 6,442,178; 6,684,821; 6,935,280; 7,063,132; 7,063,133; 7,007,748; 7,270,087; 7,334,419; 7,337,517; 7,409,925; 7,458,341; 7,559,293; 7,621,238; 7,634,976; 7,650,859; 7,665,210; 7,665,211; 7,699,026; 7,866,168; 7,900,589; 7,971,560; 7,992,526 8,082,888; 8,146,772; Other U.S. and Foreign patent applications pending. Current Canadian Patents: 2,092,105; 2,107,012; 2,108,186; 2,112,515; 2,143,031; 2,239,007; 2,262,174; 2,314,845; 2,409,271; 2,476,685; 2,504,824; 2,548,958

Refer to the parts list on www.bradfordwhite.com for a complete parts listing and expanded views of the models covered in this manual.

Complete the following information and retain for future reference:

Model No: _____

Serial No: _____

Service Phone

Days: _____ Nights: _____

Address: _____

Supplier: _____

Supplier Phone No.: _____

Frequently Asked Questions

Filter:

Q: Why is there a filter?

A: In Hybrid and Heat Pump (Only) the unit moves air through the system. The filter protects the unit from dirt and debris. A clean air filter improves efficiency.

Q: How do I clean the filter?

A: Leave the power ON and remove filter from top of unit. The filter can be vacuumed clean or rinsed with warm water. Once cleaned, reset the alarm by pressing and holding the FILTER button. A dirty filter will reduce water heater efficiency.

Modes:

Q: What is "Heat Pump (Only)"?

A: Heat Pump (Only) is the **most** efficient mode. It takes heat from the air to heat water, cooling the surrounding air. It has slower recovery but is the **most** efficient mode.

Q: What is "Hybrid"?

A: Hybrid Mode combines benefits of Heat Pump (Only) with the speed and power of Standard Electric. This provides great performance with less energy.

Q: What is "Vacation" Mode?

A: If you are gone for an extended period, this mode lowers the water temperature to reduce energy used. Unit will switch to the previous mode one day before you get back.

Q: What is "Electric (Only)"?

A: Electric (Only) mode uses only the resistance heaters to heat the water. This gives faster hot water recovery than Hybrid mode but uses more energy. This mode operates without the fan, stopping the cool air normally discharged during heat pump operation.

Q: Why does the Electric (Only) green LED flash?

A: In this mode, the green LED light will flash after 48 hours as an indication that the unit is NOT operating in the most energy efficient mode.

Operation:

Q: Why can I hear the unit run?

A: In the most energy-efficient models, Heat Pump (Only) and Hybrid, the method used to heat the water used a fan that can be heard while running.

Q: The heat pump is not running its normal length of time. What causes this?

A: Under some conditions, the water heater will operate using the electric elements instead of the heat pump to protect your unit and ensure hot water is available to you. These conditions include extreme cold ambient temperature (<35°F), extreme hot ambient temperatures (>120°F), or very low voltage conditions. The unit will return to normal operation when conditions permit.

Q: Why does the water heater display a number other than the temperature setpoint at startup or following a power loss?

A: During commissioning, a self-test countdown number will be displayed indicating the time remaining before the unit begins normal operation. It is heating water during this time.

Q: Why isn't the temperature setting always displayed on the temperature setpoint at startup or following a power loss?

A: The control will only display the temperature setting when a heat source is called for by the system and will turn off when the heating elements and heat pump are not running. Pressing any button will wake the control and display the temperature setpoint. The display screen will go blank after a period of inactivity in order to conserve energy.

Q: Why is one of the operating mode LEDs flashing?

A: In Hybrid Mode, the Electric (Only) Mode LED will flash anytime the heating elements are active, such as during the initial recovery from a large draw. In Electric (Only) Mode, the operating mode LED will flash after 48 hours as an indication that the unit is not operating in the most energy efficient mode. These are both normal conditions and do **NOT** indicate an operating issue.

Fault Codes

Note: It's important to note that fault codes should only be used to help identify components which require testing. *Never replace a part based solely on a fault code.* The control can generate a false fault if the right conditions exist. Contact a certified technician to assess and repair the water heater based on the fault codes.

Fault Code Displayed	Fault Counts Before Code Displayed	Condition
FC	10	Control checks to ensure evaporator is free of frost. Continuously verifies that T3a sensor (evaporator inlet temperature) is greater than 20°F after 30 minutes of run time.
Fd	10	Control checks to ensure evaporator superheat* is OK (controlled by EEV). Continuously verifies the temperature difference between T3a sensor (evaporator inlet temperature) and T3b sensor (evaporator outlet temperature) is greater than 5°F after 30 minutes of run time. Control also verifies that T3a is greater than 10°F less than T5 ambient sensor.
FE	10	Control checks to ensure the compressor discharge temperature never exceeds 240°F. Continuously verifies that T4 sensor (compressor outlet temperature) is less than 240°F every minute of run time.
FF	10	Control checks to ensure the EEV is operating properly and valve rotation is within range.
FG	10	Control checks to ensure ambient temperature is within an acceptable range before starting heat pump. Heat pump operating range is 35°F < [T5 ambient] < 120°F. If ambient temperature (as viewed by T5 sensor) is outside of this range, the water heater will switch to Electric/Standard Mode for that heating cycle only. NO fault code is shown on the display.
FI*	10	Control checks to ensure evaporator superheat is <20°F AND the EEV position is <450 after 30 minutes of run time. If outside these limits, this provides an early indication of a refrigerant leak. (Note: Target superheat is generally 10°F, and EEV generally operates at a position much lower than 450).
FJ	10	Control checks to ensure that the AC current draw is ≤ 20.5A while the compressor and lower heating element are both enabled. If current draw is > 20.5A, the compressor will be disabled.
FL	10	Control checks to ensure that T3 and T3b evaporator inlet and outlet temperatures are within 2.5°F of the T5 ambient temperature 20 minutes after defrost begins.
F2	1	T2 tank temperature sensor failure. Just before compressor starts, control checks T2 sensor is within 30°F - 170°F temperature range.
F3	10	Compressor failure. Control energizes compressor, but current sensor detects no current flow.
F4	10	Fan failure.
F5	10	T3a sensor (evaporator inlet temperature) failure. The control detects the thermistor output is at or nearly shorted or open circuit.
F6	10	T3b sensor (evaporator outlet temperature) failure. The control detects the thermistor output is at or nearly shorted or open circuit.
F7	10	T4 sensor (compressor outlet) failure. The control detects the thermistor output is at or nearly shorted or open circuit.

*On some models

Fault codes cont.-

Fault Code Displayed	Fault Counts Before Code Displayed	Condition
F8	10	T5 sensor (ambient temperature) failure. The control detects the thermistor output is at or nearly shorted or open circuit.
F9	10	Lower heating element failure. Control energizes lower element, but current sensor detects no current flow.
F10	10	Upper heating element failure. Control energizes upper element, but current sensor detects no current flow.
F11	1	Dry tank fault. This test is run within the first 22 minutes after the water heater has powered on (The compressor is engaged for 20 minutes after a 2 minute wait for the system to allow the high and low side pressures to equalize). The tank temperature, T2, is read and verified it has not risen more than 5°F. If it has, this indicates there is not enough water in the tank for water heater operation. After 1 failed dry tank test, "F11" is displayed. After 5 failed tests, an audible alarm will sound.
bAd linE F12	1	The voltage is too low at power-up. The control monitors the input line voltage one minute after power-up, and if the voltage is below 155 VAC, the fault code will be displayed.
F13	1	Stuck key fault. This indicates there is a button on the front panel that is stuck down. This button is inoperable. Other buttons work normally. If the button becomes free, the fault code will clear by itself.
Dirty Filter (F14)	5	Filter LED is on, and audible alarm is sounding. Filter is too dirty to enable proper function of water heater. Number of "Dirty Filter" counts are stored in the "F14" code and can be monitored via the control when it is place in Diagnostics Mode. The evaporator is operating at a colder temperature than the ambient temperature as measure by T5.
F15	10	DataFlash fault. The microcontroller has detected a problem in the DataFlash (permanent memory storage).
F16*	1	Anode Depleted. Anode LED is on, and the audible alarm is sounding. The control has calculated that the anode rod has been mostly consumed, or the time in operation has exceeded the replacement timeline threshold.
F17*	1	Anode Depletion miswire condition or shorted to ground. The control has detected that the anode circuit has a corrosion current signal $\leq 0.25\text{mA}$.
F18	10	Current transformer miswired. F3, F9, and F10 fault codes have all occurred during the same heating cycle.
F19	10	Low line voltage.
F20	10	Condensate drain port blocked. Water heater will only operate in standard/electric mode until the drain port is cleared and the sensor is no longer in contact with water.
F21	1	Application Update Failure. A problem occurred while updating the control application.
F22	1	Parametric Data Update Failure. A problem occurred while updating parametric data.
F23	10	Micro A/D Failure. The control has detected a microcontroller input port has failed.

*On some models

ring

Video Doorbell 2



Home Security Begins at the Front Door

Your new Ring Video Doorbell is the start of a Ring of Security around your entire property.

Now, you'll always be connected to your home, so you can watch over your property and answer the door from anywhere.

See who's at your door, prevent crime and protect your home – all from your phone, tablet or PC.

Contents

1. Charging
2. In-app Setup
3. Physical Installation
4. Features
5. Troubleshooting

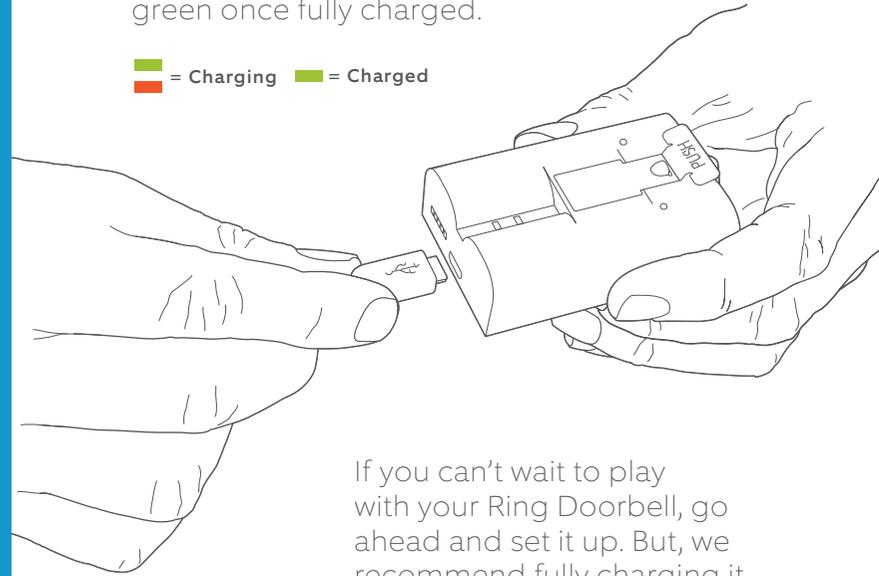
1. Charge the provided battery.

Charge the provided battery

First, fully charge the battery by plugging it into a power source using the provided orange cable.

The small light on top will glow green once fully charged.

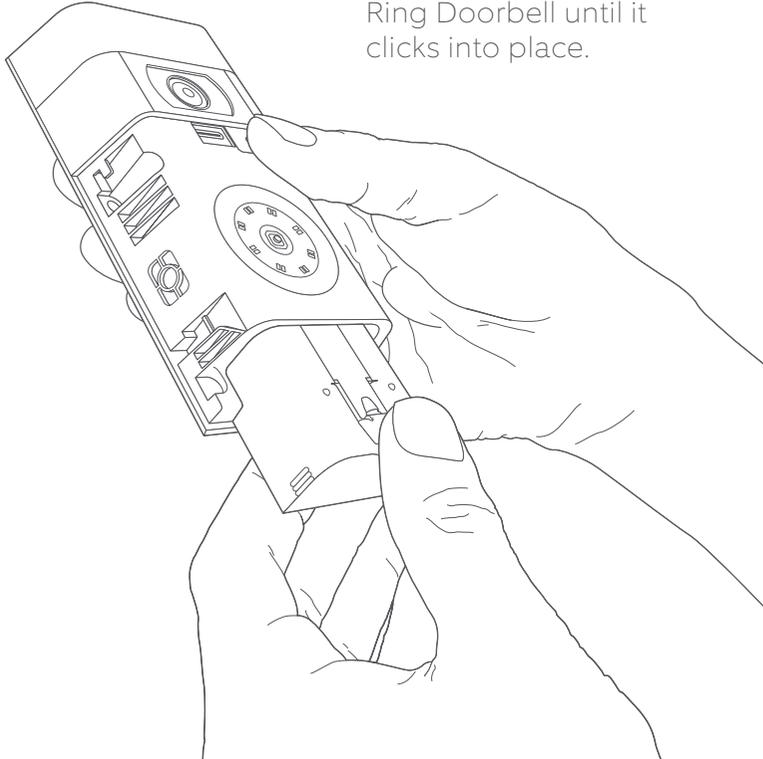
 = Charging  = Charged



If you can't wait to play with your Ring Doorbell, go ahead and set it up. But, we recommend fully charging it before installation.

Insert the battery

After charging, insert the battery in the bottom of your Ring Doorbell 2 until it clicks into place.



2. Set up your Ring Video Doorbell 2 in the Ring app.

Download the Ring app

The Ring app will walk you through setting up and managing your Ring Doorbell.

Search for “Ring” in one of the app stores below, or visit: ring.com/app.



Grab your Wi-Fi password

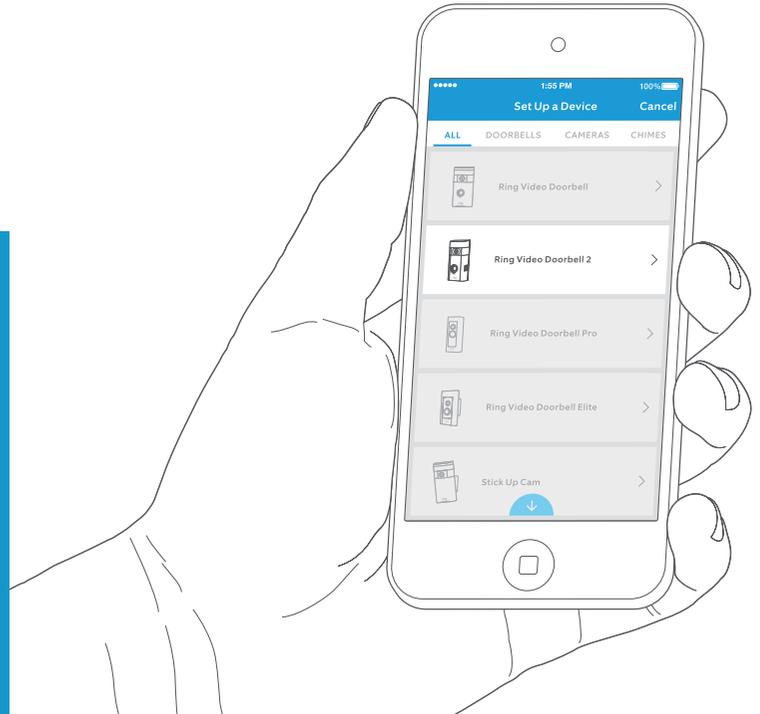
It's required for the in-app setup. Write it down below so it's handy when you need it:

Your Wi-Fi password 

Set up your Ring Video Doorbell near your router

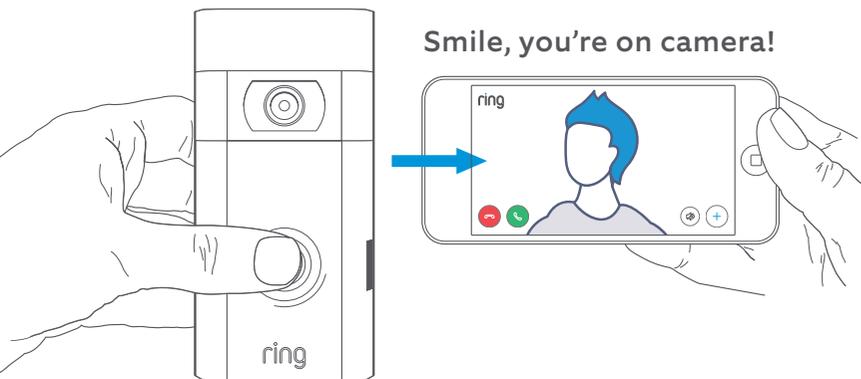
In the Ring app, select **Set Up a Device**.

When prompted, select **Ring Video Doorbell 2** and follow the in-app instructions.



Try it out!

After setup, push the button on the front of your Ring Doorbell to see video from the camera in the Ring app.



Next, test video quality where you will install your Ring Doorbell.

Everything look good? Continue to the next section.

Something not right? Jump ahead to the troubleshooting section.

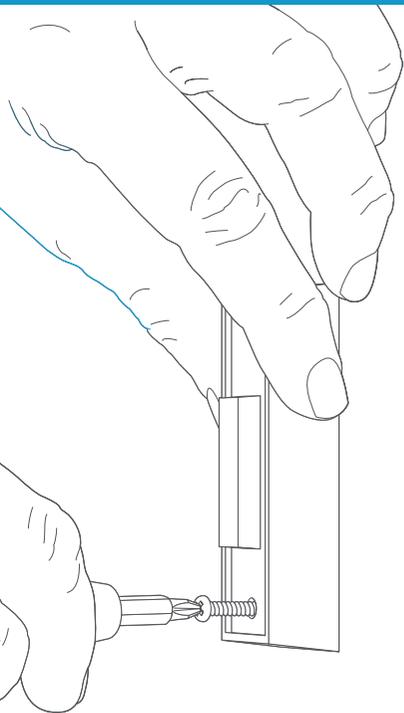
3. Install your Ring Video Doorbell 2 on the wall.

Select an install height

Install your Ring Doorbell four feet off the ground for optimal performance.

If you're connecting to existing doorbell wiring that's higher than four feet, thus limiting where you can install Ring Doorbell, use the provided wedge mount to angle your Ring Doorbell down.





Remove your existing doorbell (optional)

If replacing an existing doorbell, shut off power at the breaker. Then remove it from the wall and disconnect the wires.

i If wiring your Ring Doorbell to an existing doorbell, a transformer with a voltage of 8–24VAC is required. If wiring directly to a transformer, a resistor must be used.

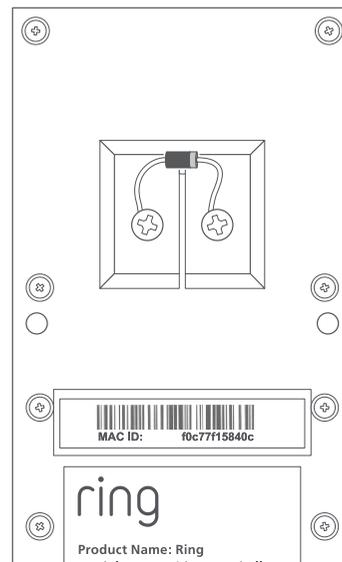
DC transformers and most intercoms are not supported.

Install the diode (optional)

If you're wiring your Ring Doorbell to a **digital doorbell** – you'll know it's digital if it plays a synthesized melody – then install the included diode.

If your existing doorbell is mechanical, **DO NOT** use the diode, as it can damage your existing doorbell.

Not sure? Visit ring.com/diode



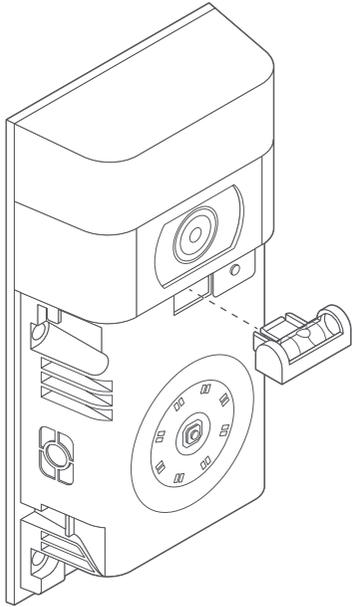
i The lighter band on your diode should be on the same side as the wire that runs to the "Front" terminal on your bell.

If you don't know which side this is, don't worry, since wiring the diode the wrong way can't do any harm.

If your bell doesn't ring when pushing the button on your Ring Doorbell, just reverse the wires on the back of your Ring Doorbell and try again.

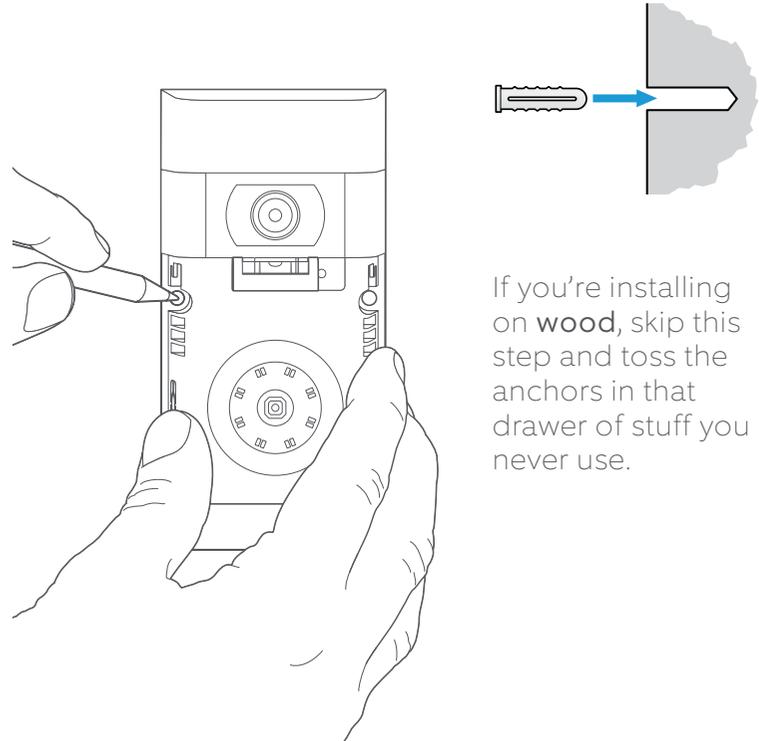
Insert the mini-level

Insert the mini-level into your Ring Doorbell to make sure it's even when you install it.



Install anchors (optional)

If installing on **stucco, brick, or concrete**, mark 4 drill holes. Use the provided bit to drill holes in your wall and insert the anchors.

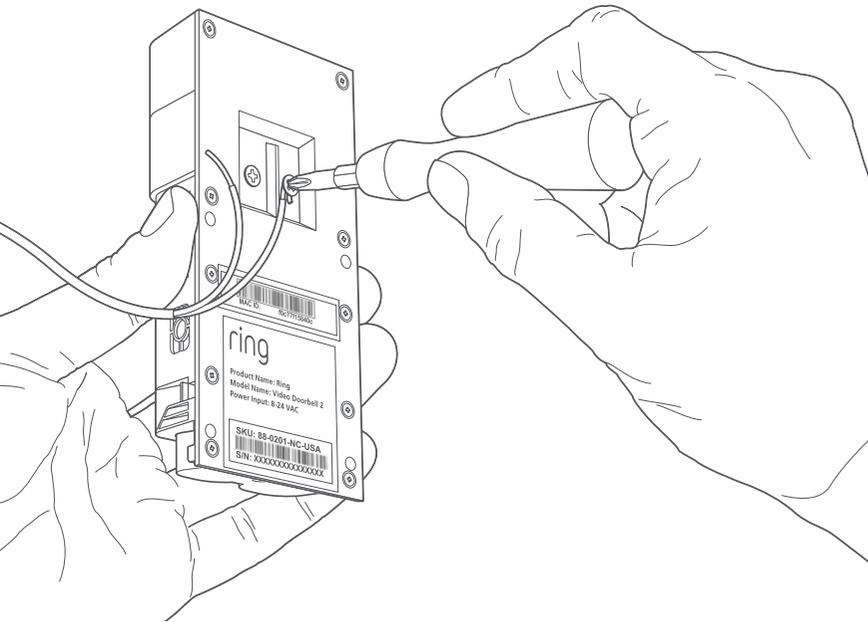


If you're installing on **wood**, skip this step and toss the anchors in that drawer of stuff you never use.

Connect the Wires (optional)

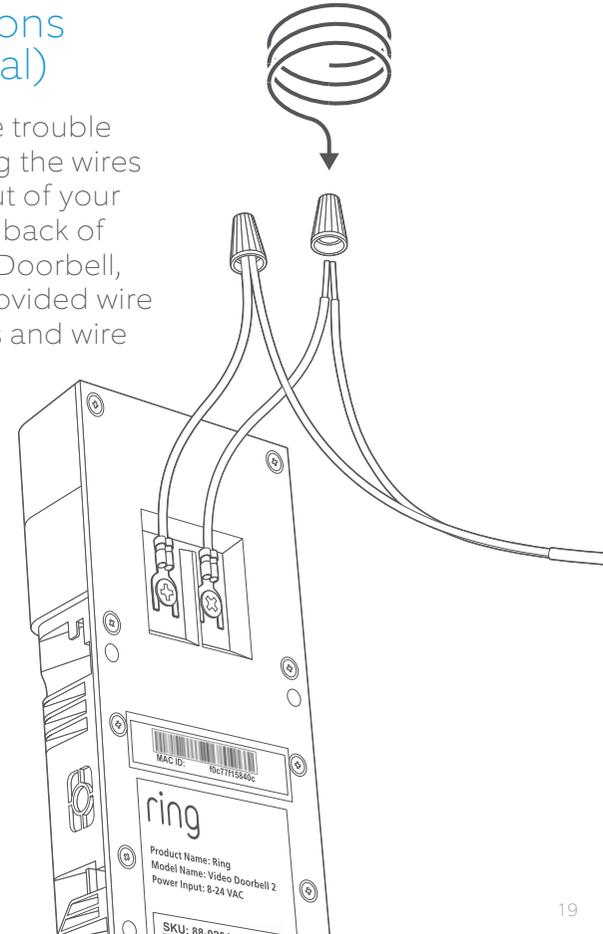
Connect the wires coming out of your wall to the screws on the back of your Ring Doorbell.

Either wire can connect to either screw. The order doesn't matter.



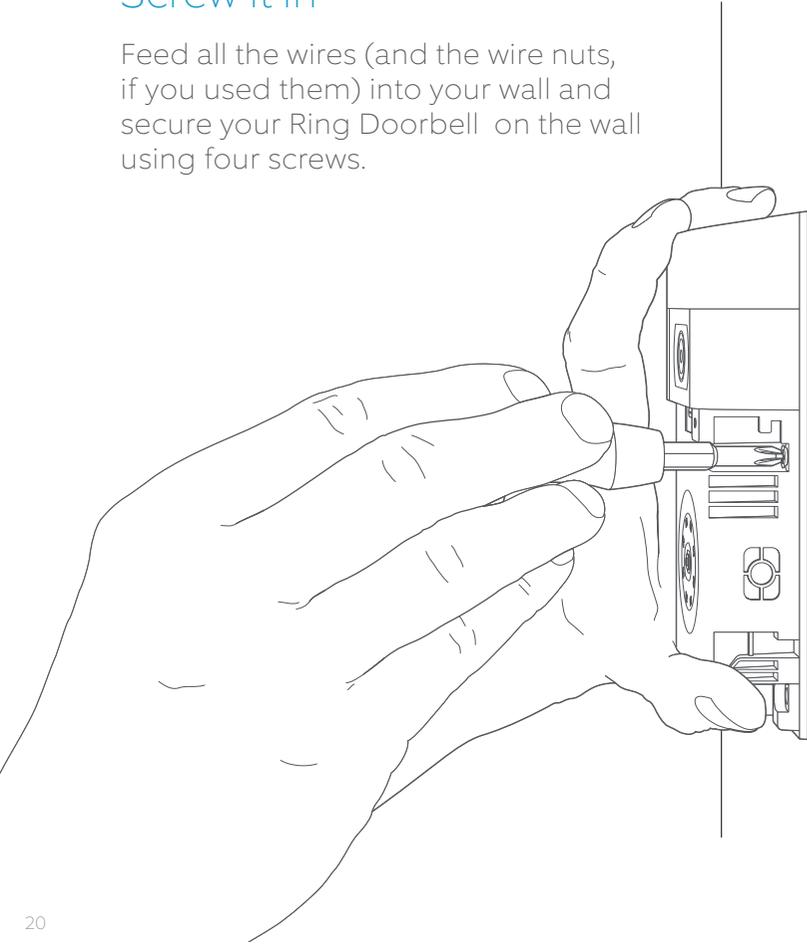
Attach the wire extensions (optional)

If you have trouble connecting the wires coming out of your wall to the back of your Ring Doorbell, use the provided wire extensions and wire nuts.



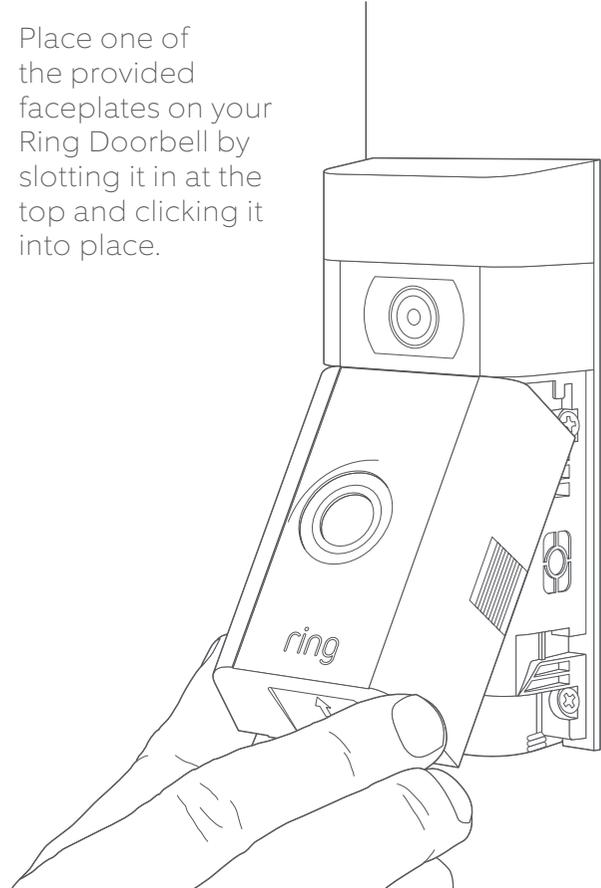
Screw it in

Feed all the wires (and the wire nuts, if you used them) into your wall and secure your Ring Doorbell on the wall using four screws.



Install the faceplate

Place one of the provided faceplates on your Ring Doorbell by slotting it in at the top and clicking it into place.





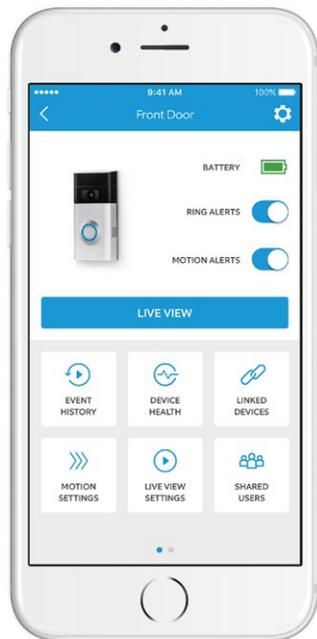
Secure with a security screw

Lastly, use one of the provided security screws and the star-shaped end of the screwdriver bit to secure the faceplate.

4. Check out all the exciting features.

After setting up your Ring Doorbell in the app, select it

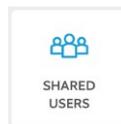
This will bring you to the Device Dashboard, where you can change settings and access various features.



Ring Alerts are notifications you receive when someone presses the button on the front of your Ring Doorbell.

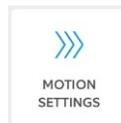
Motion Alerts are notifications you receive when movement is detected within your Motion Zones.

Switch these alerts on or off on this screen.



Shared Users

Select **Shared Users** to let family or friends answer live events and view recordings (if recording is enabled).



Motion Settings

Select **Motion Settings** to enable and customize your motion detection settings.



Device Health

Visit **Device Health** to diagnose any problems you run into with your Ring Doorbell.



Event History

View a log of all the events captured by your Ring Doorbell in **Event History**.

Answering your door



When someone is at your door, you can access these features:

-  **Two-way Talk** – Speak to visitors and hear what they have to say.
-  **Microphone** – Mute or unmute your mic.
-  **Speaker** – Mute or unmute audio in the app.
-  **Ring Neighborhoods** – Share suspicious events with your neighbors.

Ring Video Recording



This optional feature saves recordings of every event your Ring Doorbell captures.

You can access these events on any device running the Ring app or by logging into your account at:

ring.com/activity

Learn more at: ring.com/video-recording

-  Your new Ring Doorbell includes a free trial of Ring Recording for you to enjoy. Watch your email inbox for important announcements about this service.

5. Having trouble?

Here are some answers...

I'm having trouble completing the in-app setup

When the in-app setup fails, look at the front of your Ring Doorbell. The light indicates the issue.



Top Flashing White means your Wi-Fi password was entered incorrectly. Select your Wi-Fi network in your phone settings, select the option to forget it, then reconnect to it again to confirm that you're using the correct password during setup.



Right Flashing White means your Ring Doorbell may be too far from your router to get a decent signal. Repeat setup in the same room as your router. If this works, then you may need to get a Chime Pro to boost the Wi-Fi signal to your Ring Doorbell.

Learn more at: ring.com/chime-pro.



Left Flashing White indicates a possible issue with your internet connection. Unplug your modem or router for 40 seconds, plug it back in and then repeat the setup process.



Spinning White indicates that your Ring Doorbell is in setup mode. You'll need to follow the instructions in the Ring app. When prompted, connect to the Wi-Fi network being broadcast by your Ring Doorbell.



Nothing In this case, repeat setup and note the resulting pattern. If the front light never does anything, then you likely need to charge the battery.

Why can't I find the temporary Ring network on my phone?

Sometimes your phone fails to pick up the temporary Ring network. If this happens, go to your phone settings, turn off your Wi-Fi connection, wait 30 seconds and turn it back on. If the Ring network still fails to appear, ensure that the battery in your Ring Doorbell is fully charged.

If none of the above helped...

Perform a hard reset on your Ring Doorbell by holding down the setup button for 15 seconds, waiting 30 seconds and repeating the setup process.

Turn off cellular data and bluetooth on your mobile device and try again.

Try performing setup **on a different mobile device**.

Why isn't my internal doorbell ringing properly when someone presses the button on my Ring?

Make sure the circular light on the front of your Ring is glowing white to confirm that it's wired correctly.

If your internal doorbell is digital (which means it produces a synthesized melody), make sure you installed the provided **diode**.

If you have installed the **diode**, it may be installed backwards. Simply reverse the wiring on the back of your Ring Doorbell and press the front button again.

If your internal doorbell is mechanical (which means it has a physical bell and makes a classic "ding dong" sound), then make sure you **didn't** install the diode.

Visit ring.com/diode for installation assistance.

Why can't visitors hear me on my Ring when I talk through the app?

If you're on an **iPhone or iPad**, check the microphone permission on your device. Select Settings, find Ring and select it. Lastly, make sure the switch next to Microphone is toggled on.

If you're on an **Android** device, go to Settings > Application/Apps > Application Manager > Ring > Permissions. Ensure everything here is on.

If you don't see the Microphone option, then uninstall and reinstall the Ring app. When prompted to allow microphone access, choose "Allow."

I'm not receiving motion alerts

First make sure you've configured **Motion Detection**, and that **Motion Alerts** are turned on (see pg. 24).

To further troubleshoot issues with not receiving notifications, select **Device Health** in the Ring app and then select **Troubleshoot Notifications**.

Why is my video and/or audio quality poor?

First, determine the cause. Remove your Ring Doorbell and bring it inside near your router. Press the front button on your Ring Doorbell and look at the video in the Ring app.

If you get good video quality near the router, you need to extend your Wi-Fi signal.

We recommend **Chime Pro** to boost the signal to your Ring Doorbell. Learn more at: ring.com/chime-pro.

If video quality is still poor near your router, test your internet speed by selecting **Device Health** in the Ring app, then **Test Your Wi-Fi**.

The instructions in the app will help you diagnose and solve any issues related to poor video quality.



SCHLAGE TOUCH™

Keyless Touchscreen Locks

User Guide



Default Codes

Códigos de predeterminado

Codes du défaut



ALLEGION™

Place Label Here
Poner la etiqueta aquí
Placer l'autocollant ici

**PLEASE KEEP
THIS GUIDE**

You will need
these codes to
operate your lock!

**CONSERVE
ESTA GUÍA**

¡Necesitará
estos códigos
para operar la
cerradura!

**VEUILLEZ
CONSERVER
GUIDE**

Vous aurez besoin de
ces codes pour faire
fonctionner la serrure!



Schlage Touch™ User Guide

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Warranty	2	Programming Guide.....	10
Lock Parts	4	Indicator Light Signals.....	10
Keyless Touchscreen Deadbolt.....	4	Codes	10
Keyless Touchscreen Lever	5	Default Code Locations.....	10
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Locking and Unlocking.....	8	Restore Factory Settings.....	15
Changing the Battery.....	9		
Battery Jump.....	9		

Warranty

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., 800-997-4734 in Canada or 018005067866 in Mexico for assistance.



REGISTER YOUR LOCK!

To ensure the best warranty coverage and customer service, please register your product at Schlage.com/register.

»» 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 front 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!

»» How do I unlock my door if my battery dies?

Good question! In the event that the battery is dead, you can use a 9 volt battery to jump start your lock! Just press a 9 volt battery onto the contacts below the thumbturn or lever, and enter your user code to unlock.

UNLOCK YOUR SOLUTION

Browse to answers.schlage.com and click on **Keyless Touchscreen Locks** in the menu on the right side for videos, troubleshooting, FAQ and more.

Questions about your new
Schlage Touch™?

Please don't return it to the store!

Let us help you first!

Need Help?



For technical documents and videos, visit schlage.com



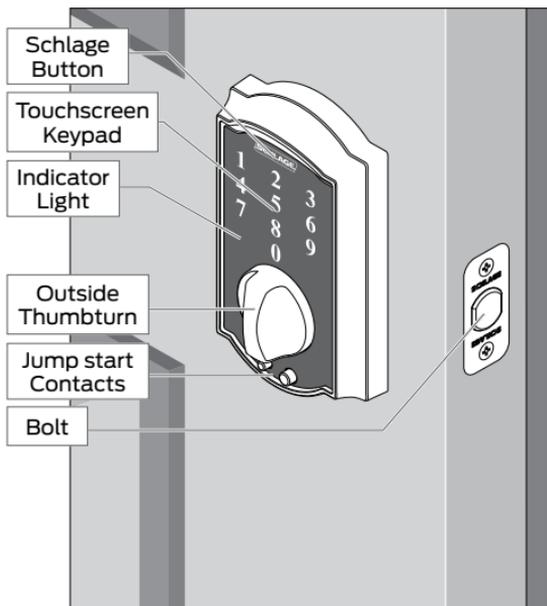
U.S.A.: 888-805-9837
Canada: 800-997-4734
Mexico: 018005067866

LOCK PARTS

Keyless Touchscreen Deadbolt

Model BE375

DOOR EXTERIOR



Touchscreen Keypad

- Used to enter codes for programming and unlocking. See **Programming Guide** on page 10 and **Locking and Unlocking** on page 6 for more information.

Indicator Light

- Multi-color light indicator for lock status. See **Indicator Light Signals** on page 10.

Outside Thumbturn

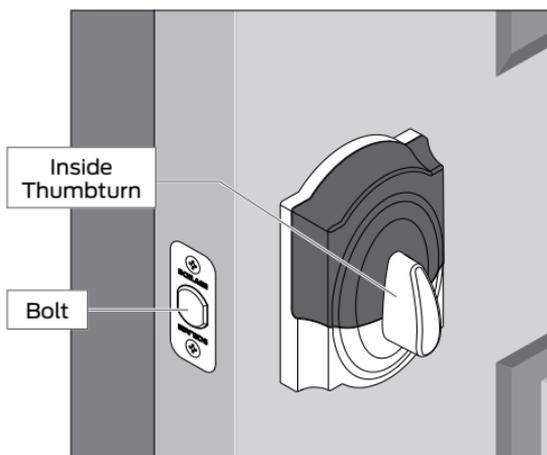
- Used to unlock the lock after a valid User Code has been entered, or to lock the lock after the Schlage button has been pressed.*

Emergency Jump Start Contacts

- Used to jump start the lock if the battery is dead.

*If the Lock & Leave feature is disabled, a valid User Code must be entered to lock the door. See **Enable or Disable Lock & Leave** on page 12.

DOOR INTERIOR



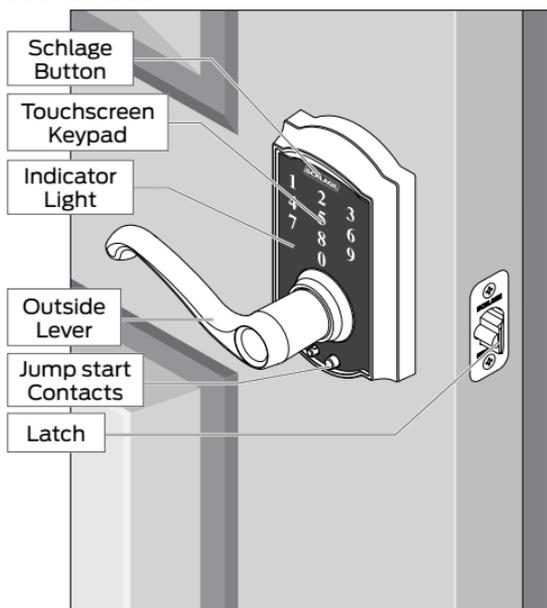
Inside Thumbturn

- Used to lock or unlock the lock.

Keyless Touchscreen Lever

Model FE695

DOOR EXTERIOR



Touchscreen Keypad

- Located on the outside of the lock. Used to enter codes for programming and unlocking. See **Programming Guide** on page 10 and **Locking and Unlocking** on page 8 for more information.

Indicator Light

- Multi-color light indicator for lock status. See **Indicator Light Signals** on page 10.

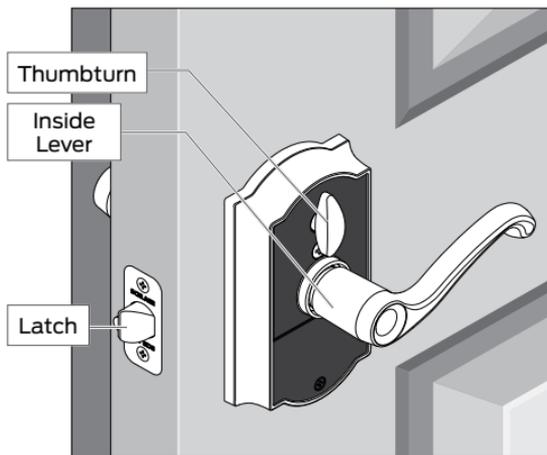
Lever

- The outside lever can be rotated at any time, but will only retract the latch when the lock is unlocked.

Emergency Jump Start Contacts

- Used to jump start the lock if the battery is dead.

DOOR INTERIOR



Lever

- The inside lever can be rotated at any time to retract the latch.

Thumbturn

- Used to put the lock in a locked or unlocked state.

KEYLESS TOUCHSCREEN DEADBOLT

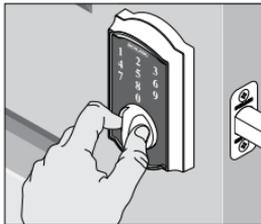
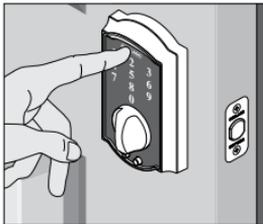
MODEL BE375

Locking and Unlocking

From the outside:

To Lock

1. Press the Schlage button.*
2. Rotate the thumbturn away from the hinges.

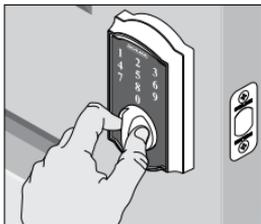
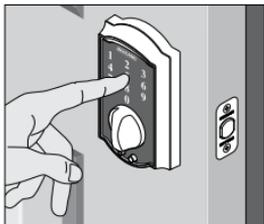


*If the Lock & Leave feature is disabled, a valid User Code must be entered to lock the door. See Enable or Disable Lock & Leave on page 12.

To Unlock

» If lighting is low, press the Schlage button to illuminate the touchscreen numbers before beginning.

1. Enter a User Code into the keypad.
2. Rotate the thumbturn toward the hinges.

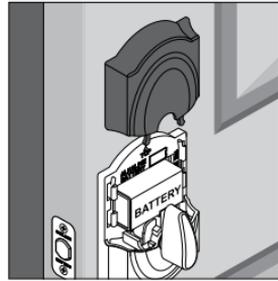
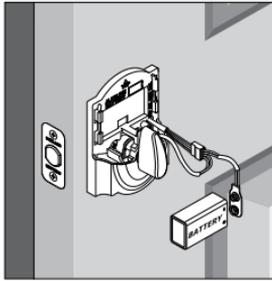
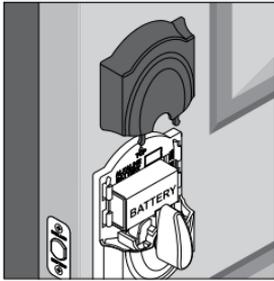


Changing the Battery

- » Tip: 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. Use a high-quality alkaline 9 volt battery for replacement.
- » If your lock's low battery icon is lit, replace the battery as soon as possible.



1. Remove the inside cover.
2. Replace the battery.
3. Re-tuck wires so they will not be crimped. Replace the cover.



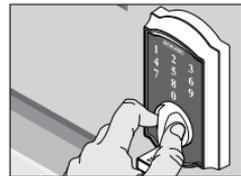
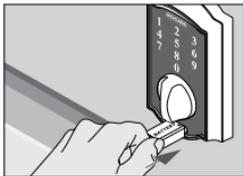
Battery Jump

The emergency battery jump start can be used if your battery is dead to unlock your door. Do not remove the battery until you have opened your door.

WARNING: The lock will remain unlocked until you change the battery or manually relock the door from the inside!

1. Connect a new high-quality alkaline 9 volt battery to the contacts below the touchscreen keypad.
2. Enter a User Code into the keypad.
3. Rotate the thumbturn toward the hinges.

- » Keep the battery connected to the jump start contacts as you unlock your door.



4. Replace the dead battery with the new 9 volt battery. See **Changing the Battery** above.

Lithium Batteries?



Lithium batteries may have a longer life, but when they begin to fail, they fail quickly. We don't recommend them because they don't give you a lot of time to change your batteries before the lock is completely dead.

KEYLESS TOUCHSCREEN LEVER

MODEL FE695

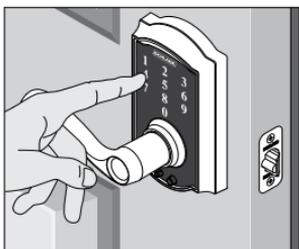
Locking and Unlocking

Keyless touchscreen locks are always locked from the outside, by default.

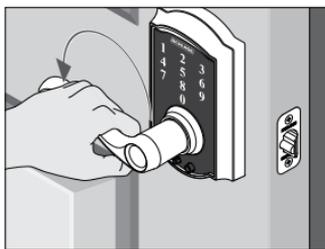
Temporarily Unlock

» If lighting is low, press the Schlage button to illuminate the keypad before beginning.

1. Enter a User Code into the keypad.



2. Rotate the lever to open the door. Door will automatically re-lock.



Set to Unlocked

1. Rotate the inside thumbturn to the vertical position.*



2. Rotate the thumbturn back to the horizontal position to re-lock.



*No User Code is required to open the door when the lock is set to unlocked.

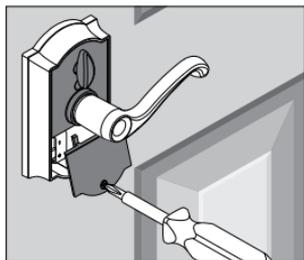
Changing the Battery

» Tip: 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. Use a high-quality alkaline 9 volt battery for replacement.

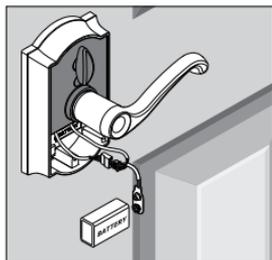
» If your lock's low battery icon is lit, replace the battery as soon as possible.



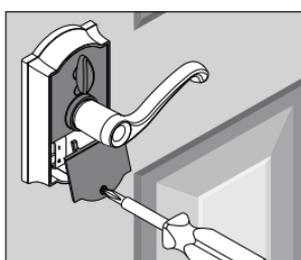
1. Unscrew the battery cover.



2. Replace the battery.



3. Replace the cover.



Battery Jump

The emergency battery jump start can be used to unlock your door if your battery is dead. Do not disconnect the battery before you open your door.

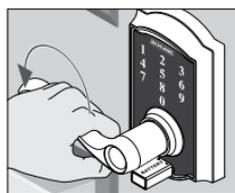
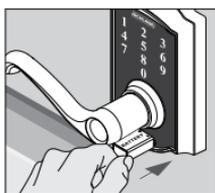
WARNING: The lock will remain unlocked until you change the battery or manually relock the door from the inside!

1. Connect a new high-quality alkaline 9 volt battery to the contacts below the touchscreen keypad.

2. Enter a User Code into the keypad.

3. Rotate the lever to open the door.

» Keep the battery connected to the jump start contacts as you unlock your door.



4. Replace the dead battery with the new 9 volt battery. See **Changing the Battery** above.

Lithium Batteries?



Lithium batteries may have a longer life, but when they begin to fail, they fail quickly. We don't recommend them because they don't give you a lot of time to change your batteries before the lock is completely dead.

PROGRAMMING GUIDE

Indicator Light Signals

The color of the light indicates the status of the lock.

Orange

- the lock is in programming mode

Green

- a correct user code was entered
- the programming process is complete

Red

- an incorrect user code was entered
- there was an error in programming

Low Battery Icon

- the battery is low.
- red blinking indicates critically low battery
- See **Changing the Battery** on page 7

Codes

Control of the lock is simply managed via six-digit Programming Code and four-digit User Codes.

PROGRAMMING CODE

(Six Digits)

- The lock comes preset with one unique default Programming Code. It can be found on the stickers, one on the back of the touchscreen keypad assembly and one on the front of this User Guide.
- Used to put the lock in programming mode.
- DOES NOT unlock the lock.
- The first four digits must be different from all of the User Codes currently in the lock.
- If you forget the Programming Code, you can reset the lock to factory settings, which restores the default Programming Code. See **Restore Factory Settings** on page 15.

USER CODES

(Four Digits)

- The lock comes preset with two unique default User Codes. They may be found on the stickers, one on the back of the keypad assembly and one on the front of this User Guide.
- Used to unlock the lock.
- These four digits must be different from the first four digits of the Programming Code.
- Up to 19 possible User Codes can be stored in the lock at one time.

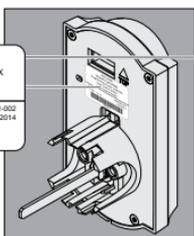
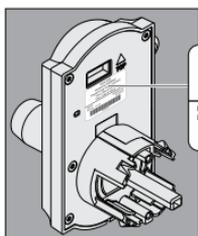
Default Code Locations

The Default User Codes and Programming Code are located in two places:

Back of the Touchscreen Keypad

- » You must remove the touchscreen keypad from the door to see this sticker.

Front of this User Guide



Basic Controls

» Write your programming code here for easy access. Also see **Record Your Codes** on page 13 for space to record User Codes.

PROGRAMMING CODE					

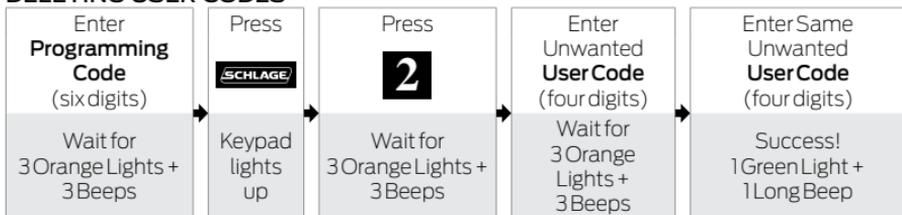
» If you make a mistake during programming, press the Schlage button repeatedly until the keypad lights up. Then start over.

ADDING USER CODES*



* These four digits must be different from the first four digits of the Programming Code.

DELETING USER CODES



CHANGING THE PROGRAMMING CODE*



* The first four digits must be different from all of the User Codes currently in the lock.

Want to see a video?

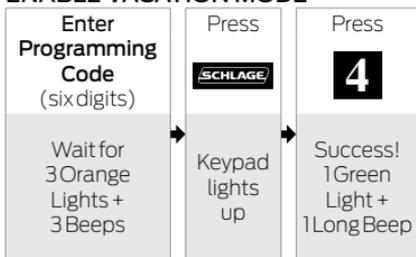


Browse to answers.schlage.com and search on "How to Program Touchscreen Lock" for a video. Other videos and information are also available.

Enhanced Controls

Schlage's keyless touchscreen locks were designed with added features that allow you to adapt the lock to your needs. Additional features that you can choose to use include:

ENABLE VACATION MODE

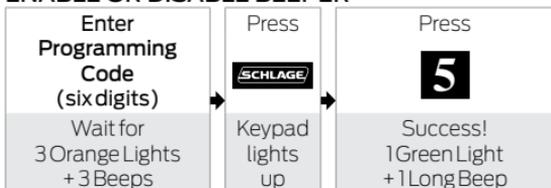


When enabled, no User Codes will unlock the door, preventing any unauthorized attempts of entry when no one is home for a prolonged period of time.

DISABLE VACATION MODE



ENABLE OR DISABLE BEEPER



The beeper can be turned off if desired. Beeps will still sound to indicate a low battery.

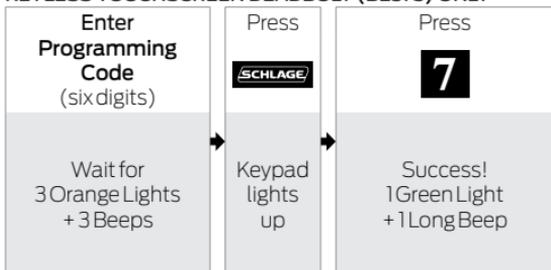
» The beeper may not be audible to everyone.

DELETE ALL USER CODES



Removes ALL User Codes from the lock.

ENABLE OR DISABLE LOCK & LEAVE KEYLESS TOUCHSCREEN DEADBOLT (BE375) ONLY



Enabled by default. When enabled, the deadbolt can be locked from the outside by pressing Schlage and rotating the thumbturn. When disabled, a User Code must be entered before rotating the thumbturn. Disabling this feature keeps an unauthorized person from locking the door from the outside.

TROUBLESHOOTING

Browse to answers.schlage.com for videos, troubleshooting, FAQ and more.

ENGLISH

Lock Issue	Beeps*	Lights	Solution	
KEYLESS TOUCHSCREEN DEADBOLT	I can unlock my deadbolt by simply pushing the Schlage button. I don't need a code.	1 High	Green Blinking	Your lock has been installed incorrectly. Repeat the installation process. Browse to answers.schlage.com and search "Installing BE375" for a video.
	After pushing  and rotating thumbturn, the deadbolt does not extend.	None	None	Lock & Leave feature is disabled. See Enable or Disable Lock & Leave on page 12.
	After entering my User Code, the light flashes green, but I cannot unlock the lock.	1 High	Green Blinking	Lock is malfunctioning. Call Customer Service.
	Outside thumbturn does not freely spin after deadbolt is thrown.	None	None	Lock is malfunctioning. Call Customer Service.
I forgot my Programming Code.	None	None	Check the front of this guide or the back of the keypad assembly for the default Programming Code.	
			If needed, restore lock to factory settings. See Restore Factory Settings on page 15.	
I need to delete a User Code that I don't remember.	None	None	Delete all User Codes. Then add all needed User Codes back into the lock. See Programming Guide on page 10.	
User Code does not unlock lock.	2	Red	User Code entered is not a valid User Code.	
	1 High, 1 Low	Green then Red	Vacation Mode is enabled. See Disable Vacation Mode on page 12.	
 does not illuminate the touchscreen when numbers are pressed.	None	None	Too many incorrect User Codes have been entered. Wait 30 seconds and try again.	
			If keypad does not respond after 30 seconds, then replace battery. See Changing the Battery on page 7 for Keyless Touchscreen Deadbolt or Changing the Battery on page 9 for Keyless Touchscreen Lever.	
There is a delay before unlock after a valid User Code is entered.	High/Low, then 1	Red then Green	Battery is low and should be replaced. See Changing the Battery on page 7 for Keyless Touchscreen Deadbolt or Changing the Battery on page 9 for Keyless Touchscreen Lever.	
Indicator light blinking red but no codes have been entered.	None	Quick Red Blinking	Battery is dead and MUST be replaced. See Changing the Battery on page 7 for Keyless Touchscreen Deadbolt or Changing the Battery on page 9 for Keyless Touchscreen Lever.	
Cannot add a new User Code.	High/Low	Red	19 User Codes already exist. Delete a User Code before adding a new one. See Deleting User Codes on page 11.	
	2	Red	Second User Code entered did not match first User Code entered. See Adding User Codes* on page 11.	
			The User Code matches the first four digits of the existing Programming Code.	
Cannot delete a User Code.	2	Red	Second User Code entered did not match first User Code entered.	

Lock Issue	Beeps*	Lights	Solution
Cannot change Programming Code.	2	Red	Second Programming Code entered did not match first Programming Code entered. See Changing the Programming Code* on page 11.
			First four digits of new Programming Code match an existing User Code.
Cannot delete all User Codes.	2	Red	Programming Code entered second time is incorrect.
Lock will not stay in programming mode.	2	Red	Any key other than SCHLAGE was pressed immediately after programming mode was entered.
			An incorrect entry was made during the programming process.

* Number of beeps if beeper is turned on.

Restore Factory Settings

If you lose or forget your Programming Code, you can restore the factory settings, which will restore the default Programming code.

1. Disconnect the battery.
2. Press and release the Schlage button.
3. The following steps must occur within 10 seconds:
 - a. Reconnect the battery. The indicator light will light green for one second.
 - b. Then, press and hold the Schlage button until the indicator light is green and the lock beeps.
4. Try entering one of the default User Codes. If it does not unlock the lock, start over at step 2.

Once you've done this, you can change the programming code to a personalized number. See **Changing the Programming Code*** on page 11.

⚠ WARNING ⚠

Locate the default Programming and User Codes on the front of this guide or the back of the touchscreen 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.

OPERATION MANUAL

VRVIV-S System air conditioner

MODEL

RXTQ36TAVJ9A
RXTQ48TAVJUA
RXTQ60TAVJUA

Operation manual
VRVIV-S System air conditioner

English

Manuel d'utilisation
Conditionneur d'air VRVIV-S System

Français

Manual de operación
Sistema de acondicionador de aire VRVIV-S

Español

Read these instructions carefully before installation.
Keep this manual in a handy place for future reference.
This manual should be left with the equipment owner.

Lire soigneusement ces instructions avant l'installation.
Conserver ce manuel à portée de main pour référence ultérieure.
Ce manuel doit être donné au propriétaire de l'équipement.

Lea cuidadosamente estas instrucciones antes de instalar.
Guarde este manual en un lugar a mano para leer en caso de tener alguna duda.
Este manual debe permanecer con el propietario del equipo.

Safety Considerations

Read these **Safety Considerations for Operations** carefully before installing air conditioner or heat pump. Make sure that the unit operates properly during the startup operation. Instruct the customer on how to operate and maintain the unit. Inform customers 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 will 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 will result in severe injury or death.
- For refrigerant leakage, consult your dealer. Refrigerant gas is heavier than air and replaces oxygen. A massive leak will result in oxygen depletion, especially in basements, and an asphyxiation hazard will result 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 all packing and transportation materials in accordance with federal/state/local laws or ordinances. Packing materials such as nails and other metal or wood parts, including plastic packing materials used for transportation may cause injuries or death by suffocation.

WARNING

- Contact your dealer for repair and maintenance. Improper repair and maintenance could 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 could result in water leakage, electric shock, and fire.
- Never let the indoor unit or the remote controller get wet. Water could result in an electric shock or a fire.
- Never use flammable spray such as hair spray, lacquer, or paint near the unit. Flammable spray could result in 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 and could result in injury.
- 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 could result in 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 could result in 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 could result in injury.
- Placing a flower vase or other containers with water or other liquids on the unit could result in a shock or fire if a spill occurs.
- Do not touch the air outlet or horizontal blades while the swing flap is in operation could result in fingers getting 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.
- Be sure to establish a ground. Do not ground the unit to a utility pipe, arrester, or telephone ground. Incomplete grounding may cause electrical shock, or fire. A high surge current from lightning or other sources may cause damage to the air conditioner.

- Although this is a recognized measure for additional protection, with the grounding system in North America, a dedicated GFCI may not be necessary.



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 it could result in damage 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 could result.
- Do not wash the air conditioner or heat pump with excessive water. An electric shock or fire could result.
- Avoid placing the controller in a spot splashed with water. Water entering the controller could result in 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 result in 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 five minutes before turning off the power. Otherwise, water leakage could result.
- 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 result in the plastics parts break resulting in 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 could result in 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 result in the unit malfunctioning, and could result in smoke or fire when they make contact with electrical parts.



NOTE

- Never press the button of the remote controller with a hard, pointed object. The remote controller result in damage.
- Never pull or twist the electric wire of the remote controller. It may result in the unit malfunctioning.
- Do not place appliances that produce open flames in places that are exposed to the air flow of the unit or under the indoor unit. It may result in 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 result in fail to display the data.
- Do not wipe the controller operation panel with benzene, thinner, chemical dust cloth, etc. The result may be that the panel becomes 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.
- 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 result may be that the drainpipe becomes 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.

Safety Considerations

[Place of Installation]

- **Make sure that the air conditioner is located in a sufficiently ventilated place not surrounded by obstacles.**
- **Do not use the air conditioner 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 resorts 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 there is steam in the air.
 - g. Locations where equipment that produces electromagnetic waves is found.
 - h. Places with an acid or alkaline mist.
 - i. Places where fallen leaves are accumulated or weeds grow close together.
- **Take snow protection measures.**

Contact your local dealer for the details of snow protection measures, such as the use of a snow protection hood.

[Electrical Work]

- **Do not attempt to conduct electrical work or grounding work unless you are licensed to do so.**

Consult with your local dealer for electrical work and grounding work.
- **Use a dedicated circuit for the air conditioner.**

[Pay Attention to Operating Sound]

- **Be sure to use the following places.**
 - a. Places that can sufficiently withstand the weight of the air conditioner and suppress the operating sound and vibration of the air conditioner.
 - 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 an increase in the operating sound of the outdoor unit.
- **Consult your local dealer if the air conditioner in operation generates unusual noise.**

[Drainage through Drainpipe]

- **Make sure that the drainpipe is installed properly to drain water.**

If no water is discharged from the drainpipe while the air conditioner is cooling operation, the drainpipe may be clogged with dust or dirt and water leakage from the indoor units may result.

Stop operating the air conditioner and consult your local dealer.

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The original instructions are written in English. All other languages are translations of the original instructions.

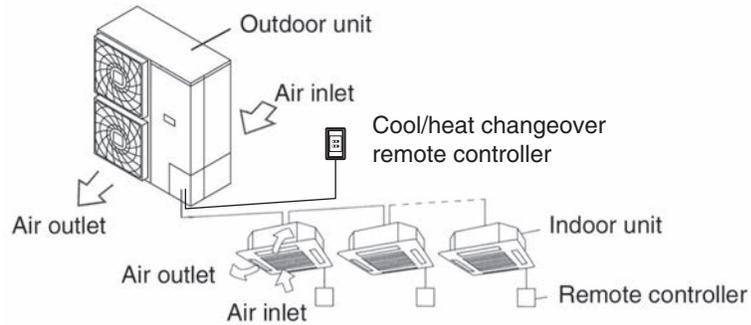
Specifications

Model name		RXTQ36TAVJ9A	RXTQ48TAVJUA	RXTQ60TAVJUA
Power supply				
Phase	—	SINGLE	SINGLE	SINGLE
Frequency	Hz	60	60	60
Voltage	V	208/230	208/230	208/230
Cooling Maximum capacity	Btu/h	34,200	45,500	57,500
Heating Maximum capacity	Btu/h	37,000	49,500	57,000
Dimensions HxWxD	inch (mm)	39x37x12-5/8 (990x940x320)		52-15/16x35-7/16x12-5/8 (1345x900x320)
Weight	lbs. (kg)	172 (78)	176(80)	225 (102)
Refrigerant				
Type	—	R410A	R410A	R410A
Charge	lbs. (kg)	6.4 (2.9)	7.5 (3.4)	7.9 (3.6)
Design pressure				
High side	psig (MPa)	478 (3.3)	478 (3.3)	478 (3.3)
Low side	psig (MPa)	362 (2.5)	362 (2.5)	362 (2.5)

What to do before Operation

This operation manual is for the following system with standard control. Before initiating operation, contact your local dealer for the operation that corresponds to your system type.

If your installation has a customized control system, ask your local dealer for the operation that corresponds to your system.



Operation Range

	COOLING	HEATING
Outdoor temperature	23 to 122°FDB (-5 to 50°CDB)	-4 to 60°FDB (-20 to 15.5°CWB)
Indoor temperature	57 to 77°FDB (14 to 25°CWB)	59 to 80°FDB (15 to 27°CDB)
Indoor humidity	80%	—

Note

- Cooling operation:
If the air conditioner is operated continuously while the indoor temperature is 70°FDB (21°CDB) or below and the humidity is 80% or over, the interiors of the indoor units may cause icing and water leakage may result.
- Heating operation:
The air conditioner may stop operating for the protection of the machine if the outdoor temperature is 70°FDB (21°CDB) or over.

Remote controller

- For more information, see the operation manual that came with the remote controller.

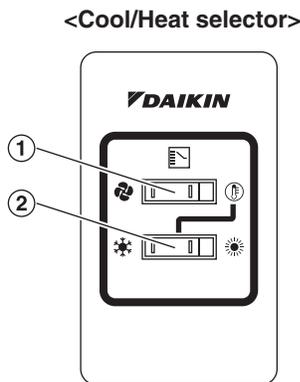
Operation Procedure

- Operation procedure varies according to the combination of outdoor unit and remote controller. Read the chapter “What to do before Operation”.
- Do not turn it off during the air conditioning season for starting operation smoothly.
- If the main power supply is turned off during operation, operation will restart automatically after the power turns back on again.

Name and Function of Each Switch and Display

Cool/Heat Selector

When the Cool/Heat selector remote controller is installed, the remote controller connected to the indoor unit cannot be used to switch between cooling and heating operation.



1. Fan only/air conditioning selector switch

- Set the switch to “” for fan only operation or to “” for heating or cooling operation.

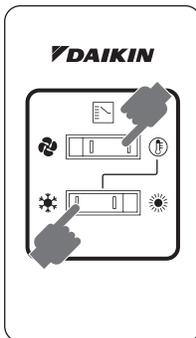
2. COOL/HEAT changeover switch

- Set the switch to “” for cooling operation or to “” for heating operation.

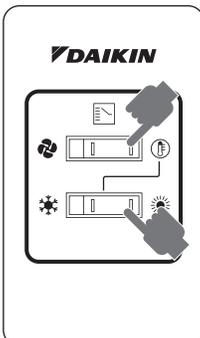
Cooling, Heating and Fan only operation

- Select operation mode with the Cool/Heat selector as follows:

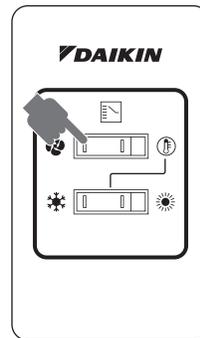
Cooling operation



Heating operation



Fan only operation



- Press On/Off button.
The operation lamp lights up and the system starts operation.
- The system can now be controlled from the remote controller.

DAIKIN

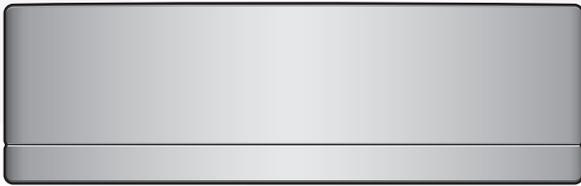
DAIKIN ROOM AIR CONDITIONER

OPERATION MANUAL

English

Français

Español



Enjoy year-round comfort.

MODELS

CTXG09QVJUW

CTXG12QVJUW

CTXG18QVJUW

CTXG09QVJUS

CTXG12QVJUS

CTXG18QVJUS

FTXR09TVJUW

FTXR12TVJUW

FTXR18TVJUW

FTXR09TVJUS

FTXR12TVJUS

FTXR18TVJUS

Features

Enhanced comfort and energy savings



INTELLIGENT EYE

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

▶ Page 14



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 times and the desired temperature. ▶ Page 21

Other functions



COMFORT AIRFLOW

The airflow direction is upward while in COOL operation, and downward while in HEAT operation. This function prevents cold or warm air from blowing directly on your body. ▶ Page 14



OUTDOOR UNIT QUIET

OUTDOOR UNIT QUIET operation assures a low noise level of the outdoor unit. This function is useful to maintain a quiet neighborhood.

▶ 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 on a shared electrical circuit. ▶Page 18

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.
- 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.
- Dismantling of the unit, disposal of the refrigerant, oil, and additional parts, shall 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.

NOTE

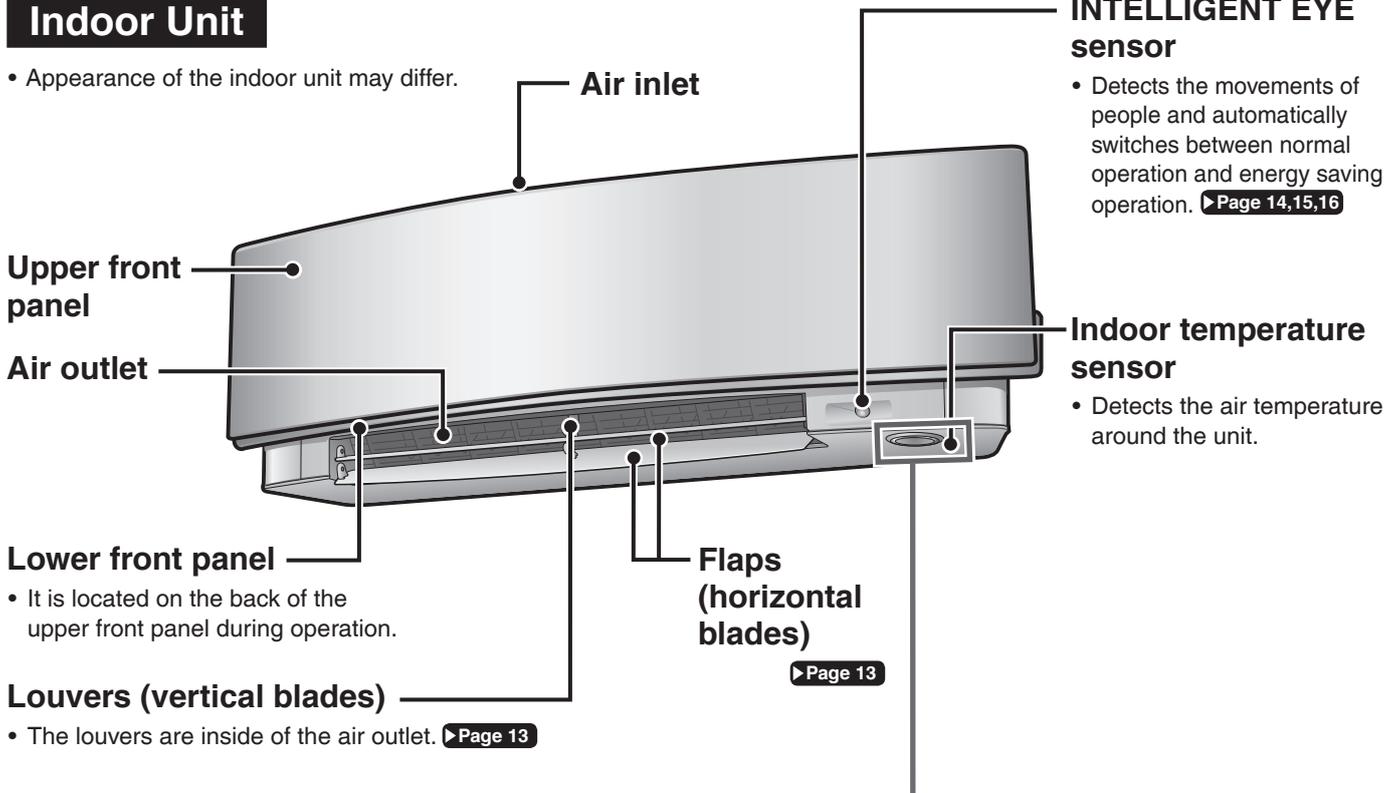
- Never press the button of the remote controller with a hard, pointed object. The remote controller may be damaged.
- Never pull or twist the electric wire of the remote controller. It may cause the unit to malfunction.
- Do not place appliances that produce open flames in places that are exposed to 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.
- 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.

FTP001-U

Names of Parts

Indoor Unit

• Appearance of the indoor unit may differ.



INTELLIGENT EYE sensor

- Detects the movements of people and automatically switches between normal operation and energy saving operation. ▶Page 14,15,16

Indoor temperature sensor

- Detects the air temperature around the unit.

▶Page 13

▶Page 13

Display

Multi-monitor lamp and TIMER lamp

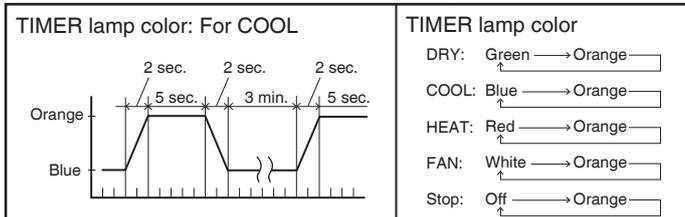
Multi-monitor lamp

- The lamp color changes according to the operation.

Operation	Multi-monitor lamp
AUTO	Red/Blue
DRY	Green
COOL	Blue
HEAT	Red
FAN	White
TIMER	Orange

TIMER lamp

- When operation by timer has been set, the multi-monitor lamp periodically changes to orange. After lighting orange for about 5 seconds, it returns to the color of the operation mode. The multi-monitor lamp will turn orange on and off in cyclic manner while the air conditioner is not in operation.



INTELLIGENT EYE lamp (green) ▶Page 15

Signal receiver and Indoor unit ON/OFF switch

Signal receiver

- 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

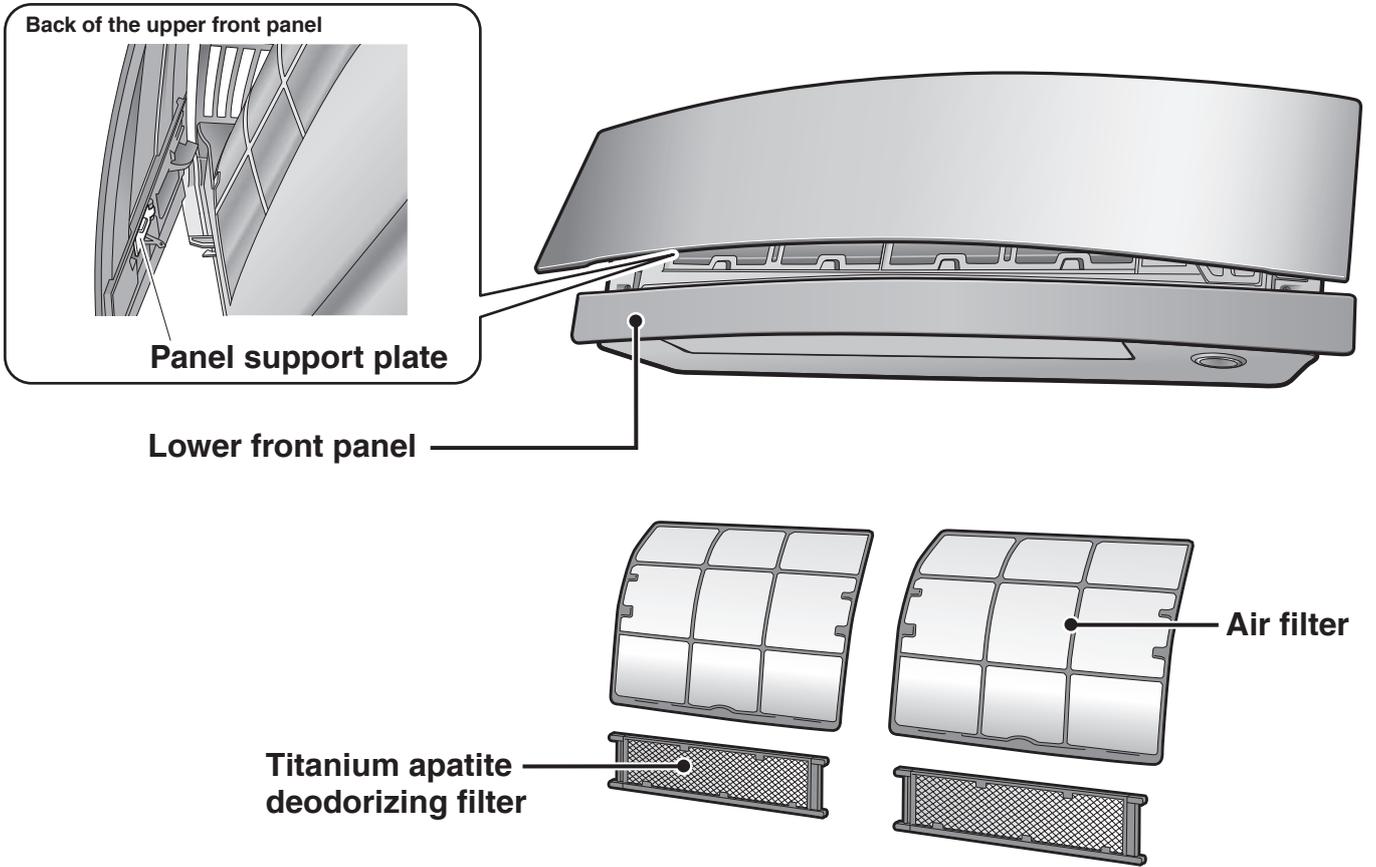
Indoor unit ON/OFF switch

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

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

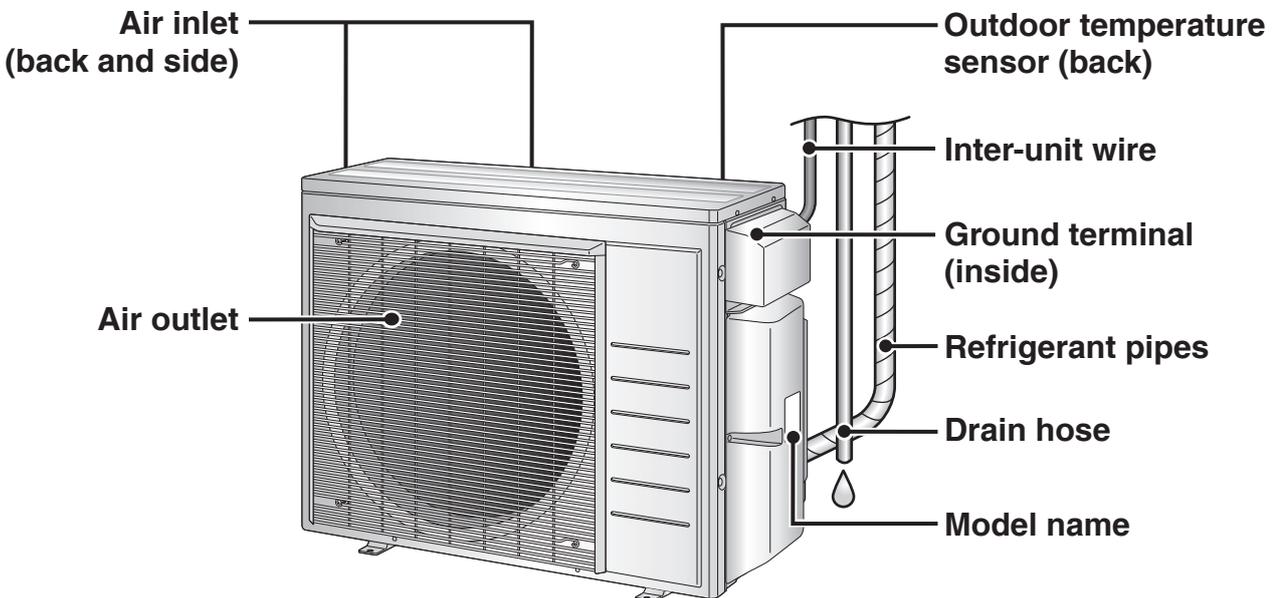
- This switch can be used when the remote controller is missing.

■ Open the upper front panel



Outdoor Unit

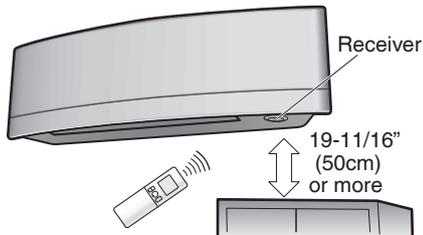
- The appearance of the outdoor unit may differ between different models.



Names of Parts

Remote Controller

Signal transmitter



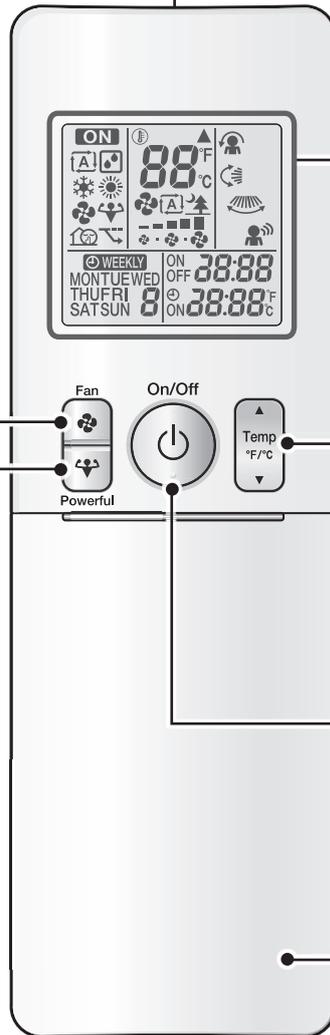
- To use the remote controller, aim the transmitter at the indoor unit. If there is anything blocking the signals between the unit and the remote controller, such as a curtain, the unit may not operate.
- The maximum transmission distance is about 19-11/16ft (6m).
Make sure that there are no obstacles within 19-11/16 inch (50cm) under the signal receiver.
Such obstacles, if any, may have an adverse influence on the reception performance of the receiver and the reception distance may be shortened.

FAN setting button

- Selects the airflow rate setting. [▶ Page 12](#)

POWERFUL button

- POWERFUL operation. [▶ Page 17](#)



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 button

- Changes the temperature setting. [▶ Page 11](#)

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](#)

Model	ARC466A36
-------	-----------

■ Open the front cover



MODE selector button

- Selects the operation mode. (AUTO/DRY/COOL/HEAT/FAN) ▶Page 11

ECONO/QUIET button

- ECONO/OUTDOOR UNIT QUIET operation. ▶Page 18

SWING button

- Adjusts the airflow direction. ▶Page 13

Weekly

◀ : WEEKLY button

⬆ : PROGRAM button

Copy

▶ : COPY button

Back

◀ : BACK button

Next

▶ : NEXT button

- WEEKLY TIMER operation. ▶Page 21

ON TIMER button

▶Page 19

CLOCK button ▶Page 10

Lamp brightness setting button

▶Page 10

COMFORT/SENSOR button

- COMFORT AIRFLOW and INTELLIGENT EYE operation. ▶Page 14

OFF TIMER button (NIGHT SET mode)

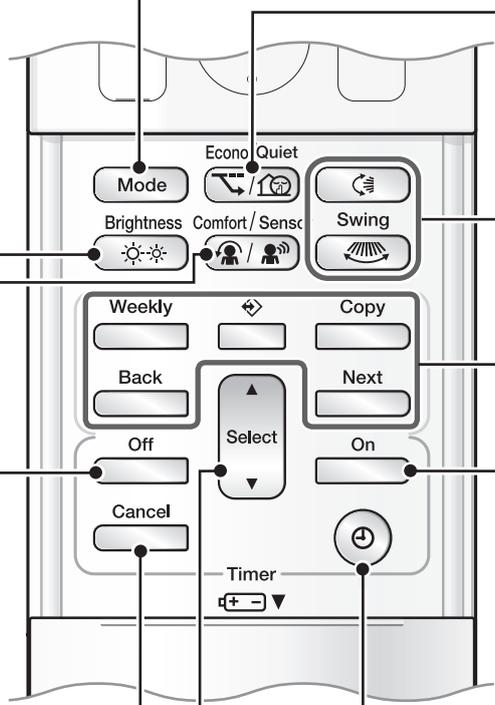
▶Page 20

TIMER CANCEL button

- Cancels the timer setting. ▶Page 19,20
- Cannot be used for the WEEKLY TIMER operation.

SELECT button

- Changes the clock, ON/OFF TIMER and WEEKLY TIMER settings.



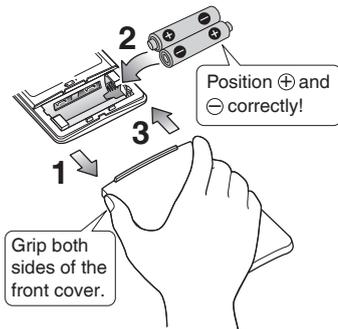
Preparation Before Operation

CAUTION

Incorrect handling of batteries can result in injury from battery leakage, rupturing or heating, or lead to equipment failure.

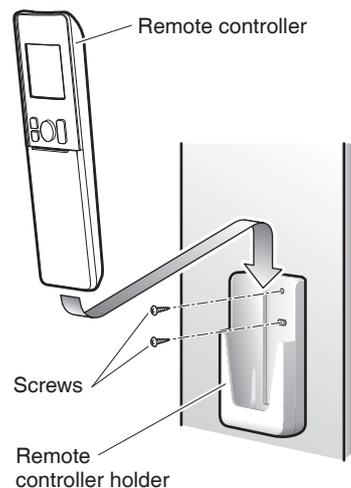
Please observe the following precautions and use safely.

- If the alkaline solution from the batteries should get in the eyes, do not rub the eyes. Instead, immediately flush the eyes with tap water and seek the attention of a medical professional.
- Keep batteries out of reach of children. In the event that batteries are swallowed, seek the immediate attention of a medical professional.
- Do not expose batteries to heat or fire. Do not disassemble or modify batteries. The insulation or gas release vent inside the battery may be damaged, resulting in battery leakage, rupturing, or heating.
- Do not damage or peel off labels on the batteries.



To insert the batteries

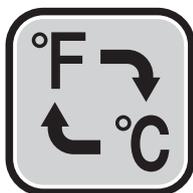
1. Slide the front cover to take it off.
2. Insert 2 dry batteries AAA.LR03 (alkaline).
3. Replace the front cover.



To attach the remote controller holder to a wall

1. Choose a place where the signals reach the unit.
2. Attach the holder to a wall, a pillar, or similar location with the screws supplied with the holder.
3. Place the remote controller in the remote controller holder.

Fahrenheit/Celsius display switch



Press  and  (TIMER button) simultaneously for about 5 seconds.

- The temperature will be displayed in Celsius when it is presently displayed in Fahrenheit, and vice versa.
- The switch operation is only possible when the temperature is being displayed.

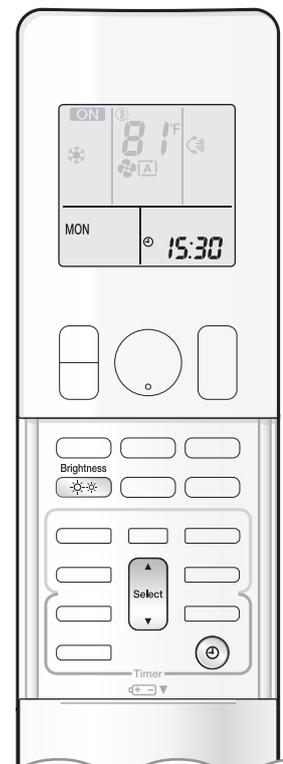
NOTE

Notes on batteries

- To avoid possible injury or damage from battery leakage or rupturing, remove the batteries when not using the product for long periods of time.
- The standard replacement time is about 1 year. Both batteries should be replaced at the same time. Be sure to replace them with new size AAA.LR03 (alkaline) batteries.
However, if the remote controller display begins to fade and the possible transmission range becomes shorter within a year, replace both batteries as specified above.
- The batteries supplied with the remote controller are for initial operation. The batteries may run out in less than 1 year.

Note on remote controller

- Do not drop the remote controller. Do not get it wet.

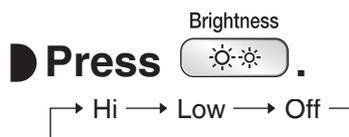


Turn on the circuit breaker

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

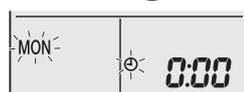
To set the luminance of the display

- The luminance of the indoor unit display can be set.



To set the clock

1. Press .



“0:00” is displayed on the LCD.
“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 displayed time.

5. Press .

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



“.” blinks.

NOTE

Fahrenheit/Celsius 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 Fahrenheit/Celsius display change function.

Note on setting the clock

- If the indoor unit's internal clock is not set to the correct time, the ON/OFF TIMER and WEEKLY TIMER will not operate punctually.



AUTO · DRY · COOL · HEAT · FAN Operation

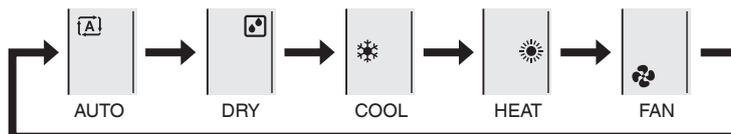


The air conditioner operates with the operation mode of your choice. From the next time on, the air conditioner will operate with the same operation mode.

To start operation

1. Press and select an operation mode.

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



2. Press .

- “**ON**” is displayed on the LCD.
- The multi-monitor lamp lights up. The color of the lamp varies depending on the operation mode.

Operation	Multi-monitor lamp
AUTO	Red/Blue
DRY	Green
COOL	Blue
HEAT	Red
FAN	White



Display

To stop operation

Press again.

- “**ON**” disappears from the LCD.
- The multi-monitor lamp goes off.

To change the temperature setting

Press .

- Press ▲ to raise the temperature and press ▼ to lower the temperature.

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.

NOTE

Notes on AUTO operation

- In AUTO operation, the system selects an appropriate operation mode (COOL or HEAT) based on the indoor temperature and starts the operation.
- The system automatically reselects setting at a regular interval to bring the indoor temperature to the user-setting level.

Note on DRY operation

- Eliminates humidity while maintaining the indoor temperature as much as possible. It automatically controls temperature and airflow rate, so manual adjustment of these functions is unavailable.



Adjusting the Airflow Rate

You can adjust the airflow rate to increase your comfort.

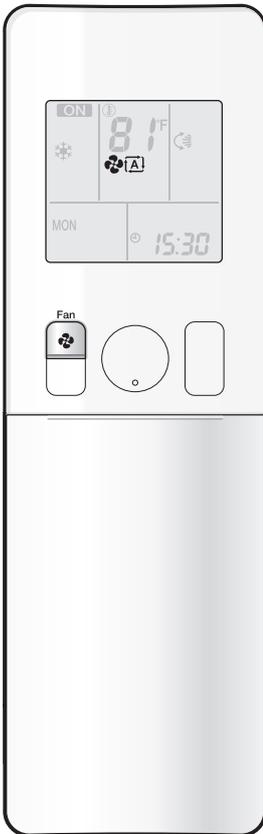
To adjust the airflow rate setting

Press .

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



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



NOTE

Note on airflow rate setting

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

Tips for saving energy

Keeping the temperature setting at a moderate level helps save energy.

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

Cover windows with a blind or a curtain.

- Blocking sunlight and air from outdoors increases the cooling (heating) effect.

Keep the air filter clean.

- Clogged air filters cause inefficient operation and waste energy. Clean them once in about every 2 weeks. [▶ Page 30](#)

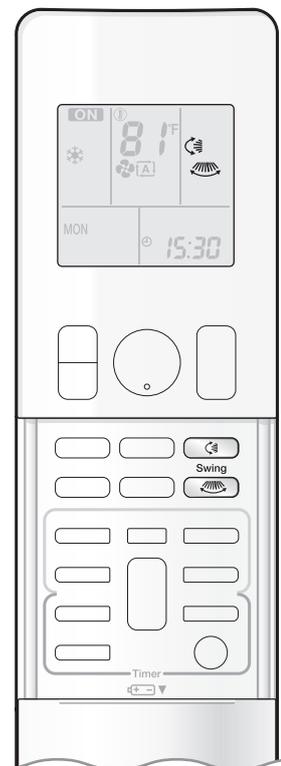
If you are not going to use the air conditioner for a long period, for example in spring or autumn, turn off the circuit breaker.

- The air conditioner always consumes a small amount of electricity even while it is not operating.





Adjusting the Airflow Direction



You can adjust the airflow direction to increase your comfort.

⚠ CAUTION

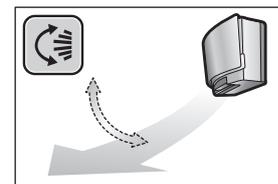
- Always use a remote controller to adjust the angles of the flaps and louvers.
 - If you attempt to move the flaps and louvers forcibly by hand when they are swinging, the mechanism may be damaged.
 - Inside the air outlet, a fan is rotating at a high speed.

To start auto swing

Up and down airflow direction

▶ Press .

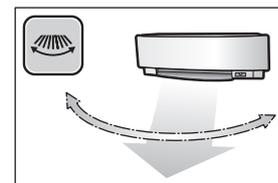
- “” is displayed on the LCD.
- The flaps (horizontal blades) will begin to swing.



Right and left airflow direction

▶ Press .

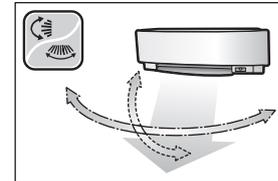
- “” is displayed on the LCD.
- The louvers (vertical blades) will begin to swing.



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 the 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.

NOTE

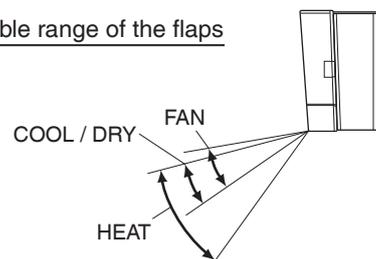
Notes on airflow direction setting

- The movable range of the flaps varies according to the operation mode.
- The flaps will stop at the upper position when the airflow rate is changed to low during the up and down swing setting.

Note on 3-D airflow

- Using 3-D airflow circulates cold air, which tends to be collected 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.

Movable range of the flaps





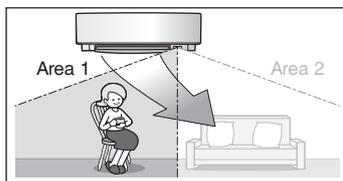
COMFORT AIRFLOW / INTELLIGENT EYE Operation

COMFORT AIRFLOW operation: The airflow direction is upward while in COOL operation, and downward while in HEAT operation. This function prevents cold or warm air from blowing directly on the occupants in the room.

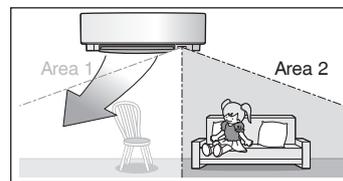
INTELLIGENT EYE operation: The INTELLIGENT EYE sensor detects human movement and adjusts the right and left airflow direction to avoid blowing air directly on the person. If no one is in the room for more than 20 minutes, the operation automatically changes to energy saving operation. The INTELLIGENT EYE sensor works differently depending on the situation.

INTELLIGENT EYE operation is useful for energy saving

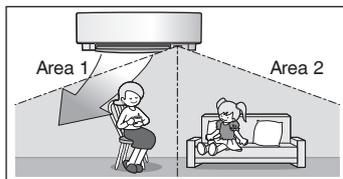
■ A person is detected in area 1.



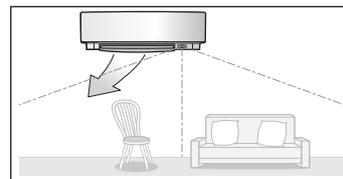
■ A person is detected in area 2.



■ People are detected in both areas.



■ No people are detected in the areas.



Use the INTELLIGENT EYE operation in combination with the COMFORT AIRFLOW operation.

The air conditioner will switch to energy saving mode after 20 minutes.

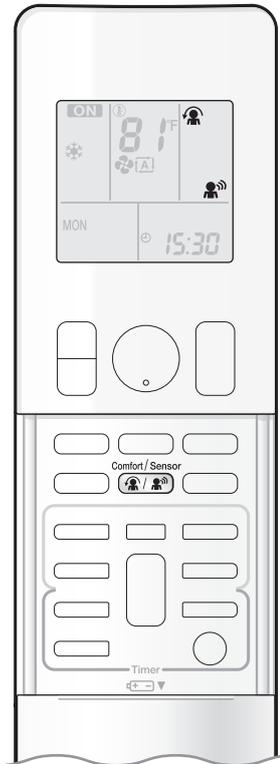
*The airflow direction may differ from the illustrated direction depending on the actions and movements of the people in the areas.

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.
- This operation changes the temperature by -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 the set temperature.
When the room temperature exceeds 86°F (30°C), the operation changes the temperature by $+1.8^{\circ}\text{F}$ ($+1^{\circ}\text{C}$) in COOL / $+1.8^{\circ}\text{F}$ ($+1^{\circ}\text{C}$) in DRY operation from the set temperature.
- This operation decreases the airflow rate slightly in FAN operation only.



COMFORT AIRFLOW / INTELLIGENT EYE Operation



⚠ CAUTION

- Do not place large objects near the INTELLIGENT EYE sensor. Also keep heating units and 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.

To start operation

▶ Press  and select the desired mode.

- Each time  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 “ 

- When the flaps (horizontal blades) are swinging, selecting any of the modes above will cause the flaps (horizontal blades) to stop.
- The lamp lights when human movement is detected.

COMFORT AIRFLOW / INTELLIGENT EYE operation settings

Display	Operation mode	Explanation
	COMFORT AIRFLOW	The flaps adjust the airflow direction upward while cooling, downward while heating. ▶Page 14
	INTELLIGENT EYE	The sensor detects the movement of people in the sensing areas and the louvers adjust the airflow direction to an area where people are not present. When there are no people in the sensing areas, the air conditioner switches to the energy saving mode. ▶Page 14
	COMFORT AIRFLOW and INTELLIGENT EYE	The air conditioner will be in COMFORT AIRFLOW operation combined with INTELLIGENT EYE operation. ▶Page 14
Blank	No function	-

To cancel operation

▶ Press  until no icon is displayed.

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

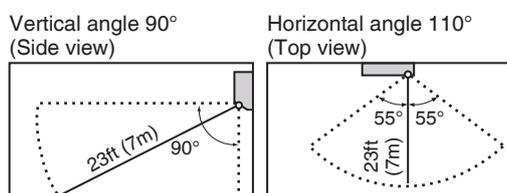
NOTE

■ 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 up and down airflow direction is selected, COMFORT AIRFLOW operation will be canceled.

■ Notes on INTELLIGENT EYE operation

- Application range is as follows.



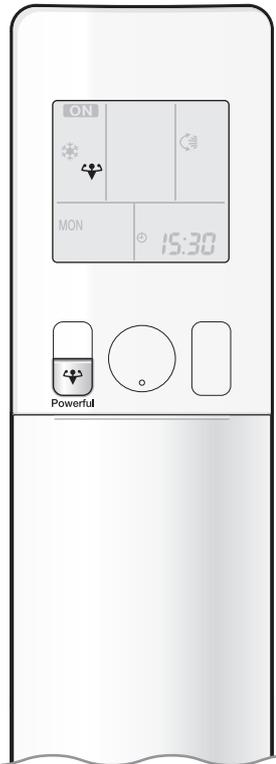
- While the air conditioner is in INTELLIGENT EYE operation, the louvers adjust the airflow direction if there are people in the sensing areas of the INTELLIGENT EYE so that the leftward or rightward airflow will not be directed to the people. If no people are detected in either area 1 or 2 for 20 minutes, the air conditioner switches to the energy saving mode with the set temperature shifted by 3.6°F (2°C). The air conditioner may switch to the energy saving operation even if there are people in the areas. This may occur depending on the clothes the people are wearing, if there is no movement of the people in the areas.
- The airflow direction from the louvers will be leftward if there are people in both areas 1 and 2. The air will also flow left if there is a person right in front of the sensor as the sensor judges that there are people in both areas.
- Due to the position of the sensor, people might be exposed to the airflow of the indoor unit if they are close to the front side of the indoor unit. If there are people close to the front side of the indoor unit or in both areas, it is recommended to use the COMFORT AIRFLOW and INTELLIGENT EYE operations simultaneously. Using both modes together, the air conditioner will not direct the airflow towards the people.
- The sensor may not detect moving objects further than 23ft (7m) away. (Please see the application range.)
- Sensor detection sensitivity changes according to the indoor unit location, the speed of passers-by, temperature range, etc.
- The sensor could also mistakenly detect pets, sunlight, fluttering curtains and light reflected off of mirrors as passers-by.
- INTELLIGENT EYE operation will not switch on during POWERFUL operation.
- NIGHT SET mode (▶ [Page 20](#)) will not switch on during use of INTELLIGENT EYE operation.

■ Notes on combining COMFORT AIRFLOW operation and INTELLIGENT EYE operation

- The airflow rate will be set to AUTO. If the up and down airflow direction is selected, COMFORT AIRFLOW operation will be canceled. Priority is given to the function of whichever button is pressed last.
- When the INTELLIGENT EYE sensor detects the movement of people, it adjusts the airflow direction upward (while in COOL operation) and downward (while in HEAT operation), by adjusting the flaps. When the sensor detects people, the louvers will direct the airflow in such a way that it will not be blown directly on them. If there are no people, the air conditioner will switch to energy saving operation after 20 minutes.



POWERFUL Operation



POWERFUL operation quickly maximizes the cooling (heating) effect in any operation mode. In this mode, the air conditioner operates at maximum capacity.

To start POWERFUL operation

Press  during operation.

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

To cancel POWERFUL operation

Press  again.

- “” disappears from the LCD.

NOTE

Notes on POWERFUL operation

- Pressing  causes the settings to be canceled, and “” disappears from 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 at the maximum setting.
 - **When using priority room setting**
Refer to “Note for Multi System”. ▶ **Page 27**

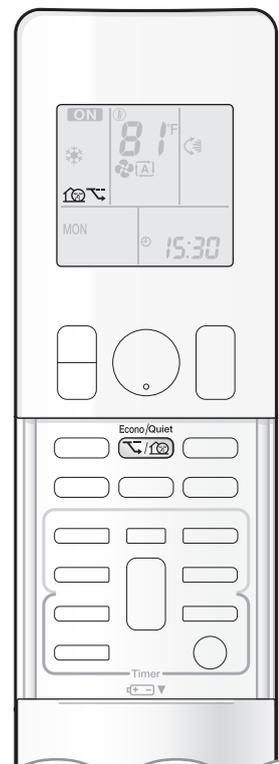
Regarding the combination of POWERFUL and other operations

POWERFUL + COMFORT AIRFLOW	Not available*
POWERFUL + ECONO	
POWERFUL + OUTDOOR UNIT QUIET	

*Priority is given to the function of whichever button is pressed last.



ECONO / OUTDOOR UNIT QUIET Operation



ECONO operation enables efficient operation by limiting the maximum power consumption.

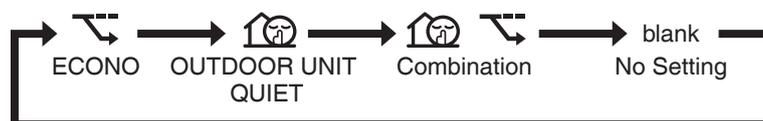
This function is useful to prevent the circuit breaker from tripping when the unit operates alongside other appliances on the same circuit.

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

To start operation

Press  and select the desired mode.

- Each time  is pressed, a different setting option is displayed on the LCD.



To cancel operation

Press  until no icon is displayed.

NOTE

Notes on ECONO operation

- Pressing  causes the settings to be canceled, and “” disappears from the LCD.
- If the power consumption level is already low, switching to ECONO operation will not reduce the power consumption.

Notes on OUTDOOR UNIT QUIET operation

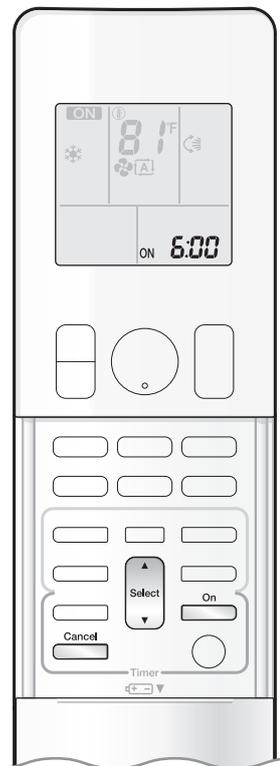
- If using a multi system, the OUTDOOR UNIT QUIET operation will work only when this function is set on all operated indoor units. However, if using priority room setting, refer to “**Note for Multi System**”. ▶ [Page 27](#)
- Even if the operation is stopped by using the remote controller or the indoor unit ON/OFF switch when using OUTDOOR UNIT QUIET operation, “” will remain displayed on the remote controller.
- OUTDOOR UNIT QUIET operation will not reduce the frequency nor fan speed if they already are operating at reduced levels.
- This operation is performed with lower power and therefore may not provide a sufficient cooling (heating) effect.

Possible combinations of ECONO / OUTDOOR UNIT QUIET operation and basic operations

	Operation mode				
	AUTO	DRY	COOL	HEAT	FAN
ECONO	✓	✓	✓	✓	–
OUTDOOR UNIT QUIET	✓	–	✓	✓	–



ON/OFF TIMER Operation

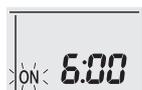


Timer functions are useful for automatically switching the air conditioner on or off at night or in the morning. You can also use the ON TIMER and OFF TIMER together.

To use ON TIMER operation

- Check that the clock is correct.
If not, set the clock to the present time. ▶ [Page 10](#)

1. Press .



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

- “⌚” and day of the week disappear from the LCD.

2. Press **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 **again.**

- The multi-monitor lamp blinks twice.
- “ON” and setting time are displayed on the LCD.
- The TIMER lamp periodically lights orange. ▶ [Page 5](#)



Display

To cancel ON TIMER operation

Press .

- “ON” and setting time disappear from the LCD.
- “⌚” and day of the week are displayed on the LCD.

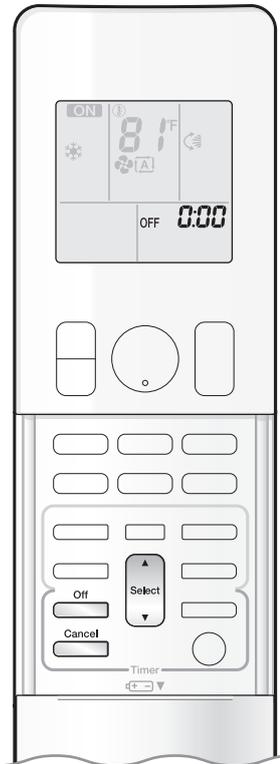
NOTE

Notes on TIMER operation

- When TIMER is set, the present time is not displayed.
- 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)

In the following cases, set the timer again.

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



To use OFF TIMER operation

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

1. Press  .



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

- “⌚” and day of the week disappear from the LCD.

2. Press  **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  **again.**

- The multi-monitor lamp blinks twice.
- “OFF” and setting time are displayed on the LCD.
- The TIMER lamp periodically lights orange. ▶ Page 5



Display

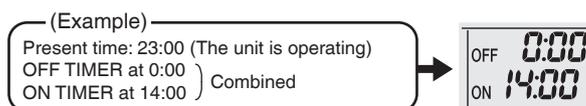
To cancel OFF TIMER operation

Press  .

- “OFF” and setting time disappear from the LCD.
- “⌚” and day of the week are displayed on the LCD.

To combine ON TIMER and OFF TIMER operation

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



NOTE

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) during sleeping hours.

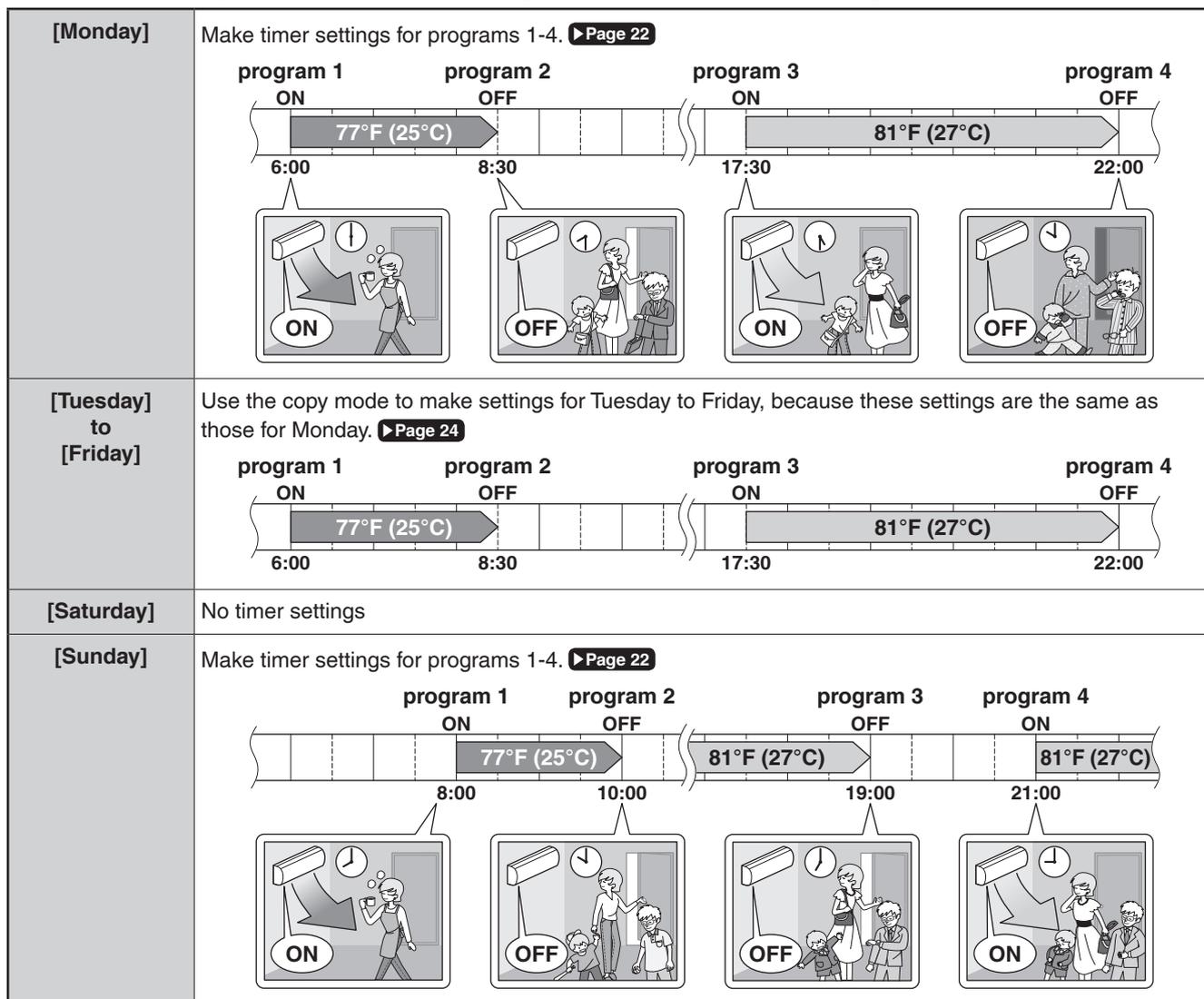


WEEKLY TIMER Operation

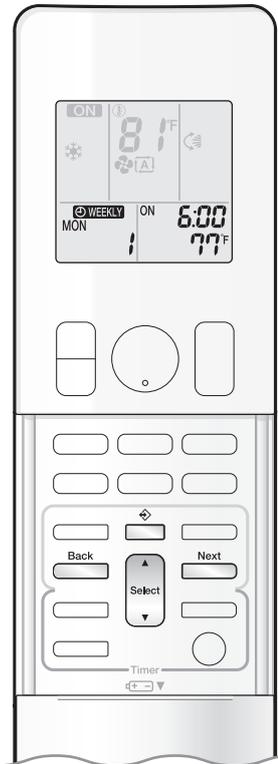
Up to 4 timer settings can be saved for each day of the week. This is convenient to adapt the WEEKLY TIMER to your family's life style.

Setting example of the WEEKLY TIMER

The same timer settings are used from Monday through Friday, while different timer settings are used for the weekend.



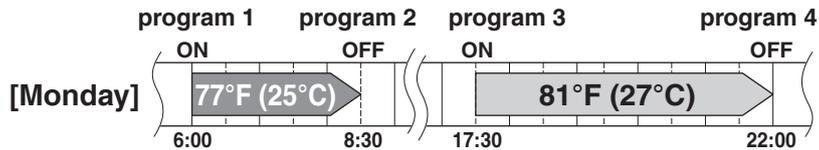
- Up to 4 reservations per day and 28 reservations per week can be set using the WEEKLY TIMER. The effective use of the copy mode simplifies timer programming.
- The use of ON-ON-ON-ON settings, for example, makes it possible to schedule operating mode and set temperature changes. Furthermore, by using 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 you forget to turn it off.



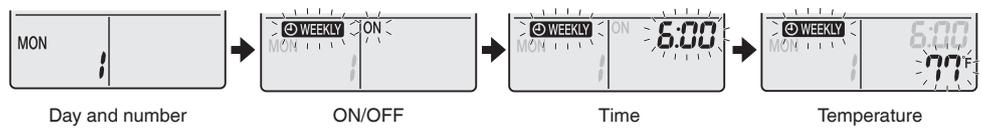
To use WEEKLY TIMER operation

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 the “ON” or “OFF” setting in sequence.



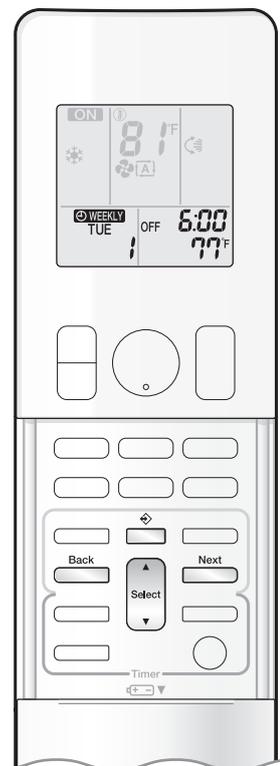
- In case the reservation has already been set, selecting “blank” deletes the reservation.
- Proceed to **STEP 9** if “blank” is selected.
- To return to the day of the week and reservation number setting, press .

5. Press .

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



WEEKLY TIMER Operation



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 .
- Proceed 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).
COOL or AUTO: The unit operates at 64°F (18°C) even if it is set at 50°F (10°C) to 63°F (17°C).
- HEAT or AUTO : 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 .
- The set temperature is only displayed when the mode setting is on.

9. Press .

- Be sure to direct the remote controller toward the indoor unit and check for a receiving tone and blinking of the multi-monitor lamp.
- The multi-monitor lamp blinks twice.
- Temperature and time are set in the case of ON TIMER operation, and the time is set in the case of OFF TIMER operation.
- The next reservation screen will appear.
- To continue further settings, repeat the procedure from **STEP 4**.

10. Press to complete the setting.

- “ WEEKLY” is displayed on the LCD and WEEKLY TIMER operation is activated.
- The TIMER lamp periodically lights orange.
- The multi-monitor lamp will not light orange if all the reservation settings are deleted.



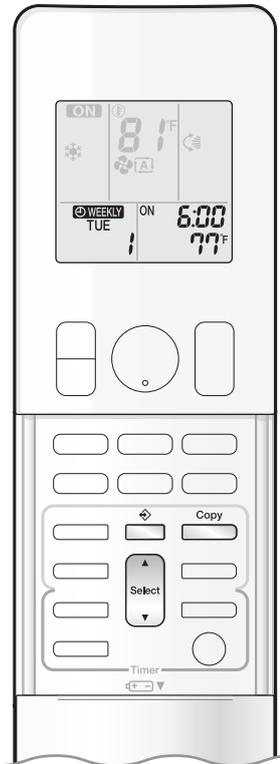
Display

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

NOTE

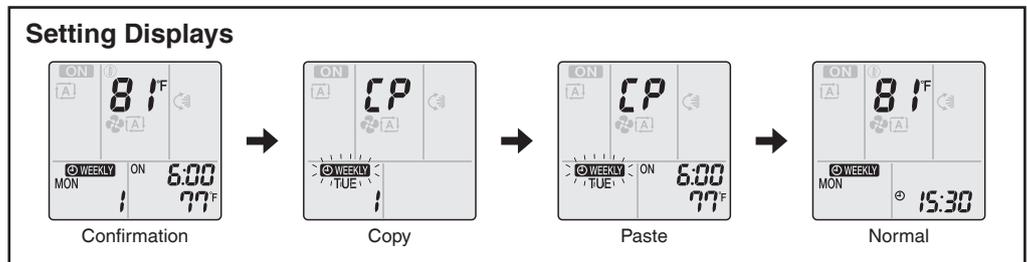
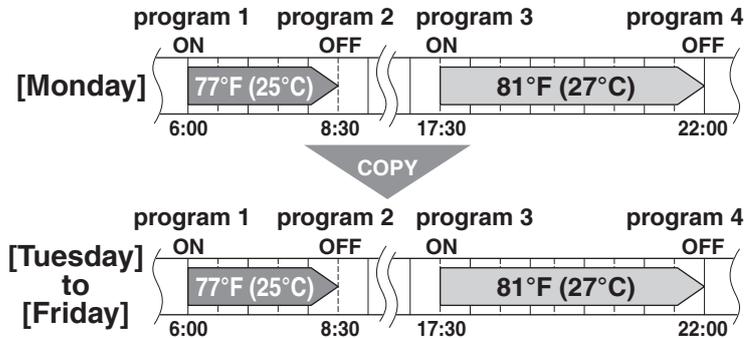
Notes on WEEKLY TIMER operation

- Do not forget to set the clock on the remote controller first.
- The day of the week, ON/OFF TIMER mode, time and set temperature (only for ON TIMER mode) can be set with the WEEKLY TIMER. Other settings for the ON TIMER are based on the settings just before the operation.
- 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 enter the standby state, and “ WEEKLY” will disappear from the LCD. When the ON/OFF TIMER is up, the WEEKLY TIMER will automatically become active.
- Turning off the circuit breaker, power failure, and other similar events will render operation of the indoor unit's internal clock inaccurate. Reset the clock.
- can be used only for the time and temperature settings. It cannot be used to go back to the reservation number.



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.



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 multi-monitor lamp blinks twice.
 - 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.
 - The TIMER lamp periodically lights orange.

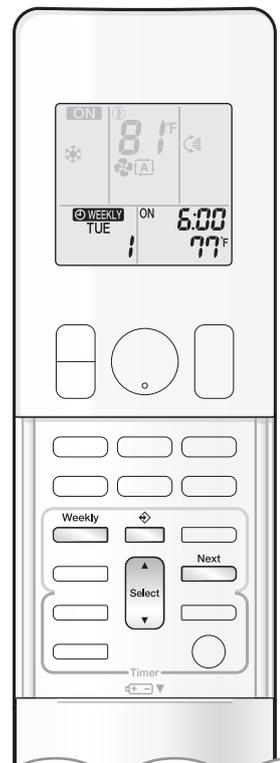
NOTE

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** . **▶Page 22**

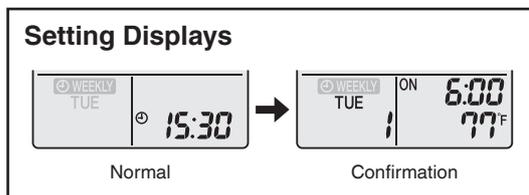


WEEKLY TIMER Operation



Confirming a reservation

- The reservation can be confirmed.



1. Press .

- The day of the week and the reservation number of the 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 . The mode is switched to setting mode. Proceed to **Setting mode** STEP 4. [▶Page 22](#)

3. Press to exit the confirmation mode.

- “ ” is displayed on the LCD and WEEKLY TIMER operation is activated.
- The TIMER lamp periodically lights orange. [▶Page 5](#)
The multi-monitor lamp will not light orange if all the reservation settings are deleted.



Display

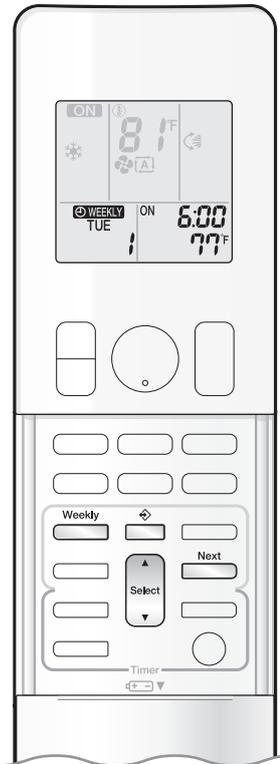
To deactivate WEEKLY TIMER operation

▶ Press while “ ” is displayed on the LCD.

- “ ” disappears from the LCD.
- To reactivate the WEEKLY TIMER operation, press again.
- If a reservation deactivated with is activated once again, the last reservation mode will be used.

NOTE

- If not all the reservation settings are reflected, deactivate the WEEKLY TIMER operation once. Then press again to reactivate the WEEKLY TIMER operation.



To delete reservations

An individual reservation

1. Press .

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

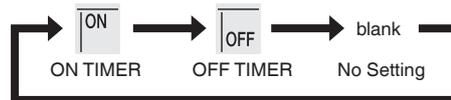
2. Press to select the day of the week and the reservation number to be deleted.

3. Press .

- “ WEEKLY” and “ON” or “OFF” blink.

4. Press until no icon is displayed.

- Pressing changes the ON/OFF TIMER mode in sequence.
- Selecting “blank” will cancel any reservation you may have.



Pressing puts the sequence in reverse.

5. Press .

- The selected reservation will be deleted.

6. Press .

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

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 about 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 about 5 seconds with the normal display.

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

Note for Multi System

A multi system has one outdoor unit connected to multiple indoor units.

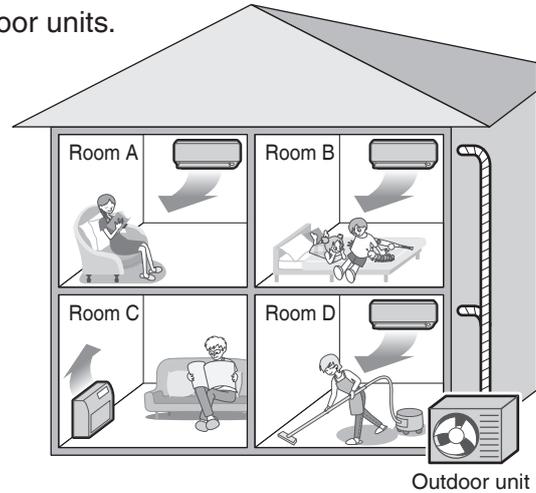
Selecting the operation mode

When the priority room setting is active but the set unit is not operating or when the priority room setting is inactive

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 multi-monitor lamp will blink; this does not indicate malfunction.



NOTE

Notes on operation mode for a 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 indoor 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 started is given priority, but the following situations are exceptions to this rule. 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 indoor unit operating in FAN mode will switch to standby, and the multi-monitor lamp will blink.

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 night-time hours to prevent annoyance to neighbors.

- NIGHT QUIET mode is activated when the temperature drops 10.8°F (6°C) or more below the highest temperature recorded that day. When the temperature difference between the current outdoor temperature and the maximum outdoor temperature becomes less than 7.2°F (4°C), this function will be canceled.
- NIGHT QUIET mode slightly reduces the cooling efficiency of the unit.

OUTDOOR UNIT QUIET operation

Refer to "OUTDOOR UNIT QUIET Operation". ▶Page 18

When the priority room setting is active but the set unit is not operating or when the priority room setting is inactive

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

When canceling OUTDOOR UNIT QUIET operation, simply cancel the mode on one of the operating indoor units using their remote controller.

However OUTDOOR UNIT QUIET operation will remain displayed on the remote controllers for the other rooms.

We recommend you cancel operation in all rooms using their remote controllers.

With the priority room setting active

Refer to "Priority room setting" on the next page.

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.

NOTE

- The COOL/HEAT mode lock cannot be activated together with the priority room setting.

Priority room setting (Not available on some models)

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, you can select a different operation mode from other rooms.

[Example]

- Room A is the priority room in this example.
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	The current operation mode is maintained.
HEAT	The unit enters the 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 the 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 this example.
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 OUTDOOR UNIT QUIET operation is used

[Example]

- Room A is the priority room in this example.
Just by setting the unit in room A to QUIET operation, the air conditioner starts OUTDOOR UNIT QUIET operation. You do not have to set all the indoor units in operation to OUTDOOR UNIT QUIET operation.

Care and Cleaning

⚠ CAUTION

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

■ Quick reference

How to open the upper front panel

- 1) Hold the upper front panel by the sides and open it.
- 2) Fix the panel with the panel support plate.

How to close the upper front panel

- 1) Return the panel support plate to its previous position.
 - 2) Turn the unit on and then off to close the panel properly.
- See instructions in “**Reattach the filters and close the upper front panel.**” for a more detailed description.

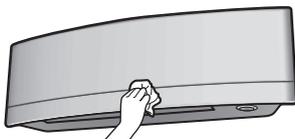
▶ Page 30,31

Cleaning parts

Upper and lower front panels

- With the panels closed, wipe them with a soft damp cloth.

If dirty



Air filter

- Vacuum dust or wash the filter.

Once every 2 weeks

▶ Page 30

Titanium apatite deodorizing filter

- Vacuum dust or replace the filter.

[Cleaning]

Once every 6 months

▶ Page 31

[Replacement]

Once every 3 years

▶ Page 31

Indoor unit and remote controller

- Wipe them with a soft cloth.

If dirty

Notes on cleaning

For cleaning, do not use any of the following:

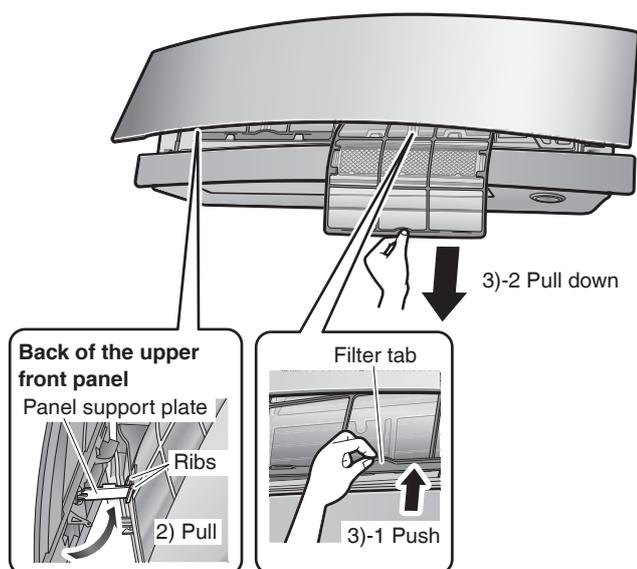
- Water hotter than 104°F (40°C)
- Volatile liquid such as benzene, gasoline and thinner
- Polishing compounds
- Rough materials such as a scrubbing brush



■ Air filter

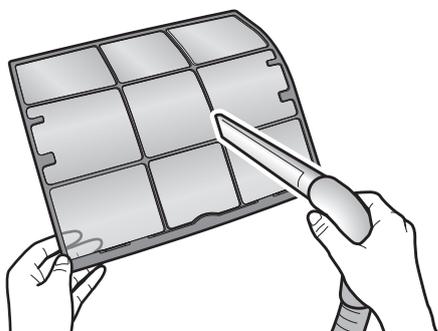
1. Pull out the air filters.

- 1) Open the upper front panel.
- 2) Set the panel support plate between the ribs on the unit to fix the upper front panel.
- 3) Push the filter tab at the center of each air filter a little upwards, then pull it down.



2. Wash the air filters with water or clean them with a 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 deodorizing filter. Refer to "Titanium apatite deodorizing filter" on the next page.



3. Reattach the filters and close the upper front panel.

- 1) Return the panel support plate to its previous position and close the upper front panel slowly.



- 2) Do not push on the panel to close it.



- 3) Turn on the unit using the remote controller. Wait till the upper and lower front panels are completely open. Then, turn off the unit using the remote controller again.



- 4) Once the both panels close completely, gently push the upper front panel to hook it into position.

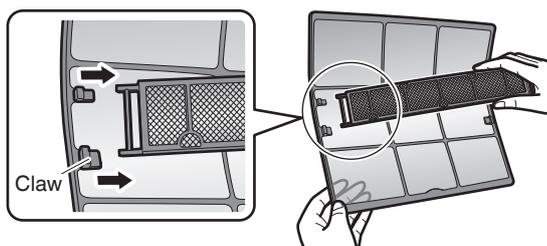


Care and Cleaning

■ Titanium apatite deodorizing filter

1. Take off the titanium apatite deodorizing filters.

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



2. Clean or replace the titanium apatite deodorizing filters.

[Cleaning]

- 1) Vacuum dust, and soak in lukewarm water or water for about 10 to 15 minutes if very dirty.

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

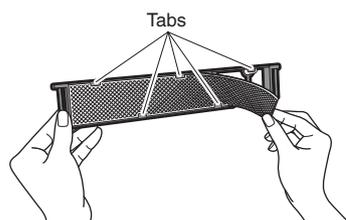
- 2) After washing, shake off remaining water and let them dry in the shade.

- Do not wring out the filter to remove water from it.

[Replacement]

Remove the filter from the filter frame and attach a new one.

- Do not throw away the filter frame. Reuse the filter frame when replacing the titanium apatite deodorizing filter.
- When attaching the filter, check that the filter is properly set in the tabs.



- Dispose of the old filter as non-flammable waste.

3. Reattach the filters and close the upper front panel.

- 1) Return the panel support plate to its previous position and close the upper front panel slowly.



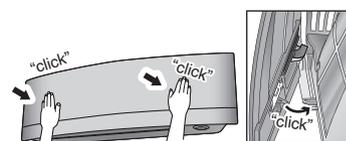
- 2) Do not push on the panel to close it.



- 3) Turn on the unit using the remote controller. Wait till the upper and lower front panels are completely open. Then, turn off the unit using the remote controller again.



- 4) Once the both panels close completely, gently push the upper front panel to hook it into position.



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 deodorizing filter, contact the dealer where you bought the air conditioner.

Item	Titanium apatite deodorizing filter (set of 2)
Part No.	KAF970A46 (without frame)

■ Prior to a long period of non-use

1. Operate the FAN mode for several hours to dry out the inside.

- 1) Press  and select “”.
 - 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. 
- 2) 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 reattach them.

4. To prevent battery leakage, take out the batteries from the remote controller.

■ 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 qualified contractor in addition to regular cleaning by the user.
- For qualified contractor maintenance, please contact the dealer where you bought the air conditioner.

FAQ

Indoor unit

The flaps do not start swinging immediately.

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

The air conditioner stops generating airflow during HEAT operation.

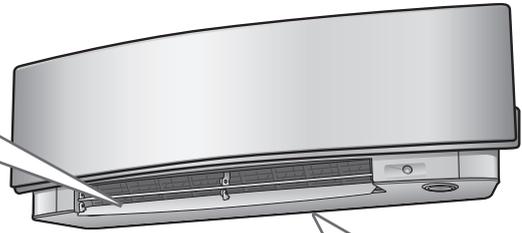
- Once the set temperature is reached, the airflow rate is reduced and operation stopped in order to avoid generating a cool airflow. Operation will resume automatically when the indoor temperature falls.

HEAT operation stops suddenly and a flowing sound is heard.

- The outdoor unit is defrosting. HEAT operation starts after the frost on the outdoor unit has been removed. This can take about 4 to 12 minutes.

Operation does not start soon.

- **When the unit is turned on again soon after being turned off.**
- **When the mode was reselected.**
 - This is to protect the air conditioner. You should wait for about 3 minutes.



Different sounds are heard.

- **A sound like flowing water**
 - This sound is generated because the refrigerant in the air conditioner is flowing.
 - This is a pumping sound of the water in the air conditioner and can be heard when the water is pumped out from the air conditioner during COOL or DRY 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 sound**
 - This sound is generated when the flow of the refrigerant in the air conditioner is switched over.
- **Ticking sound**
 - This sound is generated when the cabinet and frame of the air conditioner slightly expand or shrink as a result of temperature changes.
- **Whistling sound**
 - This sound is generated when refrigerant flows during defrosting operation.
- **Clicking sound during operation or idle time**
 - This sound is generated when the refrigerant control valves or the electrical parts operate.
- **Clopping sound**
 - This sound is 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.

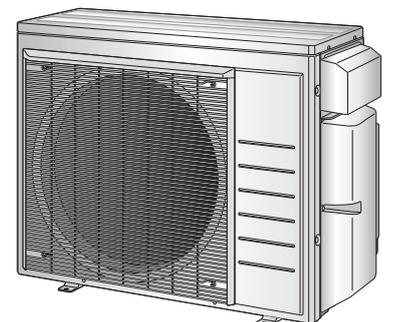
Outdoor unit

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 defrosting operation.
- **In COOL or DRY operation**
 - Moisture in the air condenses into water on the cool surface of the outdoor unit piping and drips.



Troubleshooting

Before making an inquiry or a request for repair, please check the following.
If the problem persists, consult your dealer.



Not a problem

This case is not a problem.



Check

Please check again before requesting repairs.

The air conditioner does not operate

Case	Description / what to check
Multi-monitor lamp is off.	<ul style="list-style-type: none"> • Has the circuit breaker been tripped or the fuse blown? • Is there a power failure? • Are batteries set in the remote controller? • Is the timer setting correct?
Multi-monitor lamp is blinking.	<ul style="list-style-type: none"> • Turn off the power with the circuit breaker and restart operation with the remote controller. If the multi-monitor lamp is still blinking, check the error code and consult your dealer. <p style="text-align: right;">▶ Page 38</p>

The air conditioner suddenly stops operating

Case	Description / what to check
Multi-monitor lamp is on.	<ul style="list-style-type: none"> • To protect the system, the air conditioner may stop operating after sudden large voltage fluctuations. It automatically resumes operation in about 3 minutes.
Multi-monitor lamp is blinking.	<ul style="list-style-type: none"> • Are the air filters dirty? Clean the air filters. • Is there anything blocking the air inlet or air outlet of the indoor unit or outdoor unit? Stop operation and after turning off the circuit breaker, remove the obstruction. Then restart operation with the remote controller. If the multi-monitor lamp is still blinking, check the error code and consult your dealer. ▶ Page 38 • 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. Moreover, 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 blinking after the above steps, there is no malfunction. ▶ Page 27

The air conditioner does not stop operating

Case	Description / what to check
The air conditioner continues operating even after operation is stopped.	<ul style="list-style-type: none"> <ul style="list-style-type: none"> ■ Immediately after the air conditioner is stopped <ul style="list-style-type: none"> • The outdoor unit fan continues rotating for about another 1 minute to protect the system. ■ While the air conditioner is not in operation <ul style="list-style-type: none"> • When the outdoor temperature is high, the outdoor unit fan may start rotating to protect the system.

The room does not cool down / warm up

Case	Description / what to check
Air does not come out.	<ul style="list-style-type: none"> <ul style="list-style-type: none"> ■ In HEAT operation <ul style="list-style-type: none"> • 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 <ul style="list-style-type: none"> • The air conditioner is preparing to operate. Wait for about 3 to 20 minutes.

Troubleshooting

The room does not cool down / warm up

Case	Description / what to check
Air does not come out / Air comes out.	<ul style="list-style-type: none">  ■ Is the airflow rate setting appropriate? <ul style="list-style-type: none"> • Is the airflow rate setting low, such as “Indoor unit quiet” or “Airflow rate 1”? Increase the airflow rate setting. ■ Is the set temperature appropriate? ■ Is the adjustment of the airflow direction appropriate?
Air comes out.	<ul style="list-style-type: none">  • Is there any furniture directly under or beside the indoor unit? • Is the air conditioner in ECONO operation or OUTDOOR UNIT QUIET operation? ▶Page 18 • Is the air filter dirty? • Is there anything blocking the air inlet or air outlet of the indoor unit or outdoor unit? • Is a window or door open? • Is an exhaust fan turning?

Mist comes out

Case	Description / what to check
Mist comes out of the indoor unit.	<ul style="list-style-type: none">  • This happens when the air in the room is cooled into mist by the cold airflow during COOL or other operation.

Remote controller

Case	Description / what to check
The unit does not receive signals from the remote controller or has a limited operating range.	<ul style="list-style-type: none">  • The batteries may be exhausted. Replace both batteries with new dry batteries AAA.LR03 (alkaline). For details, refer to “Preparation Before Operation”. ▶Page 9 • Signal communication may be disabled if an electronic-starter-type fluorescent lamp (such as inverter-type lamps) is in the room. Consult your dealer if that is the case. • The remote controller may not function correctly if the transmitter is exposed to direct sunlight.
LCD is faint, is not working, or the display is erratic.	<ul style="list-style-type: none">  • The batteries may be exhausted. Replace both batteries with new dry batteries AAA.LR03 (alkaline). For details, refer to “Preparation Before Operation”. ▶Page 9
Other electric devices start operating.	<ul style="list-style-type: none">  • If the remote controller activates other electric devices, move them away or consult your dealer.

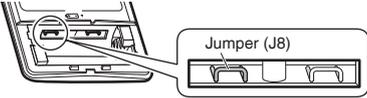
Air has an odor

Case	Description / what to check
The air conditioner gives off an odor.	<ul style="list-style-type: none">  • The room odor absorbed in the unit is discharged with the airflow. We recommend you to have the indoor unit cleaned. Please consult your dealer.

Upper and lower front panels

Case	Description / what to check
Upper and lower front panels do not open. (Multi-monitor lamp is blinking.)	<ul style="list-style-type: none">  • Is there something caught in the upper and lower front panels? Remove the object and attempt operation again using the remote controller. If the upper and lower front panels still do not open and the multi-monitor lamp is still blinking, consult your dealer where you bought the air conditioner.
Upper front panel does not close completely.	<ul style="list-style-type: none">  • Are the upper front panel locks set appropriately?
If the upper and lower front panels are closed while the air conditioner is in operation, the air conditioner will stop operating and the multi-monitor lamp will blink.	<ul style="list-style-type: none">  • Restart the air conditioner after stopping the operation of the air conditioner with the remote controller.

Others

Case	Description / what to check
The air conditioner suddenly starts behaving strangely during operation.	<p> • The air conditioner may malfunction due to lightning or radio. If the air conditioner malfunctions, turn off the power with the circuit breaker and restart the operation with the remote controller.</p>
HEAT operation cannot be selected, even though the unit is heat pump model.	<p> • Check that the jumper (J8) has not been cut. If it has been cut, contact your dealer.</p> 
The ON/OFF TIMER does not operate according to the settings.	<p> • 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 21</p>

Notes on the operating conditions

- If operation continues under any conditions other than those listed in the table,
 - A safety device may activate to stop the operation. (With a multi connection in COOL operation, the safety device may work to stop the operation of the outdoor unit only.)
 - Dew may form on the indoor unit and drip from it when COOL or DRY operation is selected.

Mode	Operating conditions
COOL / DRY	Outdoor temperature: [MXS models]: 14-115°F (–10-46°C) [MXL models]: 14-115°F (–10-46°C) [RX models]: 50-115°F (10-46°C)
	Indoor temperature: 64-90°F (18-32°C) Indoor humidity: 80% max.
HEAT	Outdoor temperature: [MXS models]: 5-75°F (–15-24°C) [MXL models]: –13-75°F (–25-24°C) [RX models]: 5-75°F (–15-24°C) Indoor temperature: 50-86°F (10-30°C)

Troubleshooting

■ Call your dealer immediately

WARNING

When an abnormality (such as a burning smell) occurs, stop operation and turn off the circuit breaker.

- Continued operation in an abnormal condition may result in problems, electric shock or fire.
- Consult the dealer where you bought the air conditioner.

Do not attempt to repair or modify the air conditioner by yourself.

- Incorrect work may result in electric shock or fire.
- Consult the dealer where you bought the air conditioner.

If one of the following symptoms takes place, call your dealer immediately.

- The power cord is abnormally hot or damaged.
- An abnormal sound is heard during operation.
- The circuit 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 off the circuit breaker and call your dealer.



■ After a power failure

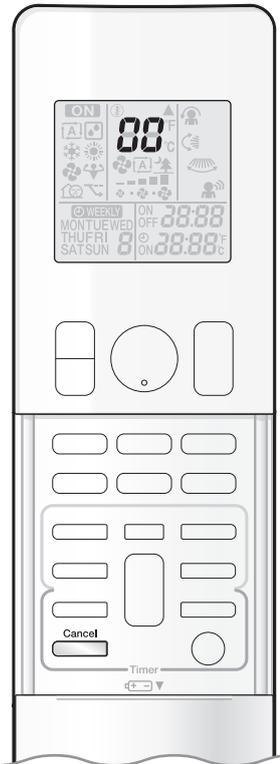
- The air conditioner automatically resumes operation in about 3 minutes. Please wait for a while.

■ Lightning

- If there is a risk lightning could strike in the neighborhood, stop operation and turn off the circuit breaker to protect the system.

■ Disposal requirements

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



■ Fault diagnosis by remote controller

- The remote controller can receive relevant error codes from the indoor unit.

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

2. Press repeatedly until a long beep is produced.

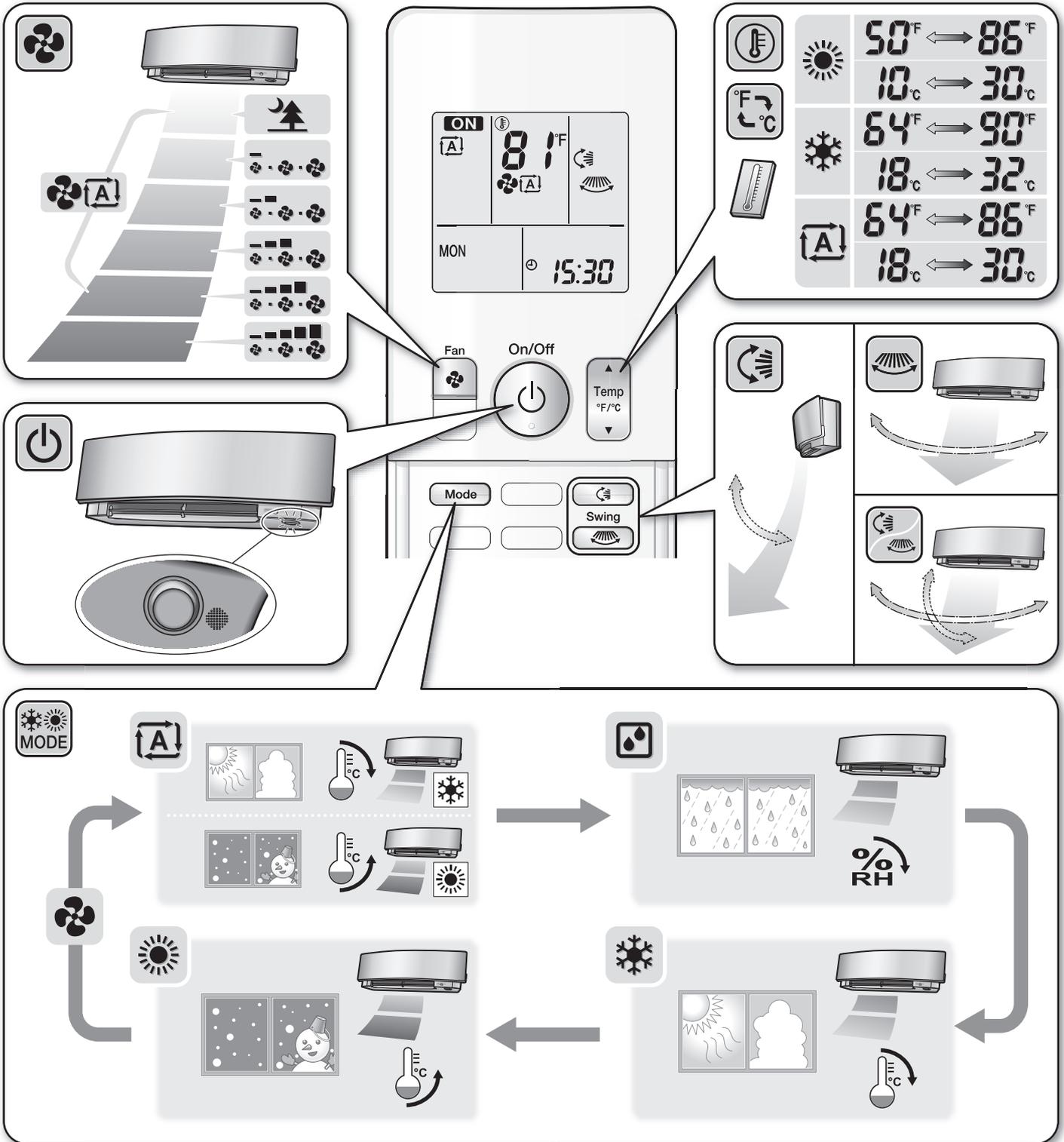
- The code indication changes as shown below, and notifies you with a long beep.

	CODE	MEANING
SYSTEM	00	NORMAL
	U0	REFRIGERANT SHORTAGE
	U2	OVER-VOLTAGE DETECTION
	U4	SIGNAL TRANSMISSION ERROR (BETWEEN INDOOR AND OUTDOOR UNIT)
INDOOR UNIT	A1	INDOOR UNIT PCB ABNORMALITY
	A5	FREEZE-UP PROTECTION OR HEATING PEAK-CUT CONTROL
	A6	FAN MOTOR (DC MOTOR) ABNORMALITY
	C4	INDOOR HEAT EXCHANGER THERMISTOR ABNORMALITY
	C7	FRONT PANEL OPEN /CLOSE FAULT
OUTDOOR UNIT	C9	ROOM TEMPERATURE THERMISTOR ABNORMALITY
	EA	FOUR WAY VALVE ABNORMALITY
	E1	OUTDOOR UNIT PCB ABNORMALITY
	E5	OL ACTIVATION (COMPRESSOR OVERLOAD)
	E6	COMPRESSOR LOCK
	E7	DC FAN LOCK
	F3	DISCHARGE PIPE TEMPERATURE CONTROL
	H0	COMPRESSOR SYSTEM SENSOR ABNORMALITY
	H6	POSITION SENSOR ABNORMALITY
	H8	DC VOLTAGE / CURRENT SENSOR ABNORMALITY
	H9	OUTDOOR TEMPERATURE THERMISTOR ABNORMALITY
	J3	DISCHARGE PIPE THERMISTOR ABNORMALITY
	J6	OUTDOOR HEAT EXCHANGER THERMISTOR ABNORMALITY
L4	RADIATION FIN TEMPERATURE RISE	
L5	OUTPUT OVERCURRENT DETECTION	
P4	RADIATION FIN THERMISTOR ABNORMALITY	

NOTE

- A short beep and 2 consecutive beeps indicate non-corresponding codes.
- To cancel the code display, hold down for about 5 seconds. The code display also clears if no button is pressed for 1 minute.

Quick Reference



DAIKIN NORTH AMERICA LLC

19001 Kermier Road
Houston, TX 77484
<http://www.northamerica-daikin.com/>



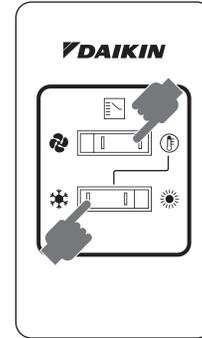
The two-dimensional bar code is a manufacturing code.

3P436086-1C M15B216C (1811)HT

Dry Mode

Preparation

- For equipment protection purposes, apply power to the outdoor units at least 6 hours before starting the operation of the system.
- The dry mode may not be selected if the remote controller is master controlled and the system is not already in the cooling mode of operation (see the following section).
- In case of changing the operation mode by the Cool/Heat selector, set it to cooling operation mode.
- The system can now be controlled from the remote controller.



Cool/Heat Mode Selection Availability

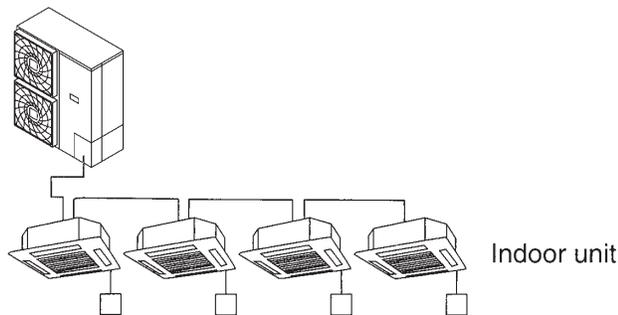
- “Cool”, “Heat” and “Auto” are all only available for selection on the COOL/HEAT changeover master indoor unit. The following table indicates the available operating modes of the other indoor units on the system based upon the selected mode of the master indoor unit.

When the master indoor unit is set to	The other indoor units in the system can be set to			
	Cool	Dry	Heat	Fan
Cool mode	✓	✓		✓
Dry mode	✓	✓		✓
Heat mode			✓	✓
Fan mode				✓
Auto mode (Cooling operation)	✓	✓		✓
Auto mode (Heating operation)			✓	✓

Precautions for Selecting the COOL/HEAT Changeover Master Indoor Unit

- The COOL/HEAT changeover master must be set for a single indoor unit in the following applications.

When one outdoor unit is connected with several indoor units.



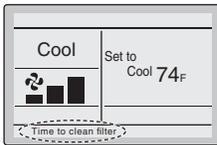
One of these remote controllers needs to be designated as the master remote controller.

Maintenance

Reset Filter Indicator

Operation

1



- When it is time to clean or replace the filter, one of the following messages will appear on the bottom of the basic screen.
 - “Time to clean filter”
 - “Time to clean filter & element”
 - “Time to clean element”

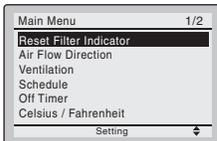
- Wash, clean, or replace the filter or element.
For details, refer to the Operation Manual supplied with the indoor unit.

2

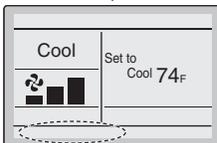
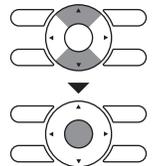
- Reset the filter indicator when the filter or element is cleaned or replaced.
- Press Menu/OK button.
The main menu screen will appear.



3



- Press ▼▲ buttons to select **Reset Filter Indicator** on the main menu screen and press Menu/OK button.



- The message shown in illustration 1 will disappear from the basic screen when the filter sign is reset.

Maintaining the Unit and LCD Display

- Wipe the LCD and surface of the remote controller with a dry cloth when they become dirty.
- If the dirt on the surface cannot be removed, soak the cloth in neutral detergent diluted with water, squeeze the cloth tightly, and clean the surface. Wipe the surface with a dry cloth.

Note

- Do not use any paint thinner, organic solvent, or strong acid.

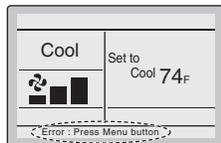
Reference Information

Error Code Display

Contact your local dealer in the following cases

Operation

1



- If an error occurs, either one of the following items will flash in the basic screen.

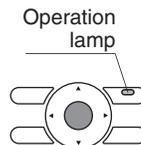
“Error: Press Menu button”

* The operation lamp will flash.

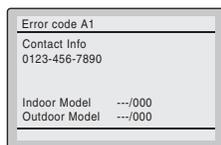
“Warning: Press Menu button”

* The operation lamp will not flash.

- Press Menu/OK button.



2



- The Error code will flash and the service contact and model name or code may appear.

- Notify your local dealer of the Error code and model name or code.

Precautions for Group Control System or Two Remote Controller Control System

This system provides two other control systems beside individual control (one remote controller controls one indoor unit) system. Confirm which type of your unit is the following system.

- **Group control system**

One remote controller controls up to 16 indoor units. All indoor units are equally set.

- **Two remote controller control system**

Two remote controllers control one indoor unit (in case of group control system, one group of indoor units). The unit is individually operated.

Note

- Contact your local dealer in case of changing the combination or setting of group control and two remote controller control systems.

Optimum Operation

Observe the following precautions to ensure the system operates properly.

- Prevent direct sunlight from entering a room during cooling operation by using curtains or blinds.
- Do not leave doors and windows open. If the doors and windows remain open, air will flow out of your room causing a decrease in the cooling or heating effect.
- Do not use other heating devices directly beneath the indoor unit.
If you do, they might get deformed by the heat.
- Never place objects near the air inlet or the air outlet of the unit. It may cause deterioration in the effect or stop the operation.
- Adjust the room temperature properly for a comfortable environment. Avoid excessive heating or cooling.
- Ventilate often.
Extended use requires special attention to ventilation.
- Keep the indoor unit and remote controller at least 3.5 ft. (1 m) away from televisions, radios, stereos, and other similar equipment.
Failing to do so may cause static or distorted pictures.
- Turn off the main power supply switch to the unit when the unit is not used for longer periods of time. If the switch is on, it uses electricity. Before restarting the unit, turn on the main power supply switch 6 hours before operation to ensure smooth running. (Refer to the chapter "Maintenance" in the indoor unit manual.)
- Fully use the function of air flow direction adjust.
Cold air gathers on the floor, and warm air gathers in the ceiling.
Set the air flow direction parallel during cooling or dry operation, and set it downwards during heating operation.
Do not let the air blow directly to a person.
- It takes time for the room temperature to reach the set temperature.
We recommend starting the operation in advance using schedule operation.

Seasonal Maintenance

Caution

- **Do not touch the air inlets or aluminum fins of the outside or indoor units.**
Touching them may result in injury.
- **Do not wash the outside or indoor units with water.**
An electric shock or fire may result.
- **Watch your steps at the time of air filter cleaning etc.**
If the scaffold is unstable, you may fall or topple down, thus causing injury.
- **Be sure to stop the operation, and turn the breaker off before cleaning.**
This may cause electric shock and injury.
- **Consult with the dealer for cleaning the interior of the indoor units.**
Incorrect cleaning may damage the plastic parts and cause failures, such as water leakage, and an electric shock may result.

■ At the beginning of the season

Check

- Are the indoor and outdoor unit intake and outlet vents blocked?
Remove anything that might be blocking them.

Clean the exterior.

- See the Operation Manual included with the indoor unit for details on how to clean it.

Turn the power on.

- When the power comes on, the characters in the remote controller display appear.
(To protect the unit, turn the power on at least 6 hours before operating it. This makes operation smoother.)

■ At the end of the season

On a clear day, use fan operation for around half a day to thoroughly dry out the interior of the unit.

- This step is performed to prevent buildup of mold and other harmful organisms.

Turn off the power.

- When the power is shut off, the characters in the remote controller display disappear.
- When the power is on, the unit consumes up to several dozen Watts of power.
Turn off the power to conserve energy.

Clean the exterior.

- See the Operation Manual included with the indoor unit for details on how to clean it.

Following Symptoms are not Air Conditioner Troubles

■ The system does not operate

- **The air conditioner does not start immediately when restarting or changing the operation mode.**
If the operation lamp lights, the system is in normal condition.
To prevent overloading of the compressor motor, the air conditioner starts 5 minutes after it is turned ON again in case it was turned OFF just before.
- If “**CENTRAL CONTROL**” is displayed on the remote controller and pressing the operation button causes the display to blink for a few seconds.
This indicates that the central device is controlling the unit.
The blinking display indicates that the remote control cannot be used.
- **The system does not start immediately after the power supply is turned on.**
Wait 10 minutes until the micro computer is prepared for operation.

■ It stops sometimes

- **The remote controller display reads “U4” or “U5” and the unit stops but then restarts after a few minutes.**
This is because the remote control is intercepted by noise from electrical appliances other than the air conditioner, and this prevents communication between the units, causing them to stop.
Operation automatically restarts when the noise goes away.

■ Cool/heat cannot be changed over

- **When the display shows “MASTER CONTROLLED”.**
It shows that this is a slave remote controller.
Refer to “Setting the Cool/Heat Change over Master”.
- **When the Cool/Heat selector switch is installed and the display shows “MASTER CONTROLLED”.**
This is because COOL/HEAT change over is controlled by the Cool/Heat selector. Ask your local dealer where the Cool/Heat selector is installed.

■ Fan operation is possible, but cooling and heating do not work

- **Immediately after the power is turned on.**
The micro computer is getting ready to operate. Wait 10 minutes.

■ The fan speed does not correspond to the setting

- **The fan speed does not change even if the fan speed control button is pressed.**
During heating operation, when the room temperature reaches the set temperature, the outdoor unit goes off and the indoor unit changes to whisper the fan speed.
This is to prevent cold air blowing directly on occupants of the room.
The fan speed will not change even if the button is pressed, when another indoor unit is in heating operation.

■ The fan direction does not correspond to the setting

- **The fan direction does not correspond to the remote control display.**
The fan direction does not swing.
This is because the unit is being controlled by the micro computer.

Following Symptoms are not Air Conditioner Troubles

■ White mist comes out of the unit

Indoor unit

- **When humidity is high during cooling operation.**

If the interior of indoor unit is extremely contaminated, the temperature distribution inside a room becomes uneven. It is necessary to clean the interior of the indoor unit. Ask your local dealer for details on cleaning the unit. This operation requires a qualified service person.

- **Immediately after the cooling operation stops and if the room temperature and humidity are low.**

This is because warm refrigerant gas flows back into the indoor unit and generates steam.

Outdoor unit

- **When the system is changed over to heating operation after defrost operation.**

Moisture generated by defrost becomes steam and is exhausted.

■ Noise of air conditioners

Indoor unit

- **An electric starting sound is heard immediately after the power supply is turned on.**

The electronic expansion valve inside an indoor unit starts working and makes the noise. Its volume will reduce in about 1 minute.

- **A continuous low hissing sound like flowing water is heard when the system is in cooling operation or at a stop.**

When the drain pump (an optional accessory) is in operation, this noise is heard.

- **A squeaking sound is heard when the system stops after heating operation.**

Expansion and contraction of plastic parts caused by temperature change make this noise.

- **A low sound like dripping water is heard while the indoor unit is stopped.**

When the other indoor unit is in operation, this noise is heard. In order to prevent oil and refrigerant from remaining in the system, a small amount of refrigerant is kept flowing.

Outdoor unit

- **When the tone of operating noise changes.**

This noise is caused by the change of frequency.

Indoor unit, outdoor unit

- **A continuous low hissing sound is heard when the system is in cooling or defrost operation.**

This is the sound of refrigerant gas flowing through both indoor and outdoor units.

- **A hissing sound which is heard at the start or immediately after stopping operation or defrost operation.**

This is the noise of refrigerant caused by flow stop or flow change.

■ Dust comes out of the unit

- **When the unit is used after stopping for a long time.**

This is because dust has gotten into the unit.

■ The units can give off odors

- **During operation.**

The unit can absorb the smell of rooms, furniture, cigarettes, etc., and then emit it again.

■ The outdoor unit fan does not rotate

- **During operation.**

The speed of the fan is controlled in order to optimize product operation.

■ The compressor or fan in the outdoor unit does not stop

- **This is to prevent oil and refrigerant from remaining in the compressor. The unit will stop after 5 to 10 minutes.**

■ The inside of outdoor unit is warm even when the unit has stopped

- **This is because the crankcase heater is warming the compressor so that the compressor can start smoothly.**

■ Hot air is emitted even though the unit is stopped

- **Hot air can be felt when the unit is stopped.**

Several different indoor units are being run on the same system, so if another unit is running, some refrigerant will still flow through the unit.

■ Does not cool very well

- **Dry operation.**

Dry operation is designed to lower the room temperature as little as possible.

Refer to page 5.

Trouble Shooting

If one of the following malfunctions occur, take the measures shown below and contact your local dealer.

Warning

- **Stop operation and shut off the power if anything unusual occurs (burning smells, etc.)**

Leaving the unit running under such circumstances may cause breakage, electrical shock, or fire.

Contact your local dealer.

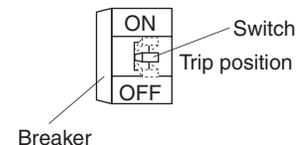
- If a safety device such as a fuse or a breaker frequently actuates;
Measure : Do not turn on the main power switch.
- If the ON/OFF switch does not properly work;
Measure : Turn off the main power switch.
- If water leaks from unit;
Measure : Stop the operation.
- The operation mode selector button does not work well.
Turn off the power.

If the system does not properly operate except for the above mentioned cases and none of the above mentioned malfunctions is evident, investigate the system according to the following procedures.

If it is impossible to fix the problem after checking all the above items, contact your local dealer.

Let them know the symptoms, system name, and model name.

1. If the system does not operate at all;
 - Check if there is no power failure.
Wait until power is restored. If power failure occurs during operation, the system automatically restarts immediately after the power supply is recovered.
 - Check if no fuse has blown;
Turn off the power supply.
 - Check if the breaker is blown.
Turn the power on with the breaker switch in the OFF position.
Do not turn the power on with the breaker switch in the Trip position.
(Contact your local dealer.)
2. If the system stops soon after starting the operation;
 - Check if air inlet or outlet of outside or indoor unit is not blocked by obstacles.
Remove any obstacle and make it well-ventilated.
 - Check if the remote controller display shows "Time to clean filter & element";
Refer to the Operation Manual of the indoor unit. And clean the air filter or element.
3. The system operates but cooling or heating is insufficient;
 - Check if air inlet or outlet of outside or indoor unit is not blocked by obstacles.
Remove any obstacle and make it well-ventilated.
 - Check if the remote controller display shows "Time to clean filter & element";
Refer to the Operation Manual of the indoor unit. And clean the air filter or element.
 - Check the temperature setting.
Refer to "Operation Procedure".



Trouble Shooting

- Check the fan speed setting on your remote controller.
Refer to “Operation Procedure”.
- Check for open doors or windows.
Shut doors and windows to prevent wind from coming in.
- Check if there are too many occupants in the room during cooling operation.
- Check if the heat source of the room is excessive during cooling operation.
- Check if direct sunlight enters the room during cooling operation.
Use curtains or blinds.
- Check if the air flow angle is not proper.
Refer to “Operation Procedure”.

After-Sales Service and Warranty

After-sale Service

Danger

- Refrigerant gas may produce a toxic gas if it comes in contact with fire such as from a fan, heater, stove or cooking device.
Exposure to this gas could cause severe injury or death.

Warning

- **Do not disassemble, modify or repair the unit.**
This may cause water leakage, electric shock or fire.
Contact your local dealer.
 - **Do not remove or reinstall the unit by yourself.**
Incorrect installation may cause water leakage, electrical shock or fire.
Contact your local dealer.
-
- **When asking your local dealer to repair, inform related staff of the details as follows:**
 - Model name and product No. of air conditioner
 - Shipping date and installation date
 - Malfunction:
Inform the staff of the defective details. (Malfunction code being displayed on the remote controller.)
 - Name, address, telephone number
 - **Repair after the warranty term is expired**
Contact your local dealer. If necessary to repair, pay service is available.
 - **Minimum storage period of important parts**
Even after a certain type of air conditioner is discontinued, we have the related important parts in stock for 9 years at least.
The important parts indicate parts essential to operate the air conditioner.
 - **Recommendations for maintenance and inspection**
Since dust collects after using the unit for several years, the performance will be deteriorated to some extent.
Disassembling and cleaning inside require technical expertise, so we recommend entering a maintenance and inspection contract (at a cost) separate from normal maintenance.
 - **Recommended inspection and maintenance cycles**
[Note: The maintenance cycle is not the same as the warranty period.]
Table 1 assumes the following usage conditions.
 1. Normal use without frequent starting and stopping of the machine.
(Although it varies with the model, we recommend not starting and stopping the machine more than 6 times/hour for normal use.)
 2. Operation of the product is assumed to be 10 hours/day and 2,500 hours/year.

• Table 1 “Inspection Cycle” and “Maintenance Cycle” Lists

Name of Main Part	Inspection Cycle	Maintenance Cycle [replacements and/or repairs]
Compressor	1 year	20,000 hours
Electric motor (fan, damper, etc.)		20,000 hours
Printed circuit boards		25,000 hours
Heat exchanger		5 years
Sensor (thermistor, etc.)		5 years
Remote controller and switches		25,000 hours
Drain pan		8 years
Expansion valve		20,000 hours
Electromagnetic valve		20,000 hours
FAN		Outside : 10 years Indoor : 13 years

Note 1

This table indicates main parts.
See the maintenance and inspection contract for details.

Note 2

This maintenance cycle indicates recommended lengths of time until the need arises for maintenance work, in order to ensure the product is operational as long as possible.
Use for appropriate maintenance design (budgeting maintenance and inspection fees, etc.).
Depending on the content of the maintenance and inspection contract, the inspection and maintenance cycles may in reality be shorter than those listed here.

Shortening of “maintenance cycle” and “replacement cycle” needs to be considered in the following cases.

1. When used in hot, humid locations or locations where temperature and humidity fluctuate greatly.
2. When used in locations where power fluctuation (voltage, frequency, wave distortion, etc.) is high.
(Cannot be used if it is outside the allowable range.)
3. When installed and used in locations where bumps and vibrations are frequent.
4. When used in bad locations where dust, salt, harmful gas or oil mist such as sulfurous acid and hydrogen sulfide may be present in the air.
5. When used in locations where the machine is started and stopped frequently or operation time is long. (Example: 24 hour air-conditioning)

■ Recommended replacement cycle of wear-out parts

[The cycle is not the same as the warranty period.]

• Table 2 “Replacement Cycle” Lists

Name of Main Part	Inspection Cycle	Replacement Cycle
Air filter	1 year	5 years
High efficiency filter (Optional accessory)		1 year
Fuse		10 years
Crankcase heater		8 years

Note 1

This table indicates main parts.
See the maintenance and inspection contract for details.

Note 2

This maintenance cycle indicates recommended lengths of time until the need arises for maintenance work, in order to ensure the product is operational as long as possible.
Use for appropriate maintenance design (budgeting maintenance and inspection fees, etc.).
Contact your local dealer for details.
Note: Breakage due to taking apart or cleaning inside by anyone other than our authorized dealers may not be included in the warranty.

After-Sales Service and Warranty

■ Moving and discarding the unit

This unit uses chlorofluorocarbon.

Contact your local dealer for discarding this unit since it is required by law to collect, transport and discard the refrigerant in accordance with “chlorofluorocarbon collection and destruction” law.

■ Where to call

For after-sales service, etc., consult with your local dealer.

DAIKIN MANUFACTURING COMPANY, L.P

Daikin Texas Technology Park,
19001 Kermier Road,
Waller, TX, 77484, U.S.A.



FRIGIDAIRE

All about the

Use & Care

of your Electric Range

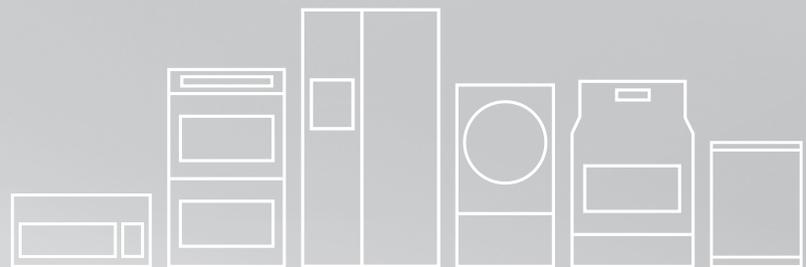


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PRODUCT RECORD AND REGISTRATION

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Questions?

For toll-free telephone support in the U.S. and Canada call **1-800-944-9044**

For online support and Internet production information visit <http://www.frigidaire.com>.

Product Registration

Registering your product with Frigidaire enhances our ability to serve you. You can register online at <http://www.frigidaire.com> or by dropping your Product Registration Card in the mail.

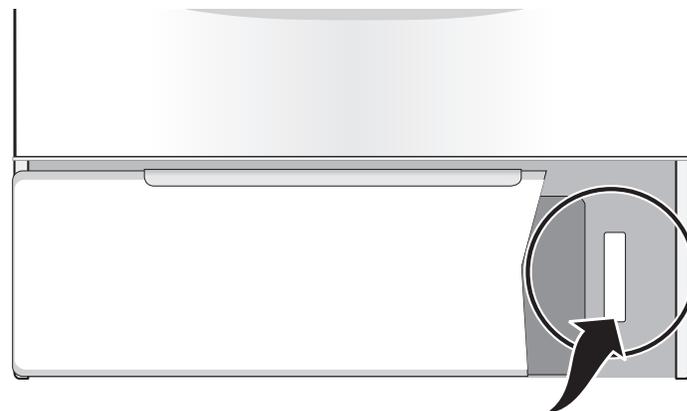
Record model & serial numbers here

Purchase Date

Frigidaire model number

Frigidaire serial number

Serial Plate Location



Serial plate location: open lower oven drawer (some models) or storage drawer (some models).

Thank you for choosing Frigidaire.

Important: This Use and Care Guide is part of our commitment to customer satisfaction and product quality throughout the service life of your new appliance. We view your purchase as the beginning of a relationship. To ensure our ability to continue serving you, please use this page to record important product information.

Need Help?

Visit the Frigidaire web site at www.frigidaire.com

Before you call for service, there are a few things you can do to help us serve you better.

Read this Use & Care Manual

This manual contains instructions to help you use and maintain your range properly.

If You Received a Damaged Range...

Immediately contact the dealer (or builder) that sold you the range.

Save Time and Money

Check the section title "Before You Call". This section helps step you through some common problems that might occur.

If you do need service, help is only a phone call away. Call Frigidaire Customer Services at **1-800-944-9044**.

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 you to 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, maintenance, or valuable information that is not hazard related.

NOTE

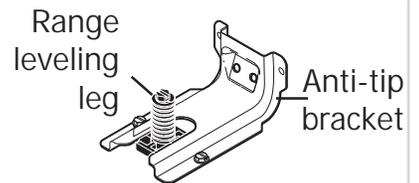
Indicates a short, informal reference – something written down to assist the memory or for future reference.

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.

IMPORTANT

Save these instructions for future reference.

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.

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.

Save these instructions for future reference

IMPORTANT SAFETY 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.

Do not store items of interest to children in the cabinets above the appliance or on the back-guards 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 over 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.

WARNING

Never cover any slots, holes, or passages in the oven bottom or cover an entire oven rack with any materials, such as aluminum foil or after-market oven liners. Doing so blocks air flow through the oven and may result in carbon monoxide poisoning. Aluminum foil and other liners may 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.

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.

IMPORTANT SAFETY INSTRUCTIONS

CAUTION

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.

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.

Save these instructions for future reference

IMPORTANT SAFETY INSTRUCTIONS

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, after-market 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.

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 SAFETY INSTRUCTIONS

IMPORTANT INSTRUCTIONS FOR SELF CLEANING OVENS

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 oven cleaners. No commercial oven cleaner or oven liner protective coating of any kind should be used in or around any part of the appliance.

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

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.

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

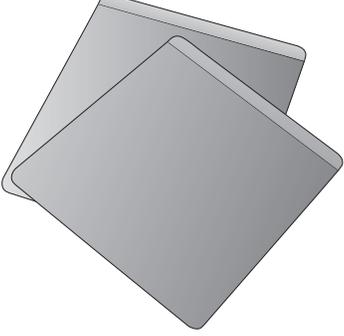
California Residents: for cancer and reproductive harm information, visit www.P65Warnings.ca.gov

Save these instructions for future reference

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.</p> <p>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.</p> <p>Insulated bakeware is designed for baking in gas ovens.</p>	<p>Increase the cooking temperature by 25° F (13-14° C) when using insulated bakeware.</p>

COOKING RECOMMENDATIONS

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.

Cooking	Tips
Baking	
Rack placement	Follow the instructions in “Oven Control Features” on starting on page 20 . 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	Bake is the best function to use for baking on multiple racks.

COOKING RECOMMENDATIONS

Cooking	Tips
Food placement	Allow at least 2 inches (5 cm) of space between bakeware for proper air circulation.
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, they may be purchased from www.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>
Convection roast	<p>Convection roast is best for meats and does not require preheating for most meats and poultry.</p> <p>Reducing the cooking temperature for convection roast is not recommended. Carefully follow your recipe's temperature and time recommendations, adjusting the cooking time if the recipe does not specify convection roasting time.</p> <p>Since convection roast cooks faster, cook time may be reduced by 25% to 40% depending on food type. You can reduce cook times by 25% from the recommended time of your recipe, and check the food at this time. If needed, continue cooking until the desired doneness is obtained.</p> <p>Use a meat probe if available with your appliance. Meat probes are also available from most grocery and home goods stores.</p> <p>Arrange oven racks so large cuts of meat and poultry are on the lowest rack of the oven.</p> <p>Do not cover foods when dry roasting - covering will prevent the meat from browning properly.</p> <p>When cooking meats, use the broiler pan and insert or a roasting rack. The broiler pan will catch grease spills and the insert helps prevent grease splatters. If you do not have one of these accessories, they may be purchased from www.frigidaire.com.</p>

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 and Figure 2.



Check for flatness by rotating a ruler across the bottom of the cookware (see Figure 1). Cookware should have flat bottoms that make good contact with the entire surface heating element (see Figure 2).

Figure 1: Testing 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). If aluminum pans slide across the ceramic cooktop, they may leave metal marks which will resemble scratches. Remove these marks immediately.
- **Copper** - Excellent heat conductor but discolors easily (see Aluminum).
- **Stainless** - Slow heat conductor with uneven cooking results. Is durable, easy to clean and resists staining.
- **Cast Iron** - A slow heat conductor that will retain heat very well. Cooks evenly once cooking temperature is reached. If cast iron pans slide across the ceramic cooktop, they may leave metal marks which will resemble scratches. Remove these marks immediately.
- **Porcelain-enamel on metal** - Heating characteristics will vary depending on base material. Porcelain-enamel coating must be smooth to avoid scratching ceramic cooktops.
- **Glass** - Slow heat conductor. Not recommended for ceramic cooktop surfaces because it may scratch the glass.

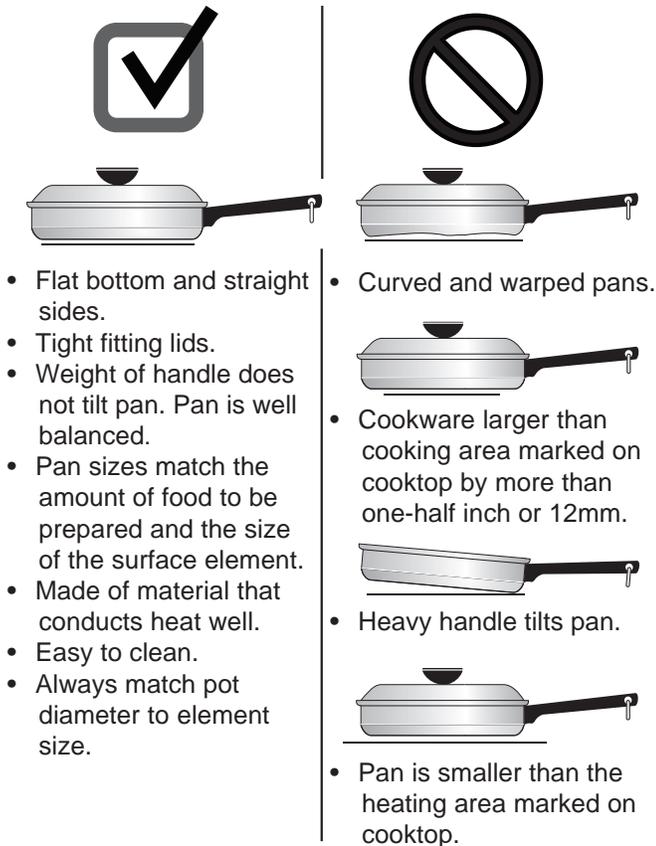


Figure 2: Proper cookware

IMPORTANT

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

BEFORE SETTING SURFACE CONTROLS

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

White glass cooktops only - Due to the high intensity of heat generated by the surface elements, the glass surface may discolor when the element is turned off. This is normal and the glass will return to its original white color after it has completely cooled down.

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** 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.

🔧 NOTE

Radiant elements have a limiter that allows the element to cycle on and off, even at the HI setting. This helps to prevent damage to the ceramic smooth top. Cycling at the HI setting is normal and can occur if the cookware is too small for the radiant element or if the cookware bottom is not flat.

Be sure to read detailed instructions for ceramic glass cooktop cleaning in the Care and Cleaning section and Before You Call checklist section of this *Use and Care Guide*.

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.

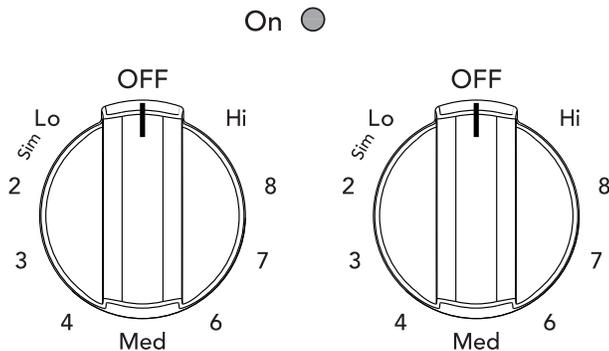


Figure 3: On indicator light

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.

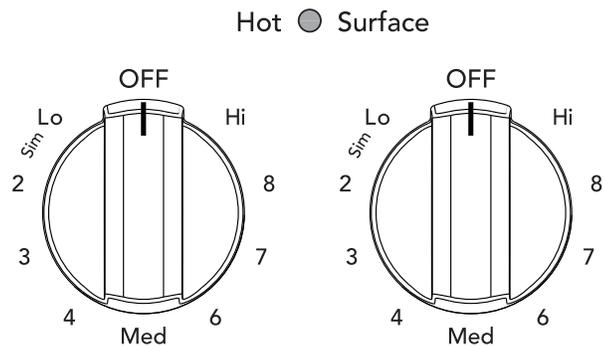


Figure 4: Hot surface indicator light

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.
- 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.
- A triple radiant element (some models) has three circles. The element may be set using only the inner element, the inner and middle elements, or all three elements together.
- Dual and triple elements allow more flexibility with the size of cookware.

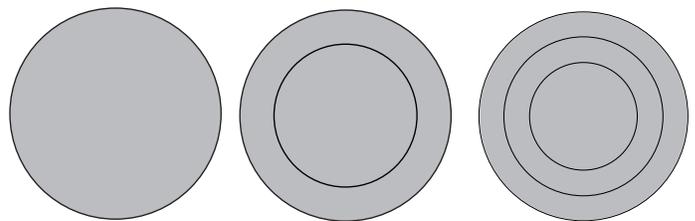


Figure 5: Single, double, and triple elements

- A warm zone 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.

SETTING SURFACE CONTROLS

Single radiant surface elements

To operate the single radiant element:

1. Place correctly sized cookware on surface element.
2. Push in and turn the surface control knob in either direction (Figure 6) 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 6).

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 radiant surface element settings

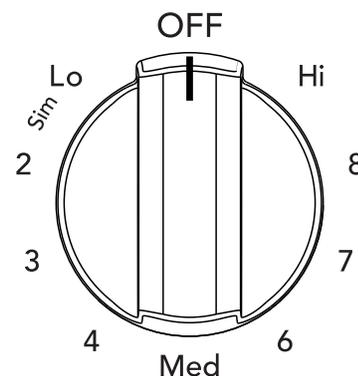


Figure 6: Single element knob

CAUTION

- 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 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.

NOTE

- 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 turn on 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.

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.

SETTING SURFACE CONTROLS

Dual radiant surface elements

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 7).
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 15.

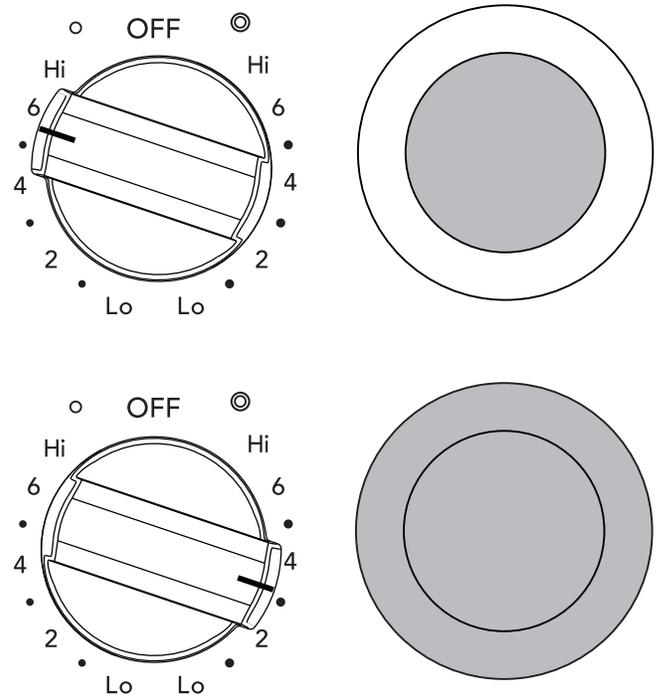


Figure 7: Dual element knob settings

CAUTION

- 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 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.

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.

NOTE

- 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 turn on 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.

SETTING SURFACE CONTROLS

Triple Surface Radiant Element

Symbols around the knob are used to indicate which element of the triple radiant element will heat. The ○ symbol indicates that only the inner element will heat. The ◎ symbol indicates that the inner and middle elements will heat. The ⊙ symbol indicates that the inner, middle and outer elements will heat (Figure 8). You may switch the element setting at any time during cooking.

To Operate the Triple Surface Element

1. Place correctly sized cookware on the triple surface element.
2. Push in and turn the control knob to the inner element symbol for smaller cookware or to the inner and middle element symbol for average cookware or to the inner, middle, and outer element symbol for large cookware (Figure 8). Turn the knob to adjust the setting if needed.
3. When cooking has completed, turn the surface control 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.

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 to the single, dual, or triple element setting at any time during cooking. See “Suggested radiant surface element settings” on page 15.

CAUTION

- 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 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.

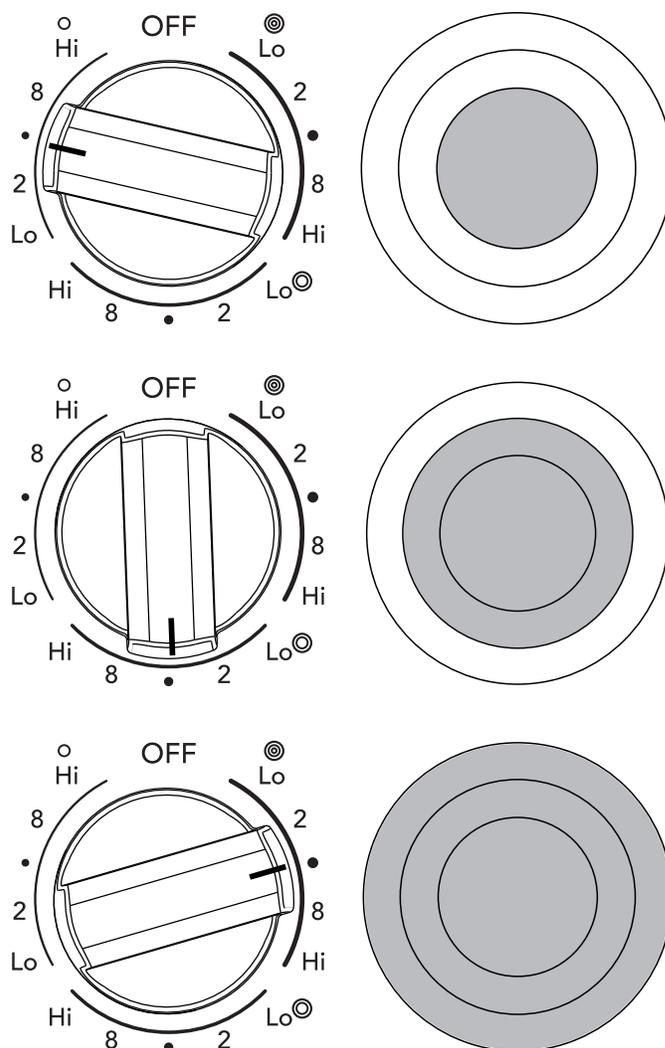


Figure 8: Triple element knob settings

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.

SETTING SURFACE CONTROLS

Warm Zone



Use the Warm Zone feature to keep cooked foods hot. The Warm Zone key is located on the oven control panel just below the **OFF** key. It controls the Warm Zone (the middle element on the back row of the radiant cooktop).

Always start with hot food. It is not recommended to heat cold food on the warm zone. All food placed on the warm 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 warm zone.

Setting the Warm Zone control:

1. Press the **Warm Zone** key. **WARM ZONE** will appear in the display. The temperature is preset to the optimal heating level for keeping cooked foods ready for serving.
2. When ready to serve, press the **Warm Zone** key again. **WARM ZONE** will disappear from the display

CAUTION

- Unlike the surface elements, the 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 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.

WARNING

Food poisoning hazard. Do not let food sit for more than one hour before or after cooking. Doing so can result in food poisoning or sickness.

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.

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.

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.

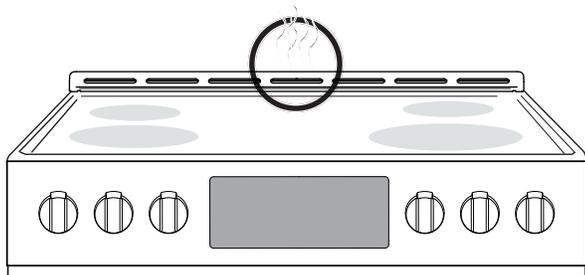


Figure 9: Oven vent

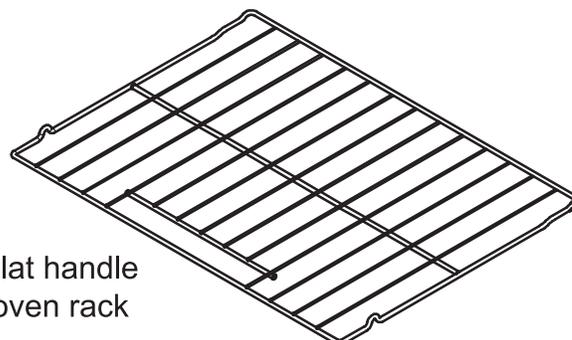
! WARNING

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.

Type of oven racks



Flat handle
oven rack

Figure 10: Oven rack types

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

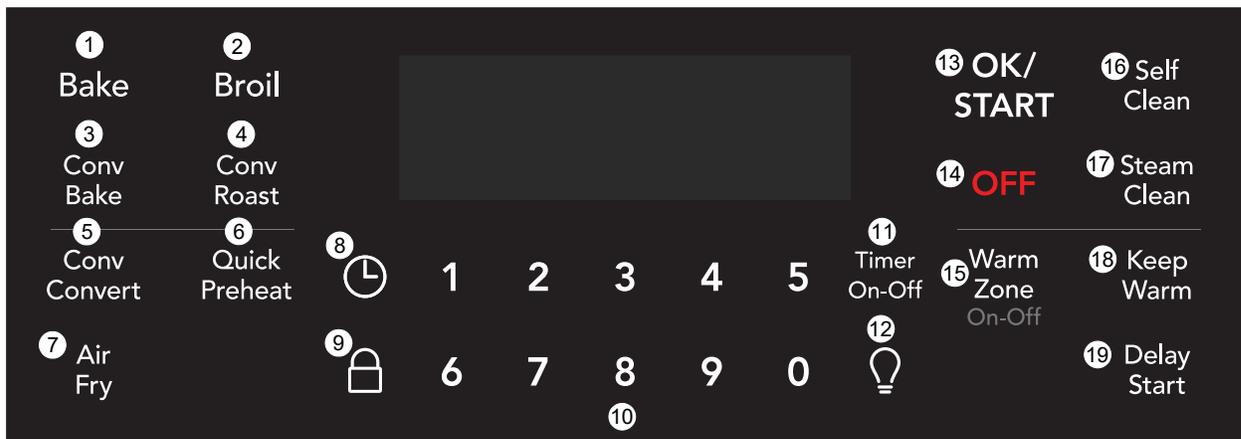
Removing, replacing, and arranging oven racks

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.

SETTING OVEN CONTROLS



Oven Control Features

- Bake** - Use to enter normal baking temperatures for recipes that call for regular baking.
- Broil** - Selects normal broil function for direct heat cooking.
- Conv Bake** - Circulates the oven heat evenly and continuously for faster cooking of some foods.
- Conv Roast** - Uses a convection fan to gently brown meats and poultry and seal in the juices.
- Conv Convert** - Converts standard bake temperatures to convection temperature in convection bake.
- Quick Preheat** - Best used for single rack baking with packaged and convenience foods.
- Air Fry** - Uses hot air for crispy great tasting results without all the oil.
- Set Clock** - Use to set the time of day
- Oven Lock** - Use to lock out oven controls and oven door.
- 0 through 9 keys** - Use to set temperature and time
- Timer On-Off** - Use to set or cancel the minute timer. The minute timer does not start or stop any cooking function.
- Oven Light** - Use to turn on internal light. Will turn on when the oven door is opened.
- OK/START** - Use to set cooking functions and when setting the clock.
- OFF** - Use to turn off all cooking functions.
- Warm Zone** - Uses radiant heat to keep cooked foods at serving temperature.

- Self Clean** - Use to set self-clean cycle between 2 and 4hrs.
- Steam Clean** - Use as a time saving method for cleaning light soils.
- Keep Warm** - Use to keep cooked foods at serving temperature.
- Delay Start** - Add to Quick Preheat, Bake, Conv Bake, Conv Roast, and Self Clean to program a Delay Start.

Feature	Mode	Min.Temp. /Time	Max Temp. /Time
Quick Preheat		170°F (77°C)	550°F (288°C)
Bake		170°F (77°C)	550°F (288°C)
Broil		400°F (205°C)	550°F (288°C)
Conv Bake		170°F (77°C)	550°F (288°C)
Conv Roast		170°F (77°C)	550°F (288°C)
Air Fry		170°F (77°C)	550°F (288°C)
Keep Warm		170°F (77°C)	until canceled
Timer		0:01 Min.	11:59 Hr./Min.
Clock Time	12 Hr.	1:00 Hr./Min.	12:59 Hr./Min.
	24 Hr.	0:00 Min	23:59 Hr./Min.
Delay Start	12 Hr.	1:00 Hr./Min.	12:59 Hr./Min.
	24 Hr.	0:00 Min	23:59 Hr./Min
Steam Clean		30 mins	
Self Clean		2 hours	4 hours

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.

SETTING OVEN CONTROLS

Setting the Clock

When the appliance is first powered up, **12:00** will flash in the display (Figure 11). The time of day must first be set before operating the oven.



Figure 11: 12:00 in display before setting the clock

To Set Clock to 1:30:

1. Press .
2. Enter **1 3 0** using numeric keys.
3. Press **OK/START**.

Important note:

The clock cannot be changed when a Self Clean, Delay Start, or cooking feature is active.

Setting Timer

The minute timer allows you to track your cooking times without interfering with the cooking process. The timer may be set from a minimum time of 1 minute to a maximum of 11 hours and 59 minutes.

To set timer for 5 minutes:

1. Press **Timer On-Off**.
2. Enter **5** using numeric keypad.
3. Press **Timer On-Off** to start the timer. When set time ends, **END** will show in the display and the control will sound a beep three times every 30 seconds until **Timer On-Off** key is pressed.

To cancel the timer when active, press **Timer On-Off** again.

Important note:

- The timer does not start or stop the cooking process. It serves as an extra minute timer that will beep when the set time has run out. The timer may be used alone or while using any of the other oven functions.
- When timer is set for more than 1 hour it will display hours and minutes until 1 hour remains. When less than 1 hour remains, the display counts down in minutes and seconds. With less than 1 minute remaining, only seconds will display.
- If the timer is active during a cooking process, the timer will show in the display. To view the status of any other active oven function, press the key of the cooking function once and it will appear in the display for a few seconds.

Setting 12 Hour or 24 Hour display mode

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 and hold  for 6 seconds.
2. Press **Self Clean** to toggle between **12 Hr day** or **24 Hr day** display modes (Figure 12).
3. Press **OK/START** to accept the choice.



Figure 12: 12 Hr dAy and 24 Hr dAy settings

Changing between continuous bake setting or 12 hour energy saving

The oven control has a factory preset built-in 12 Hour Energy Saving feature that will turn off the oven if the oven is left on for more than 12 hours. The control may be programmed to override this feature to bake continuously.

To change between continuous bake or 12 hour energy saving feature:

1. Press and hold **Timer On-Off** for 6 seconds
2. Press **Self Clean** to toggle between **12 Hour OFF** or **Stay On** feature (Figure 13).
3. Press **OK/START** to accept choice.



Figure 13: 12 hr energy saving (L) continuous setting (R)

SETTING OVEN CONTROLS

Changing temperature display from Fahrenheit to Celsius

The electronic oven control is set to display °F when shipped from the factory. The display may be changed to show either °F or °C oven temperatures.

To change temperature display mode from °F to °C or from °C to °F:

1. Press and hold **Broil** for 6 seconds.
2. Once **F (or C)** appears in the display, press **Self Clean** to toggle between Fahrenheit and Celsius temperature display modes (Figure 14).
3. Press **OK/START** to accept the choice.

Important note:

The oven temperature display cannot be changed during the cooking process or if a delay start has been set or self clean is active.



Figure 14: Display showing Fahrenheit and Celsius

Setting Silent or Audible Control mode

Silent mode allows the oven control to operate without audible tones. The control may be programmed for silent operation and later reset to operate with all the normal audible tones.

To set for silent or audible mode:

1. Press and hold **Delay Start** for 6 seconds.
2. Press the **Self Clean** key to toggle between **bEEP On** or **bEEP OFF** (Figure 15).
3. Press **OK/START** to accept the choice.



Figure 15: Display showing audible and silent operation

Setting Oven Lockout

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

To activate the oven lockout features:

1. Be sure oven door is completely closed.
2. Press and hold the lock key for 3 seconds. The motor driven door latch mechanism will begin locking the oven door automatically. Do not open the oven door. Allow about 15 seconds for the oven door to completely lock. Once door is locked, the word **DOOR** with a lock icon will appear in the display.

To cancel the oven lockout feature:

1. Press and hold the lock key for 3 seconds. The motor door latch will begin unlocking the oven door automatically. Do not open the oven door. Allow about 15 seconds for the oven door to completely unlock.
2. When the word **DOOR** with a lock icon no longer displays, the oven door may be opened, and the oven control keypad will be available for use.

Important: If a control key is pressed when oven lockout is active, the control will triple beep indicating the key action is not available when the oven lockout feature is active.

Operating Oven Lights



The interior oven lights will automatically turn on when the oven door is opened. Oven lights will not operate during a self clean cycle. For best baking results, do not leave oven light on while cooking.

Press  to turn the interior oven lights on and off whenever the oven door is closed.

The interior oven lights are located on the side wall of the oven interior and are covered with a glass shield. The glass shield protects the bulb from high temperatures and should always be in place whenever the oven is in use.

To replace the interior oven light, see ["Replacing the Oven Light"](#)

SETTING OVEN CONTROLS

Quick Preheat

Quick Preheat is available for single rack baking with packaged and convenience foods and can be programmed for temperatures between 170°F and 550°F. Follow the recipe or package directions for food preparation time and temperature. When quick preheat is complete, a reminder tone will sound and food should be placed in the oven.

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.

During quick preheat function, the bake burner will cycle on and off. The convection fan will turn on and stay on until quick preheat is canceled and turn on and off as needed during cooking. Depending on your preference for doneness cooking times may vary. Watch food closely.

Important:

- Always place food in center of the oven on rack position 4 (Figure 17). Place the food as shown in Figure 16.
- For best results when baking batter and dough-based items such as cookies and pastries, use convection bake function and place food in oven when the reminder tone sounds signaling the oven is fully preheated.
- Food may need to be removed early and should be checked at minimum recommended bake time.

To set the preheat temperature for 350°F:

1. Arrange the interior oven racks.
2. Press **Quick Preheat**. 350 will appear in the display.
3. Press **OK/START**.
4. 350 and PREHEAT will be displayed while the oven is preheating.
5. Press **OFF** when baking is complete or to cancel the preheat feature.

To change preheat temperature while oven is preheating (ex: changing from 350°F to 425°F):

1. Press **Quick Preheat**. 350 will appear in the display.
2. Enter the new preheat temperature. Press **4 2 5**.
3. Press **OK/START**. 425 will show in the display.
4. When baking is complete, press **OFF**.

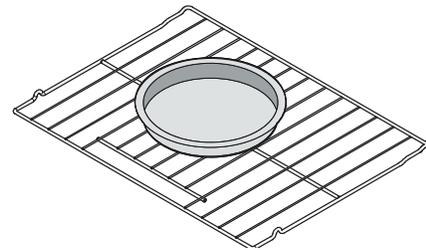


Figure 16: Single rack baking for convenience foods

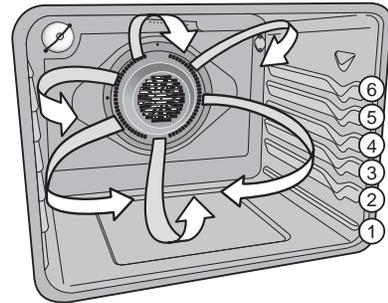


Figure 17: Oven rack positions

Note: The oven is equipped with cooling fans that turn on when the oven reaches a high enough temperature and will remain on until the oven cavity has cooled. Cooling fans may remain on for a time after the oven function has been canceled. This is normal.

SETTING OVEN CONTROLS

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 fans 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 3 and 5 and place pans as shown in [Figure 19](#).
- 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 overbrowned foods. It may be necessary to reduce oven temperature or cook time to prevent overbrowning 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.

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

1. Press **Bake**.
2. **350°** will appear in the display.
3. Press **OK/START**.

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

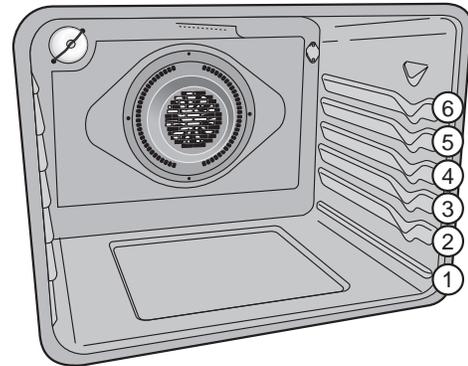


Figure 18: Rack positions

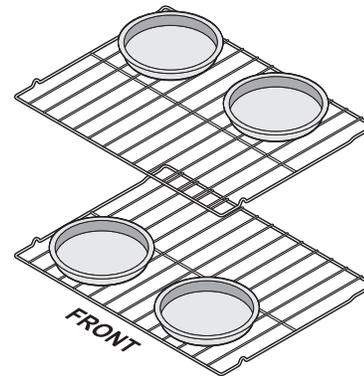


Figure 19: Pan placement

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.

SETTING OVEN CONTROLS

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.

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 3 and 5 and place bakeware as shown in [Figure 21](#).
- Allow at least 2 inches (5 cm) of space between bakeware to allow for proper air circulation.
- When using any single rack for baking cookies, cakes, biscuits or muffins, use rack position 3.
- Cookies and biscuits should be baked on pans with no sides or low sides to allow the heated air to circulate around the food.
- 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 overbrowned foods. It may be necessary to reduce oven temperature or cook time to prevent overbrowning 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.

To set convection bake with a default oven set temperature of 350°F:

1. Press **Conv Bake**.
2. **Conv Bake** and 350° will appear in the display.
3. Press **OK/START**. The convection fan will turn on and stay on during the cooking process.
4. To cancel convection bake at any time, press **OFF**.

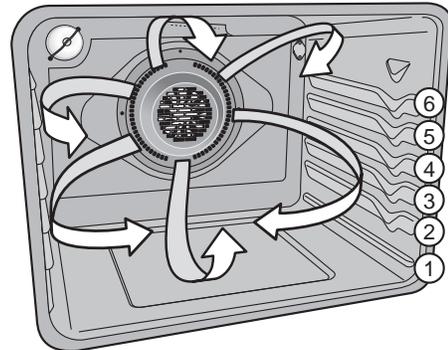


Figure 20: Rack positions

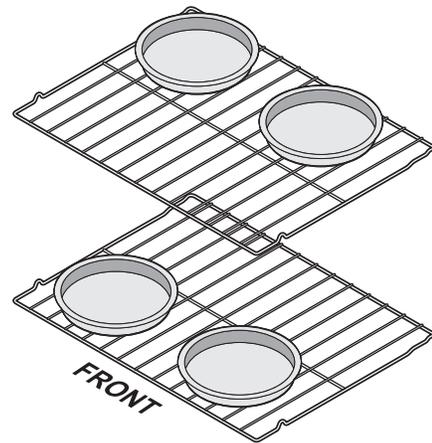


Figure 21: Pan placement for convection baking

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 OVEN CONTROLS

Setting Convection Convert

Pressing the **Convection Convert** key automatically converts the cooking temperature entered for any standard baking recipe to the lower temperature required for convection baking.

To set the oven for convection bake with a standard baking recipe temperature of 400°F:

1. Arrange interior oven racks.
2. Press **Conv Bake**.
3. Press **4 0 0**.
4. Press **Conv Convert**.
5. Press **OK/START**.
6. Place food in the oven.

Important note:

- Convection convert may only be used with the Convection Bake function.
- When using convection convert, bake time reductions may vary depending on the oven set temperature.
- If the oven door is opened when any convection function is active, the convection fan will stop rotating until the oven door is closed.
- Do not open the oven door often. Opening the door will reduce the temperature in the oven and may increase the cooking time necessary for best results.

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 Delay Start

Delay Start sets a delayed starting time to oven cooking or cleaning functions. Prior to setting a delay start, be sure the time of day is set correctly. Delay Start must be set before starting the cooking function.

WARNING

Food Poisoning Hazard. Do not let food sit for more than one hour before or after cooking. Doing so can result in food poisoning or sickness. Foods that can easily spoil such as milk, eggs, fish, meat or poultry, should be chilled in the refrigerator first. Even when chilled, they should not stand in the oven for more than 1 hour before cooking begins, and should be removed promptly when finished cooking.

To program oven for a delay start beginning at 5:30, and for baking at 375°F:

1. Press **Bake**. Enter **3 7 5** using numeric keypad.
2. Press **Delay Start**.
3. Enter **5 3 0** using numeric keypad.
4. Press **OK/START** to accept.
5. The oven will turn on when the delay start time (5:30) is reached.

Important note:

Delay Start may be set using a 24 hr clock. To set clock for 24 Hr operation, See "[Setting 12 Hour or 24 Hour display mode](#)" on [page 21](#) for more information. The Delay Start feature may be used with Convection Bake, Convection Roast, Convection Convert, Bake, Broil and Self Clean functions.

SETTING OVEN CONTROLS

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. Broil may be set with Delay Start.

Broil is preset to 550°F and may be set to any temperature between 400°F (205°C) and 550°F (288°C).

! 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.

Important: OPEN DOOR BROIL SHUTOFF: If the oven door is left open during Broil for more than 3 minutes an alarm will sound to notify the user to close the oven door. If the door is not closed the oven will turn off within 30 seconds of the open door alarm.

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

1. Arrange the oven racks when cool. For optimum browning results, preheat oven for 2 minutes before adding food.
2. Press **Broil**. Broil with oven door closed.
3. Position bakeware in oven.
4. Press **OK/START**. To adjust the broil temperature, press **Broil** again and then enter the new temperature using the number keys. Press **OK/START**.
5. Broil on one side until food is browned; turn and broil other side until done to your satisfaction.
6. When finished broiling, press **OFF**.

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

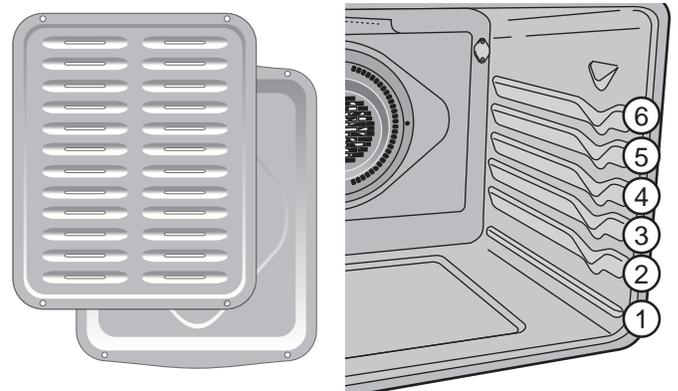


Figure 22: Broil pan with insert(L) Rack positions (R)

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

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 2: Broil Suggestions

Food	Rack Position	Temperature	Cook time (minutes)		Internal Temperature	Doneness
			1st side	2nd side		
Steak 1" thick	6th**	550°F (288°C)	5	4	140°F (60°C)	Rare*
Steak 1" thick	5th or 6th**	550°F (288°C)	6	5	145°F (63°C)	Medium
Steak 1" thick	5th or 6th**	550°F (288°C)	7	6	170°F (77°C)	Well
Pork Chops 3/4" thick	5th	550°F (288°C)	12	10	170°F (77°C)	Well
Chicken bone-in	4th	450°F (232°C)	20	10	170°F (77°C)	Well
Chicken boneless	5th	450°F (232°C)	8	6	170°F (77°C)	Well
Fish	5th	550°F (288°C)	as directed		170°F (77°C)	Well
Shrimp	4th	550°F (288°C)	as directed		170°F (77°C)	Well
Hamburger 1" thick	4th**	550°F (288°C)	6	5	145°F (63°C)	Medium
Hamburger 1" thick	4th	550°F (288°C)	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.

SETTING OVEN CONTROLS

Convection Roast

Convection roast combines a cook cycle with the convection fan and element to rapidly roast meats and poultry. Heated air circulates around the meat from all sides, sealing in juices and flavors. Meats cooked with this feature are crispy and brown on the outside while staying moist inside.

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

! WARNING

Should an oven fire occur, close the oven door and turn the oven off. If the fire continues, use a fire extinguisher. Do not put water or flour on fire. Flour may be explosive.

! 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.

Benefits of Convection Roasting:

- Some foods cook up 25 to 30% faster, saving time and energy.
- No special pans or bakeware required.
- Preheating is not necessary for most meats and poultry.
- Be sure to carefully follow your recipe's temperature and time recommendations or refer to the convection roast chart for additional information.

To set Convection Roast:

1. Place the insert on broiler pan. Place meat (fat side up) on insert.
2. Make sure the insert is securely seated on top of the broiler pan. Do not use the broiler pan without the insert.
3. Place prepared food on oven rack and slide into oven.
4. Close the oven door.
5. Press **Conv Roast**.
6. Enter desired temperature using numeric keys.
7. Press **OK/START**.
8. When cooking is completed or to cancel convection roast press **OFF**.

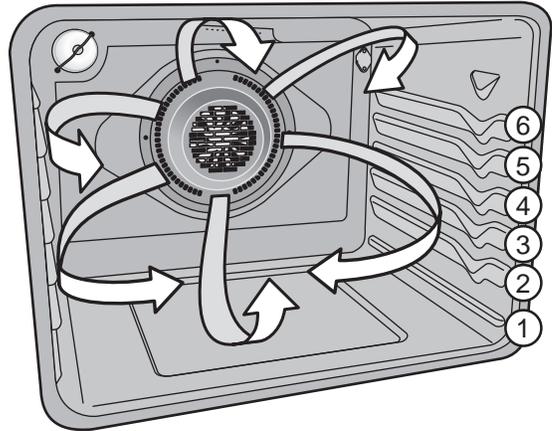


Figure 23: Convection roasting on lower oven racks

SETTING OVEN CONTROLS

Convection Roasting tips:

- Preheating for convection roast is not necessary for most meats and poultry.
- Arrange oven racks so large cuts of meat and poultry are on the lowest rack of the oven.
- Smaller roasts and poultry should be cooked using rack position 2 or 3.
- Since convection roast cooks faster, may be able to reduce cook times as much as 25% from the recommended time of your recipe (check the food at this time). Then if needed, increase cook time until the desired doneness is obtained.
- Carefully follow your recipe's temperature and time recommendations or refer to the convection roast recommendations for additional information.
- Do not cover foods when dry roasting - covering will prevent the meat from browning properly.
- When cooking meats use the broiler pan and insert. The broiler pan will catch grease spills and the insert helps prevent grease splatters.

Table 3: Convection roasting temperature and time recommendations

Meat		Weight	Oven Temp	Internal Temp	Mins per lb.
Beef	Standing rib roast*	4 to 6 lb.	350°F (177°C)	*160°F (71°C)	25-30
	Rib eye roast*	4 to 6 lb.	350°F (177°C)	*160°F (71°C)	25-30
	Tenderloin roast	2 to 3 lb.	400°F (204°C)	*160°F (71°C)	15-25
Poultry	Turkey whole**	12 to 16 lb.	325°F (163°C)	170°F (77°C)	8-10
	Turkey whole**	16 to 20 lb	325°F (163°C)	170°F (77°C)	10-15
	Turkey whole**	20 to 24 lb.	325°F (163°C)	170°F (77°C)	12-16
	Chicken	3 to 4 lb.	350°F-375°F (177°C-191°C)*	170°F (77°C)	12-16
Pork	Ham roast, fresh	4 to 6 lb.	325°F (163°C)	160°F (71°C)	30-40
	Shoulder blade roast	4 to 6 lb.	325°F (163°C)	160°F (71°C)	20-30
	Loin	3 to 4 lb.	325°F (163°C)	160°F (71°C)	20-25
	Pre-cooked ham	5 to 7 lb.	325°F (163°C)	160°F (71°C)	30-40

* 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)** Stuffed turkey requires additional roasting time. Shield legs and breast with foil to prevent over browning and drying of the skin.

SETTING OVEN CONTROLS

Air Fry

The Air Fry feature works best for single rack baking with packaged and convenience foods and can be programmed for temperatures between 170°F and 550°F.

Follow the recipe or package directions for food preparation quantity, time, and temperature.

Important:

- Air Fry is designed for baking on a single oven rack. Food should be arranged in single layers on a pan.
- When using Air Fry, use dark bakeware with low or no sides and place food on rack position 4 for best results.
- Leave oven light off when baking.
- Food may need to be removed early and should be checked at minimum recommended bake time. However, frozen dense foods and items with cook times less than 15 minutes may require additional time.

To set the Air Fry function:

1. Arrange food on rack as suggested.
2. Press **Air Fry**. Enter the suggested temperature for particular food.
3. Press **OK/START**.
4. When preheat tone sounds place The tray on rack position 4.

Note: Set the minute timer for the minimum suggested cook time listed in the table below and check food for desired doneness when timer ends.

5. When cooking is complete press **OFF**.

Frigidaire offers an optional Air Fry Tray specifically designed to deliver superior performance.

Some Benefits of the Optional Air Fry Tray:

- Tray optimized for oven space.
- Fits in the dishwasher for easy clean up.
- Higher yield than countertop models.
- Frees up countertop space.
- Compatible with convection ovens.
- The optional Air Fry tray may be purchased from www.frigidaire.com.

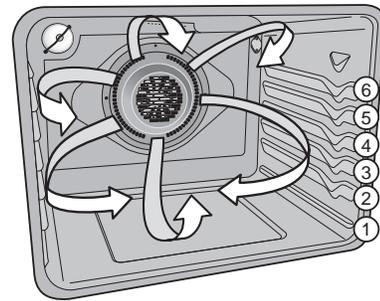


Figure 24: Optional Frigidaire Air Fry Tray. Use rack position 4 with tray or dark pan with low or no sides for best results.

Table 4: Suggested Air Fry Settings

Food	Quantity (oz.)	Temperature	Cook Time (mins)
Frozen Tater Tots	50 (Full Tray)	450 °F - 232°C	29-33
Frozen Golden Fries	43 (Full Tray)	425°F - 218°C	25-35
Frozen Sweet Potato Fries	43	425°F - 218°C	20-25
Frozen Chicken Nuggets	32	400°F - 205°C	11-13
Frozen Crispy Chicken Strips	25	400°F - 205°C	18-20
Frozen Hot Wings Bone-In	42	450 °F -232°C	18-25
Frozen Chicken Wings	42	375°F -190°C	60-65
Fresh Chicken Wings	42	425°F - 218°C	30-40
Homemade French Fries	24	425°F - 218°C	30-40

SETTING OVEN CONTROLS

Setting the Sabbath Feature (for use on the Jewish Sabbath and Holidays)



For further assistance, guidelines for proper usage, and a complete list of models with the Sabbath feature, please visit the web at www.star-k.org.

This appliance provides special settings for use when observing the Jewish Sabbath/Holidays. Sabbath mode disables all audible tones or visual display changes on the oven control. **Bake** is the only cooking feature available while in the Sabbath mode. Oven controls are locked during Sabbath mode.

You must first set the Bake feature and temperature(s) needed for the oven and Delay Start options (if needed). Any settings made prior to setting the Sabbath mode will be visible in the displays.

The Sabbath mode will override the factory preset 12 hour energy saving mode, and the appliance will stay on until the cooking features are canceled. If any of the cooking features are canceled when the appliance is in the Sabbath mode, no audible or visual indicators will be available to verify the cancellation.

If the oven interior lights are needed, be sure to activate them prior to setting the Sabbath mode. Once the oven light is turned on and the Sabbath mode is active, the oven light will remain on until the Sabbath mode is turned off and the oven lights are turned off. The oven door will not activate the interior oven lights when the oven door is opened or closed.

It is recommended that any oven temperature modification made within an active Sabbath mode be followed with two presses of the **OK/START** key. This will insure the oven remains on even if an attempt is made to set the oven temperature outside of its temperature range.

If the oven temperature is set outside of the temperature range, the oven will default to the nearest available temperature. Try to set the desired oven temperature again..

WARNING

Food poisoning hazard. Do not let food sit for more than one hour before or after cooking. Doing so can result in food poisoning or sickness. Foods that can easily spoil such as milk, eggs, fish, meat or poultry, should be chilled in the refrigerator first. Even when chilled, they should not stand in the oven for more than 1 hour before cooking begins, and should be removed promptly when finished cooking.

Important:

- Do not attempt to activate any other oven function except Bake while the Sabbath feature is active. The following keys will function correctly when the Sabbath feature is active: 0-9 number keypad, Bake, OK/START, and OFF. All other keys should not be used once the Sabbath feature is active.
- You may change the oven temperature once baking has started. Press **Bake**, use the numeric keypad to enter the oven temperature change (170°F to 550°F), and press **OK/START** (for Jewish Holidays only).
- Remember that the oven control will no longer provide audible tones or display any further changes when the Sabbath feature is active.
- The oven will remain on until canceled and therefore may only be used once during the Sabbath/Jewish Holidays.
- If a delay start time longer than 11 hours and 59 minutes is desired, set the oven control for the 24 hour day display mode setting. See [“Setting 12 Hour or 24 Hour display mode”](#) on [page 21](#) for more information.

To program oven to Bake with default oven temperature of 350°F and activate the Sabbath feature:

1. Be sure the clock is set with the correct time of day.
2. Arrange oven racks, place bakeware in oven, and close oven door. Press **Bake**.
3. Note: If Delay Start is desired enter the time at this point. See [“Setting Delay Start”](#) on [page 26](#) for detailed instructions.
4. Press **OK/START**.
5. Press and hold **Self Clean** and **Steam Clean** simultaneously for about 3 seconds to set the Sabbath feature. Once the feature is set, SAb will appear in the display indicating the oven is properly set for the Sabbath feature ([Figure 25](#)).



Figure 25: Oven set for Sabbath baking

SETTING OVEN CONTROLS

To turn the oven off and keep the Sabbath feature active:

1. Press **OFF**.

To turn off the Sabbath feature:

Press and hold both **Self Clean** and **Steam Clean** simultaneously for at least 3 seconds to turn the Sabbath feature off. The control will provide an acceptance tone, and **SAb** will disappear from the display. The oven is no longer programmed for the Sabbath feature.

What to do during a power failure or power interruption after the Sabbath feature was activated:

Should you experience a power failure or interruption, the oven will shut-off. When power is restored the oven will not turn back on automatically. The oven will remember that it is set for the Sabbath, and the oven display will show the message **SF** for Sabbath failure (Figure 26).



Figure 26: Display showing Sabbath failure

The food may be safely removed from the oven while still in the Sabbath feature, however the oven cannot be turned back on until after the Sabbath/Holidays. After the Sabbath observance turn off the Sabbath feature.

Press and hold both **Self Clean** and **Steam Clean** keys for at least 3 seconds simultaneously to turn the Sabbath feature off. **SF** will disappear from the display, and the oven may be used with all normal functions.

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) until canceled.

To set Keep Warm:

1. If needed, arrange oven racks and place cooked food in oven.
2. Press **Keep Warm: WARM** will appear in the display. (If no other keys are touched within 25 seconds the request for Warm will clear.)
3. Press **OK/START**. **Warm** will automatically turn on and remain on until cancelled.

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

WARNING

Food poisoning hazard. Do not let food sit for more than one hour before or after cooking. Doing so can result in food poisoning or sickness.

SETTING OVEN CONTROLS

Self Clean

A self cleaning oven cleans itself with high temperatures (well above normal cooking temperatures), which eliminate soils completely or reduces them to a fine powdered ash you can wipe away afterwards with a damp cloth. Self Clean can be programmed for times between 2 and 4 hours.

Important: 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 27). 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.

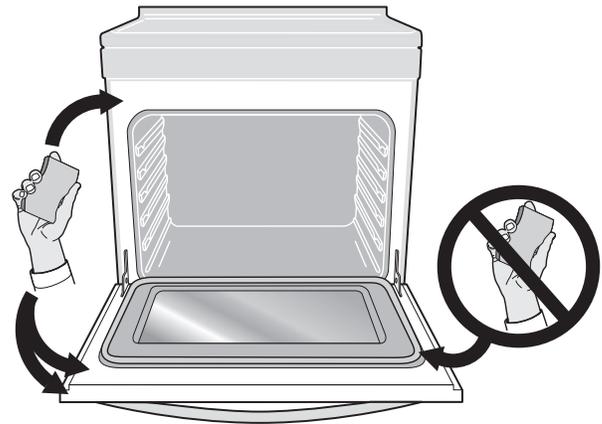


Figure 27: Areas to clean and areas to avoid (gasket)

- 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 OVEN CONTROLS

Setting Self Clean

To set self clean:

1. 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.
2. Press **Self Clean**. The default 3 hour clean time will appear in the display. You may accept the 3 hour clean time or choose a different clean duration by entering any time between 2 and 4 hours clean time by entering the time using the numeric keys.
3. Press **OK/START**. The warning to **REMOVE RACKS** will flash in the display to remind you that oven racks should be removed before a self clean.
4. Press **OK/START** to activate self clean.
5. The warning will end and the motor door lock will begin locking the oven door and Self Clean will start.

Important: 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.

When self clean is finished:

1. **CLEAN** message will turn off, and **Hot** will appear in display window.
2. Once the oven has cooled down (about 1 hour) and **Hot** is no longer displayed, the oven door may be opened.
3. When the oven interior has completely cooled, wipe away any residue or powdered ash with a damp cloth or paper towel.

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.

Setting Delay Start Self Clean

To start a delay self clean with default clean time of 3 hours and a start time of 9:00 o'clock:

1. Be sure the clock is set with the correct time of day, the oven is empty, and all oven racks are removed. Be sure oven door is completely closed.
2. Press **Self Clean**
3. Press **Delay Start**.
4. Using numeric keypad, enter **9 0 0**.
5. Press **OK/START** to accept.

If it becomes necessary to stop self clean when active:

1. Press **OFF**.

Important: If self clean has heated the oven to a high temperature, allow enough time for the oven to cool. Before restarting self clean, be sure to read important notes below.

Important note:

- If your clock is set with the (default) 12 hr display mode, the delay start for a self clean can only be programmed to start up to 11 hours and 59 minutes after the time showing in the display (be sure to set the clock to current time before programming a Delay Start). To set a delay start Self Clean to begin 12 or more hours (maximum is 23 hours and 59 minutes) after the time of setting, be sure to first set the control in the 24 Hr display mode.
- If self clean was active and then interrupted by a power failure or canceled before the oven was thoroughly cleaned, it may be necessary to run another self clean cycle.
- If the oven temperature was high enough when self clean was interrupted the oven control may not allow another self clean cycle to be set for up to 4 hours.

SETTING OVEN CONTROLS

Steam Clean

The Steam Clean feature offers a chemical free and time saving method to assist in the routine cleaning of small and light soils. For heavier baked on soils use the Self Clean feature.

CAUTION

Do not add bleach, ammonia, oven cleaner, or any other abrasive household cleaners to the water used for Steam Clean. Before 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.

Be sure the oven is level and cool before starting Steam Clean. If the oven temperature is above room temperature a triple beep will be heard and the function will not start. Steam Clean produces best results when started with a cool oven

To set a Steam Clean cycle:

1. Remove all racks and oven accessories.
2. Scrape or wipe loose debris and grease from the oven bottom.
3. Pour 1 cup of tap water onto the oven bottom. (Figure 28) Close oven door.



Figure 28: Add 1 cup of tap water

4. Press **Steam Clean**.
5. Press **OK/START**. **St Cn** will appear in the display.
6. To see the time remaining in the Steam Clean cycle press the Steam Clean key once. Do not open the door during this time. If door is open while in Steam Clean for more than 4 minutes an open door alarm will sound.
7. When the steam clean cycle is complete an alert will sound and the **END** message will show in the display. Press **OFF** to return to the clock.
8. Take care opening the door when the steam clean is finished. Stand to the side of the oven out of the way of escaping vapor.

9. Wipe oven cavity and bottom. Do not clean oven door gasket (Figure 29). Avoid leaning or resting on the oven door glass while cleaning cavity.
10. To cancel Steam Clean at any time press **OFF**.



Figure 29: Clean around the oven door gasket

Important: Opening oven door during Steam Clean cycle prevents the water from reaching the temperature needed to clean. If the door is left open once Steam Clean starts, an alarm will sound alerting you to close the door.

- For best results, clean oven immediately after the cycle is complete. Steam clean works best for soils on the oven bottom.
- Place a paper towel or cloth in front of the oven to capture any water that may spill while wiping out.
- A non abrasive scouring pad, stainless steel sponge, plastic scraper, or eraser style cleaning pad (without cleaner) can be used for difficult soils. Moisten pads with water before use.
- Do not leave the residual water in the oven for any length of time.
- Some condensation or water vapor may appear close to the oven vent. This is normal. The oven gasket may become damp; do not wipe dry.
- Local water sources often contain minerals (hard water). If hard water deposits occur, wipe cavity with a 50/50 solution of water and vinegar or 50/50 solution of lemon juice and water.
- Steam clean cannot be programmed with a delay start.
- If Steam Clean results are not satisfactory, run a Self Clean. See “Self Clean” on page 34.

SETTING OVEN CONTROLS

Restoring Factory Default Settings

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
- All Meat Probe settings
- Continuous bake or 12 hour energy savings mode
- Silent or audible control
- Oven temperature display (Fahrenheit or Celsius)
- Oven temperature adjustments (UPO)

CAUTION

All of the above user settings will be restored to the factory default settings.

To restore oven control to factory default settings:

1. Press and hold **7** on numeric keypad until acceptance tone sounds (about 6 seconds).
2. Press **OK/START**. The control has been reset with the default settings.

Adjusting Oven Temperatures

Your appliance has been factory calibrated and tested to ensure accurate baking temperatures. 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 may adjust the control so the oven cooks hotter or cooler than the oven 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°F 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 and hold **Bake** until the control produces an audible tone (about 6 seconds). The factory offset temperature of 0 (zero) should appear in the display.
2. Enter **2 0** using numeric keypad.
3. To offset the oven by -20°F, press **self clean** to toggle between + and -.
4. Press **OK/START** to accept change.

Important note:

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

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.

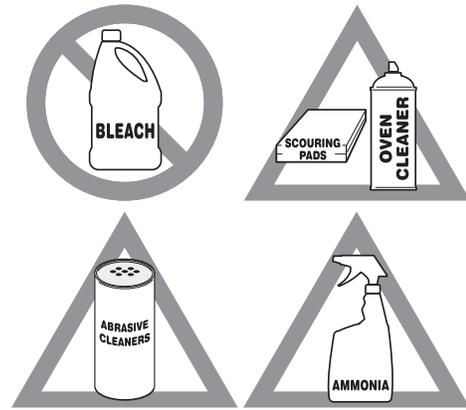


Figure 30: Use cleaners with caution

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.

CARE AND CLEANING

Porcelain-enameled broiler pan and insert	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.
Porcelain door liner	
Porcelain body parts	
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 34 .
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 Maintenance" on page 40 .

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 aluminum, cast iron, or copper bottomed 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.

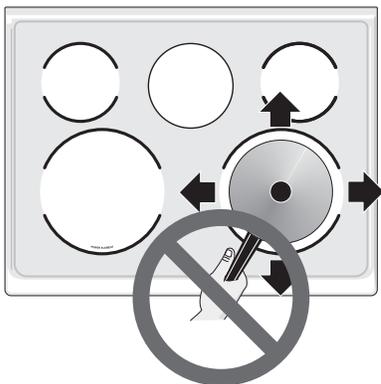


Figure 31: Cooktop care

Cooktop Cleaning

! 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.

! CAUTION

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

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, holding scraper at a 30 degree angle to the surface. Remove loosened soils with cooktop cleaning cream and buff the surface clean.

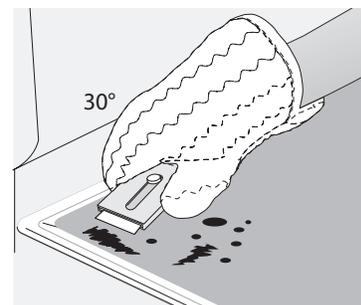


Figure 32: Cooktop cleaning

CARE AND CLEANING

Cooktop Maintenance (cont'd)

→ 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.

Aluminum Foil and Utensils

⚠ WARNING

Never cover any slots, holes, or passages in the oven bottom or cover an entire oven rack with materials such as aluminum foil. Aluminum foil linings may trap heat, causing a fire hazard.

⚠ WARNING

Protective Liners — Do not use aluminum foil to line the oven bottom. Improper installation of these liners may result in risk of electric shock or fire.

→ IMPORTANT

- Aluminum foil - Use of aluminum foil on a hot cooktop can damage the cooktop. Do not use thin aluminum cooking utensils or allow aluminum foil to touch the surface elements under any circumstances.
- 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 on the cooktop. If aluminum pans are allowed to boil dry when using the cooktop, not only will the utensil be damaged or destroyed, but it may fuse to, break, or mark the ceramic glass surface, permanently damaging the cooktop surface.

Remove and replace storage drawer

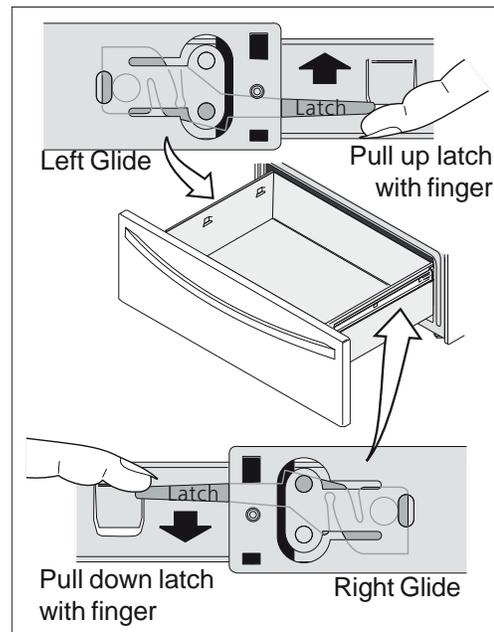
Use the storage drawer for storing cooking utensils. The drawer can be removed to facilitate cleaning under the range. Use care when handling the drawer.

To remove the drawer:

1. Open the drawer to the fully opened position.
2. Locate the latches on both sides of the drawer.
3. Pull up on the left glide latch and push down on the right glide latch.
4. Pull the drawer away from the range.

To replace the drawer:

1. Align the glide latches on both sides of the drawer with the slots on the drawer.
2. Push the drawer back into the range.



CARE AND CLEANING

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.

To remove the oven door:

1. Open oven door completely, horizontal with floor.
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 (Figure 34 and Figure 35).
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 36).

To Replace Oven Door:

1. Firmly grasp both sides of oven door along the door sides. Do not use the oven door handle (Figure 36).
2. Hold the oven door at the same angle as the removal position. 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. (Figure 36).
3. Fully open the oven door, horizontal with floor (Figure 33).
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 41).
5. Close the oven door.

IMPORTANT

Special door care instructions - 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.

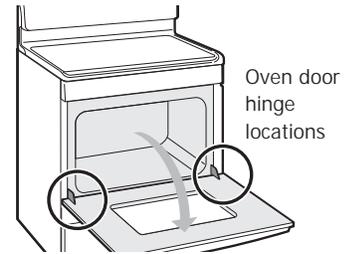


Figure 33: Door hinge location

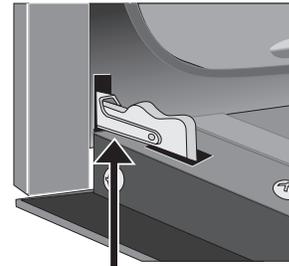


Figure 34: Door hinge locks

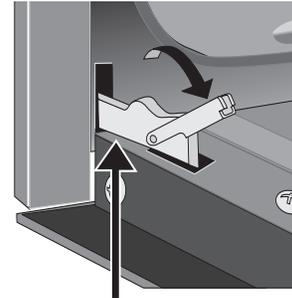


Figure 35: Unlocking door hinge

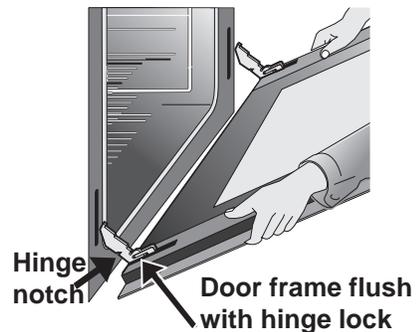


Figure 36: Replacement and location of hinge arm and roller pin

Replacing the Oven Light

CAUTION

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

Replacing the oven interior light bulb:

The interior oven light is located at the rear of the oven cavity and covered with a glass shield. The glass shield must be in place whenever the oven is in use (Figure 37).

1. Turn electrical power off at the main source or unplug the appliance.
2. Remove the interior oven light shield after removing the wire holder by carefully moving the wire to the side of the glass shield. The tension from the wire holds the glass shield in place.
3. Pull the shield straight out. Do not twist or turn.
4. Replace the bulb with a new appliance bulb.
5. Replace the glass oven light shield. Replace wire holder.
6. Turn the power back on again at the main source (or plug the appliance back in).
7. Be sure to reset the time of day on the clock.

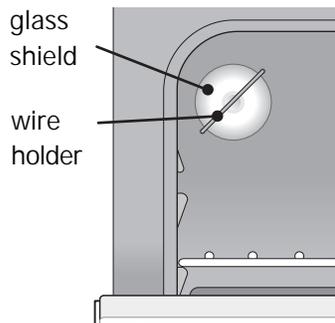


Figure 37: Oven light protected by glass shield

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. 	<ul style="list-style-type: none"> • Cookies and biscuits put into oven before oven is preheated. • Oven rack is overcrowded. • Dark pan absorbs heat too fast. 	<ul style="list-style-type: none"> • Allow oven to preheat to desired temperature before placing food in oven. • Choose pan sizes that will permit at least 2" of air space (5.1 cm) on all sides when placed in the oven. • Use a medium weight shiny baking sheet.
Cakes too dark on top or bottom 	<ul style="list-style-type: none"> • Cakes put in oven before oven is preheated. • Rack position too high or too low. • Oven too hot. 	<ul style="list-style-type: none"> • 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 	<ul style="list-style-type: none"> • Oven too hot. • Incorrect pan size. • Pan not centered in oven. • Glass cookware slow heat conductor. 	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Oven not level. • Pan too close to oven wall or rack overcrowded. • Pan warped. • Oven light left on while baking. 	<ul style="list-style-type: none"> • 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. 	<ul style="list-style-type: none"> • Oven too cool. • Oven overcrowded. • Oven door opened too frequently. 	<ul style="list-style-type: none"> • 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.

Solutions to Common Problems:

Before you call for service, review the following list. It may save you time and expense. Possible solutions are provided with the problem listed.

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	
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 "Adjusting Oven Temperatures" on page 37 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" instructions 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.
F11 Error	If you get an F11 error, turn the power to the range off and wait 30 second to turn it back on. Make sure the oven control panel is clean. Spills, grease, lots of steam when opening the oven door, and residues from certain cleaners may cause this error. Clean the control with some warm, soapy water and dry with a clean cloth. If the error persists, call our help line.
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.	The time of day is not set. The clock must be set in order to operate the oven. See "Setting the Clock" on page 21 . Be sure the oven controls are set properly for the desired function. See "Oven Control Features" starting on page 20 and review instructions for the desired cooking function in this manual or see "Entire appliance does not operate." in this checklist.
Fan noise before cooking, or after cooking is finished and the appliance is off.	Some models are equipped with fans that run during and after normal operation to cool and ventilate the appliance. On some models, the fan will begin to run as soon as a function is activated. It is normal for these fans to continue to run during any kind of operation. They may also run for an extended period of time, even when the oven is off. Loud noises from the fans are not normal and require service.

BEFORE YOU CALL

Problem	Cause / Solution
Cooktop Problems	
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 heavy-weight 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.
The letter E appears in a setting indicator	An error has occurred. This may happen because cookware has boiled dry. Remove cookware and turn off the cooktop. After 30 seconds, turn on the cooktop. If the cookware was the problem, E will no longer display. An error may occur because of water, oil, or food on the controls. Clean the control panel. Disconnect the power to the range for a minute, then reconnect it. If the error still occurs, call an authorized dealer or service technician.
The Hot Cooktop warning did not come on.	The cooktop did not get hot enough to activate the warning. If the cooktop was running long enough for the surface to get hot, call an authorized dealer or service technician.
The control area becomes hot.	The cookware is too large or too close to the controls. Put large cookware on a rear zone if possible.
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 40 .
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 40 .
Self Clean Problems	
Self clean does not work.	Oven control not set properly. See “Self Clean” on page 34 .

BEFORE YOU CALL

Problem	Cause / Solution
Oven racks discolored or do not slide easily.	Oven racks left in oven cavity during self clean. Remove oven racks from oven cavity before starting a self-clean cycle. Clean by using a mild abrasive cleaner following manufacturer's instructions. Rinse with clean water, dry, and replace in oven.
Soil not completely removed after self clean.	Self clean was interrupted. Review instructions on "Self Clean" on page 34 . Excessive spills on oven bottom. Remove excessive spills before starting self clean. Failure to clean 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. These areas are not in the self-cleaning area, but get hot enough to burn on residue. Clean these areas before starting the self-cleaning cycle. Burned-on residue can be cleaned with a stiff nylon brush and water or a nylon scrubber. Be careful not to damage the oven gasket.
Other Problems	
Appliance is not level.	Be sure the floor is level, strong, and stable enough to adequately support the range. If the floor is sagging or sloping, contact a carpenter to correct the situation. 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. Kitchen cabinet alignment may make range appear not level. Be sure cabinets are square and have sufficient room for appliance clearance.
Cannot move appliance easily. Appliance must be accessible for service.	Cabinets not square or are built in too tightly. Contact the builder or installer to make the appliance accessible. 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.
Oven light does not work.	Be sure the oven light is secure in the socket. See "Replacing the Oven Light" on page 43 .

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
1.800.944.9044
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
L5V 3E4

FRIGIDAIRE

All about the

Use & Care

of your Microwave Oven

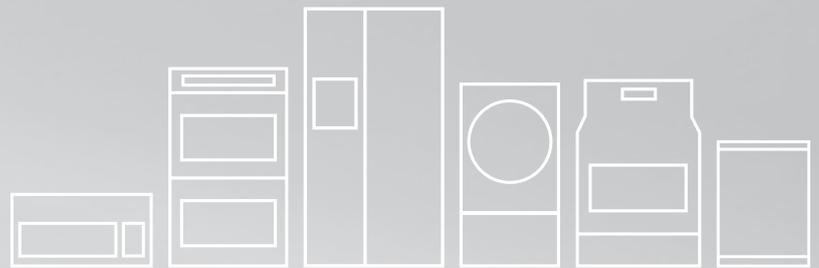


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A06823423 (NOV 2019)

WELCOME & CONGRATULATIONS

Questions?

1-800-374-4432

(United States)

Please attach sales receipt here for future reference.

Congratulations on your purchase of a new microwave oven! At **Electrolux Home Products**, we are very proud of our product and are completely committed to providing you with the best service possible. Your satisfaction is our number one priority.

We know you'll enjoy your new microwave oven and **Thank You** for choosing our product. We hope you consider us for future purchases.

PLEASE CAREFULLY READ AND SAVE THESE INSTRUCTIONS

This Use & Care Manual provides specific operating instructions for your model. Use your microwave oven only as instructed in this manual. These instructions are not meant to cover every possible condition and situation that may occur. Common sense and caution must be practiced when installing, operating and maintaining any appliance.

Please record your model and serial numbers below for future reference.

Model Number: _____

Serial Number: _____

Purchase Date: _____

NEED HELP?

Visit the Frigidaire Web Site at: <http://www.frigidaire.com>

Before you call for service, there are a few things you can do to help us serve you better.

Read this manual.

It contains instructions to help you use and maintain your microwave oven properly.

If you received a damaged Microwave Oven... immediately contact the dealer (or builder) that sold you the Microwave Oven.

Save time and money.

Check the section titled "Service Call Check". This section helps you solve common problems that might occur. If you do need service, you can relax knowing help is only a phone call away. A list of toll-free customer service numbers is included in the back of this manual. Or call Frigidaire Customer Services at 1-800-374-4432, 24 hours a day, 7 days a week.

IMPORTANT SAFETY INSTRUCTIONS

For your safety the information in this manual must be followed to minimize the risk of fire or explosion or to prevent property damage, personal injury or loss of life.

PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY

- (a) 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.
- (b) Do not place any object between the oven front face and the door or allow soil or cleaner residue to accumulate on sealing surfaces.
- (c) 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.
- (d) The oven should not be adjusted or repaired by anyone except properly qualified service personnel.

IMPORTANT SAFETY INSTRUCTIONS

Definitions

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

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.

READ ALL INFORMATION BEFORE USING

WARNING

To reduce the risk of fire, burns, electric shock, injury to persons, or exposure to excessive microwave energy when using your appliance, follow basic **precautions, including the following sections.**

- Read all instructions before using the appliance.
 - Read and follow the specific **"PRECAUTIONS TO AVOID POSSIBLE EXPOSURE TO EXCESSIVE MICROWAVE ENERGY"** on page 2.
 - This appliance must be grounded. Connect only to properly grounded outlet. See **"GROUNDING INSTRUCTIONS"** on page 5.
 - 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 microwave oven.
 - Use this appliance only for its intended use as described in this manual. Do not use corrosive chemicals or vapors in this appliance. This type of microwave oven is specifically designed to heat, cook or dry food. It is not designed for industrial or laboratory use.
 - As with any appliance, close supervision is necessary when used by children.
 - 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 Electrolux Authorized Servicer for examination, repair or adjustment.
 - Do not cover or block any openings on the appliance.
 - Do not store or use this appliance outdoors. Do not use this product near water—for example, near a kitchen sink, in a wet basement or near a swimming pool, or similar locations.
 - Do not immerse cord or plug in water.
 - Keep cord away from heated surfaces.
 - Do not let cord hang over edge of table or counter.
 - See door surface cleaning instructions on page 20.
- To reduce the risk of fire in the microwave oven cavity:
 - **Do not overcook food. Carefully attend appliance when paper, plastic or other combustible materials are placed inside the microwave oven to facilitate cooking.**
 - Remove wire twist-ties from paper or plastic bags before placing bag in microwave oven.
 - **If materials inside the microwave oven ignite, keep microwave oven door closed, turn microwave 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 LIQUIDS SUDDENLY BOILING OVER WHEN A SPOON OR OTHER 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. Use a wide-mouthed container.
 - After heating, allow the container to stand in the microwave oven at least for 20 seconds before removing the container.
 - Use extreme care when inserting a spoon or other utensil into the container.
 - Clean ventilation openings and grease filters frequently. Grease should not be allowed to accumulate on ventilation openings, louver or grease filters.
 - Use care when cleaning the louver and the grease filters. Corrosive cleaning agents, such as lye-based oven cleaners, may damage the louver and the grease filters.
 - When flaming food under the hood, turn the fan on.
 - This appliance is suitable for use above both gas and electric cooking equipment 36" wide or less.

SAVE THESE INSTRUCTIONS.

IMPORTANT SAFETY INSTRUCTIONS

- Do not clean with metal scouring pads. Pieces off the pad can touch electrical parts involving risk of electric shock.



WARNING

If you see arcing, press the Stop/Cancel button and correct the problem.

Arcing is the microwave term for sparks in the oven. Arcing is caused by:

- Metal or foil touching the side of the oven.
- Foil not molded to food (upturned edges act like antennas).
- Metal, such as twist-ties, poultry pins, or gold-rimmed dishes, in the microwave.
- Recycled paper towels containing small metal pieces being used in the microwave.

Federal Communications Commission Radio Frequency Interference Statement (U.S.A. Only)

This equipment generates and uses ISM frequency energy and if not installed and used properly, that is in strict accordance with the manufacturer's instructions, may cause interference to radio and television reception. It has been type tested and found to comply with limits for ISM Equipment pursuant to part 18 of FCC Rules, which are designed to provide reasonable protection against such interference in a residential installation.

However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause 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 inference by one or more of the following:

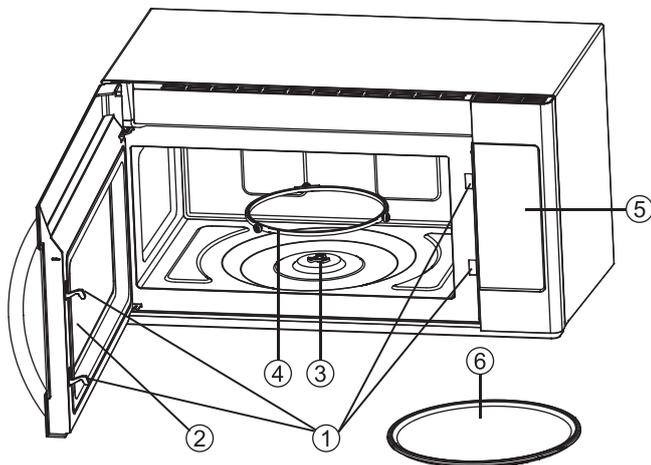
- Reorient the receiving antenna of the radio or television.
- Relocate the microwave oven with respect to the receiver.
- Move the microwave oven away from the receiver.
- Plug the microwave oven into a different outlet so that the microwave oven and the receiver are on different branch circuits.

The manufacturer is not responsible for any radio or television interference caused by unauthorized modification to this microwave oven. It is the responsibility of the user to correct such interference.

IMPORTANT SAFETY INSTRUCTIONS

UNPACKING AND EXAMINING YOUR MICROWAVE OVEN

- (a) Unpacking and Examining Your Oven
- (b) Carefully remove oven from carton. **SAVE THE CARTON AS IT MAY MAKE INSTALLATION EASIER.**
- (c) Remove
- (d) All packing materials from inside the oven cavity; however, **DO NOT REMOVE THE WAVEGUIDE COVER**, which is located on the right side in the oven cavity. Check to see that there are Installation Instructions, Wall Template, Top Cabinet Template, bag of Installation Hardware, Charcoal Filter and Exhaust Damper Assembly. Read enclosures and **SAVE the Owner's Instructions.**
- (e) The feature sticker from the outside of the door, if there is one.
- (f) Check the oven for any damage, such as misaligned or bent door, damaged door seals and sealing surfaces, broken or loose door hinges and latches and dents inside the cavity or on the door. If there is any damage, do not operate the oven and contact your dealer.
- (g) See Installation Instruction for more details.



1. Door Safety Lock System
2. Oven Window
3. Shaft
4. Roller Ring
5. Control Panel
6. Glass Tray

GROUNDING INSTRUCTIONS

This appliance must be grounded. This microwave oven is equipped with a cord having a grounding wire with a grounding plug. It must be plugged into a wall receptacle that is properly installed and grounded in accordance with the National Electrical Code and local codes and ordinances. In the event of an electrical short circuit, grounding reduces risk of electric shock by providing an escape wire for the electric current.

WARNING

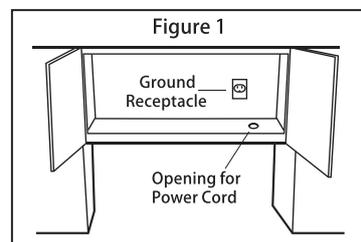
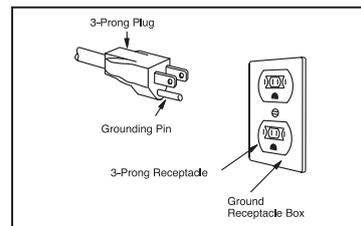
Improper use of the grounding plug can result in a risk of electric shock.

Electrical Requirements

Check Installation Instructions for proper location for the power supply.

The electrical requirements are a 120 volt 60 Hz, AC only, 20 amp. or more protected electrical supply. It is recommended that a separate circuit serving only the microwave oven be provided.

The microwave oven is equipped with a 3-prong grounding plug. It must be plugged into a wall receptacle that is properly installed and grounded. **DO NOT UNDER ANY CIRCUMSTANCES CUT OR REMOVE THE GROUNDING PIN FROM THE PLUG. DO NOT USE AN EXTENSION CORD.**



NOTES

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.

IMPORTANT SAFETY INSTRUCTIONS

ABOUT YOUR MICROWAVE OVEN

This Use and Care Manual is valuable: read it carefully and always save it for reference.

A good microwave cookbook is a valuable asset. Check it for microwave cooking principles, techniques, hints and recipes.

NEVER use the microwave oven without the turntable and support nor turn the turntable over so that a large dish could be placed in the microwave oven. The turntable will turn both clockwise and counterclockwise.

ALWAYS have food in the microwave oven when it is on to absorb the microwave energy.

When using the microwave oven at power levels below 100%, you may hear the magnetron cycling on and off. It is normal for the exterior of the microwave oven to be warm to the touch when cooking or reheating.

Condensation is a normal part of microwave cooking. Room humidity and the moisture in food will influence the amount of moisture that condenses in the microwave oven. Generally, covered foods will not cause as much condensation as uncovered ones. Ventilation openings must not be blocked.

The microwave oven is for food preparation only. It should not be used to dry clothes or newspapers.

Your microwave oven is rated 1000 watts by using the IEC Test Procedure. In using recipes or package directions, check food a minute or two before the minimum time and add time accordingly.

ABOUT FOOD

FOOD	DO	DON'T
Eggs, sausages, nuts, seeds, fruits & vegetables	<ul style="list-style-type: none">• Puncture egg yolks before cooking to prevent "explosion".• Pierce skins of potatoes, apples, squash, hot dogs and sausages so that steam escapes.	<ul style="list-style-type: none">• Cook eggs in shells.• Reheat whole eggs.• Dry nuts or seeds in shells.
Popcorn	<ul style="list-style-type: none">• Use specially bagged popcorn for microwave cooking.• Listen while popping corn for the popping to slow to 1 or 2 seconds or use special popcorn pad.	<ul style="list-style-type: none">• Pop popcorn in regular brown bags or glass bowls.• Exceed maximum time on popcorn package.
Baby food	<ul style="list-style-type: none">• Transfer baby food to small dish and heat carefully, stirring often. Check temperature before serving.• Put nipples on bottles after heating and shake thoroughly. "Wrist" test before feeding.	<ul style="list-style-type: none">• Heat disposable bottles.• Heat bottles with nipples on.• Heat baby food in original jars.
General	<ul style="list-style-type: none">• Cut baked goods with filling after heating to release steam and avoid burns.• Stir liquids briskly before and after heating to avoid "eruption".• Use deep bowl, when cooking liquids or cereals, to prevent boilovers.	<ul style="list-style-type: none">• Heat or cook in closed glass jars or air tight containers.• Can in the microwave as harmful bacteria may not be destroyed.• Deep fat fry.• Dry wood, gourds, herbs or wet papers.

ABOUT MICROWAVE COOKING

- Arrange food carefully. Place thickest areas towards outside of dish.
- Watch cooking time. Cook for the shortest amount of time indicated and add more as needed. Food severely overcooked can smoke or ignite.
- Cover foods while cooking. Check recipe or cookbook for suggestions: paper towels, wax paper, microwave plastic wrap or a lid. Covers prevent spattering and help foods to cook evenly.
- Shield with small flat pieces of aluminum foil any thin areas of meat or poultry to prevent overcooking before dense, thick areas are cooked thoroughly.
- Stir foods from outside to center of dish once or twice during cooking, if possible.
- Turn foods over once during microwaving to speed cooking of such foods as chicken and hamburgers. Large items like roasts must be turned over at least once.
- Rearrange foods such as meatballs halfway through cooking both from top to bottom and from the center of the dish to the outside.
- Add standing time. Remove food from microwave oven and stir, if possible. Cover for standing time which allows the food to finish cooking without overcooking.
- Check for doneness. Look for signs indicating that cooking temperatures have been reached.

Doneness signs include:

- Food steams throughout, not just at edge.
- Center bottom of dish is very hot to the touch.
- Poultry thigh joints move easily.
- Meat and poultry show no pinkness.
- Fish is opaque and flakes easily with a fork.

IMPORTANT SAFETY INSTRUCTIONS

ABOUT UTENSILS AND COVERINGS

It is not necessary to buy all new cookware. Many pieces already in your kitchen can be used successfully in your new microwave oven. Make sure the utensil does not touch the interior walls during cooking.

Use these utensils for safe microwave cooking and reheating:

- glass ceramic (Pyroceram®), such as Corningware®.
- heat-resistant glass (Pyrex®)
- microwave-safe plastics
- paper plates
- microwave-safe pottery, stoneware and porcelain
- browning dish (Do not exceed recommended preheating time. Follow manufacturer's directions.)

These items can be used for short time reheating of foods that have little fat or sugar in them:

- wood, straw, wicker

DO NOT USE

- metal pans and bakeware
- dishes with metallic trim
- non-heat-resistant glass
- non-microwave-safe plastics (margarine tubs)
- recycled paper products
- brown paper bags
- food storage bags
- metal twist-ties

Should you wish to check if a dish is safe for microwaving, place the empty dish in the microwave oven and microwave on HIGH for 30 seconds. A dish which becomes very hot should not be used.

The following coverings are ideal:

- Paper towels are good for covering foods for reheating and absorbing fat while cooking bacon.
- Wax paper can be used for cooking and reheating.
- Plastic wrap that is specially marked for microwave use can be used for cooking and reheating. DO NOT allow plastic wrap to touch food. Vent so steam can escape.
- Lids that are microwave-safe are a good choice because heat is kept near the food to hasten cooking.
- Microwave oven cooking bags are good for large meats or foods that need tenderizing. DO NOT use metal twist ties. Remember to slit bag so steam can escape.

How to use aluminum foil in your microwave oven:

- Small flat pieces of aluminum foil placed smoothly on the food can be used to shield areas that are either defrosting or cooking too quickly.
- Foil should not come closer than one inch to any surface of the microwave oven.

Should you have questions about utensils or coverings, check a good microwave cookbook or follow recipe suggestions.

ACCESSORIES There are many microwave accessories available for purchase. Evaluate carefully before you purchase so that they meet your needs. A microwave-safe thermometer will assist you in determining correct doneness and assure you that foods have been cooked to safe temperatures. Electrolux is not responsible for any damage to the microwave oven when accessories are used.

ABOUT CHILDREN AND THE MICROWAVE

Children below the age of 7 should use the microwave oven with a supervising person very near to them. Between the ages of 7 and 12, the supervising person should be in the same room.

As with any appliance, close supervision by an adult is necessary when used by children.

At no time should anyone be allowed to lean or swing on the microwave oven door.

Children should be taught all safety precautions: use potholders, remove coverings carefully, pay special attention to packages that crisp food because they may be extra hot.

Don't assume that because a child has mastered one cooking skill he/she can cook everything.

Children need to learn that the microwave oven is not a toy. See page 10 for Child Lock feature.

ABOUT SAFETY

- Check foods to see that they are cooked to the United States Department of Agriculture's recommended temperatures.

TEMP	FOOD
145°F (63°C)	- For beef, lamb or veal cut into steaks, chops or roasts, fish
160°F (71°C)	- For fresh pork, ground meat, seafood, egg dishes, frozen prepared food and beef, lamb or veal cut into steaks, chops or roasts
165°F (74°C)	- For leftover, ready-to-reheat refrigerated, deli and carry out "fresh" food, whole chicken or turkey, chicken or turkey breasts and ground poultry used in chicken or turkey burgers

NOTE

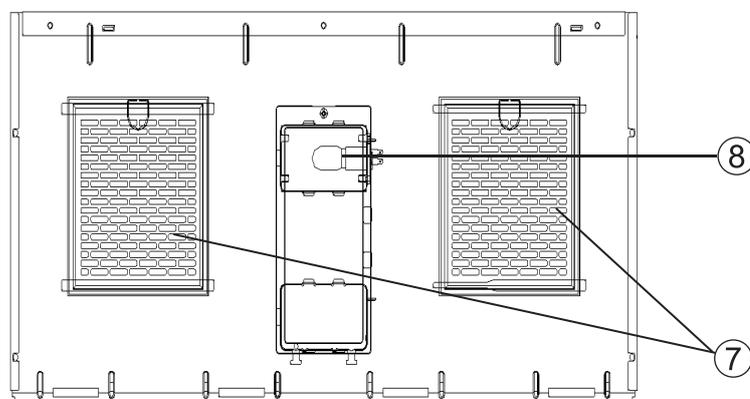
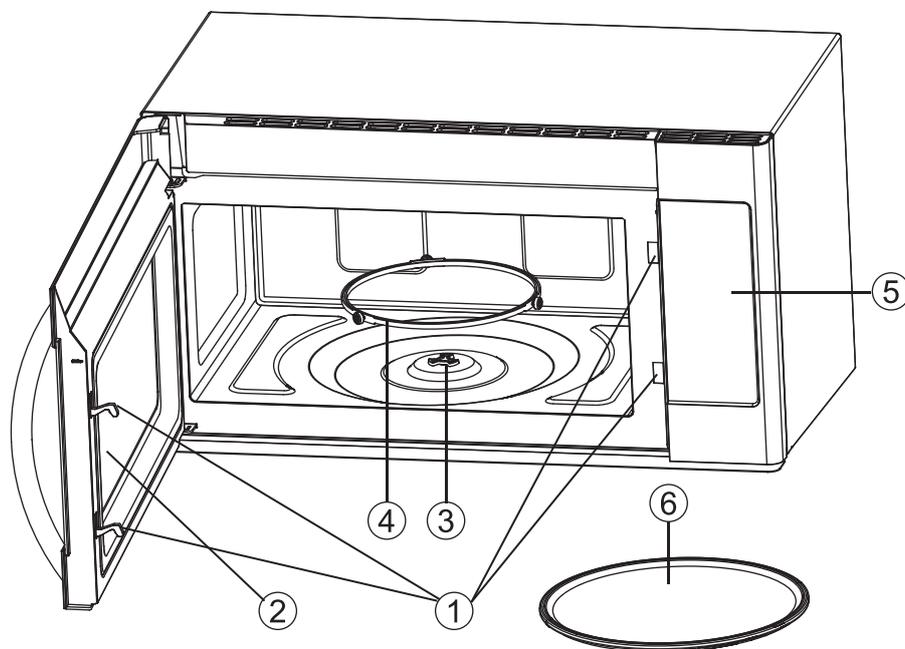
Do not cook whole, stuffed poultry. Cook stuffing separately to 165°F.

To test for doneness, insert a meat thermometer in a thick or dense area away from fat or bone. NEVER leave the thermometer in the food during cooking, unless it is approved for microwave oven use.

- ALWAYS use potholders to prevent burns when handling utensils that are in contact with hot food. Enough heat from the food can transfer through utensils to cause skin burns.
- Avoid steam burns by directing steam away from the face and hands. Slowly lift the farthest edge of a dish's covering and carefully open popcorn and oven cooking bags away from the face.
- Stay near the microwave oven while it's in use and check cooking progress frequently so that there is no chance of overcooking food.
- NEVER use the cavity for storing cookbooks or other items.
- Select, store and handle food carefully to preserve its high quality and minimize the spread of foodborne bacteria.
- Keep waveguide cover clean. Food residue can cause arcing and/or fires.
- Use care when removing items from the microwave oven so that the utensil, your clothes or accessories do not touch the safety door latches.
- Keep aluminum foil used for shielding at least 1 inch away from walls, ceiling and door.

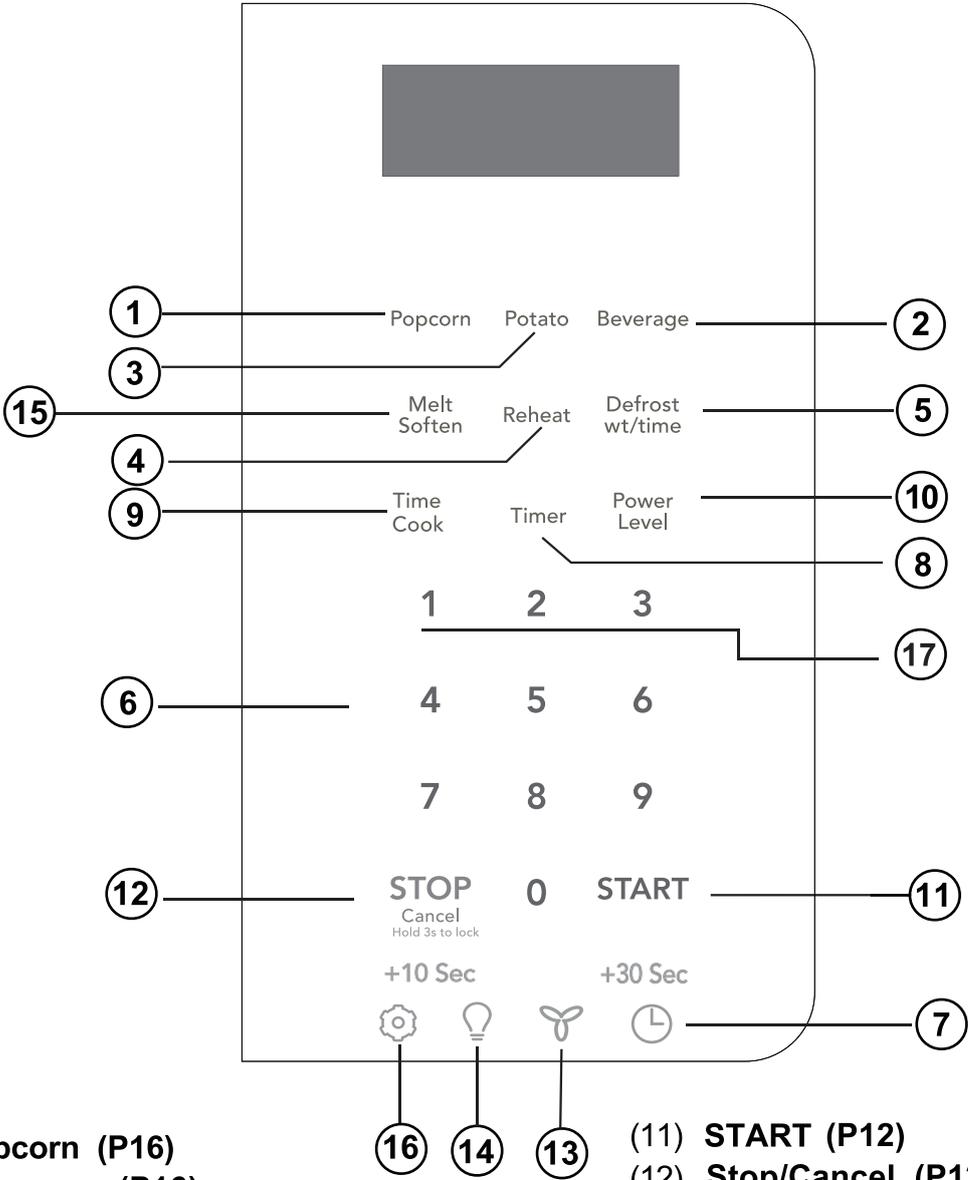
PART NAMES

Microwave features



1. Door Safety Lock System
2. Oven Window
3. Shaft
4. Roller Ring
5. Control Panel
6. Glass Tray
7. Filter
8. Cooktop Lamp

CONTROL PANEL



- (1) **Popcorn (P16)**
- (2) **Beverage (P16)**
- (3) **Potato (1-4 potatoes) (P16)**
- (4) **Reheat (3 different settings) (P14)**
- (5) **Defrost (by time or weight) (P13)**
- (6) **Numeric pads (0 thru 9)**
- (7) **Clock Settings (P10)**
- (8) **Timer (P10)**
- (9) **Time Cook (P11)**
- (10) **Power Level (10 power levels available) (P11)**
- (11) **START (P12)**
- (12) **Stop/Cancel (P12)**
- (13) **Exhaust (High/Low/Off) ~ Use to turn the exhaust fan on, off, or to adjust fan speed. (P10)**
- (14) **Surface Light ~ Press this pad to turn the surface lights on or off. (P10)**
- (15) **Melt Soften (P14)**
- (16) **Settings (P10)**
- (17) **Ready Set (P16)**

Note: For detailed information, please go to relative page listed above.

BEFORE OPERATING

Settings

The microwave oven has settings that allow you to customize the operation for your convenience. Below is the table showing the various settings. Touch the **Settings** key multiple times to scroll to the desired setting function.

Key press	Option
Settings x1	Sound Low/nor/Hi/Off(nor=Normal)
Settings x2	Weight lb/kg
Settings x3	Clock ON/OFF
Settings x4	Demo

Setting the clock

Example: set a 12-hour clock at 9:00:

1. Touch **Clock** pad once. 
2. Enter time using number pads. **9 0 0**
3. Touch **START** pad again. **START**

Setting the timer

Example: setting timer for 5 minutes:

1. Touch **Timer** pad once. **Timer**
2. Enter desired time using number pads. **5 0 0**
3. Touch **START** pad. **START**

Timer count down does not stop even if the door is opened. To stop/cancel the timer, press the **Stop/Cancel** key once. When the timer has reached the end of set time, you will hear beep alerts indicating the timer has run out.

Exhaust Low / High / 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, Touch the **Exhaust Low/High/Off** pad once for the Low speed setting. Touch the pad again to choose the High 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 High 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

Touch the **Surface Light/On/Off** pad once for a cooking surface light. Press the pad again to turn the light off.



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:

Touch 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:

Touch 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

MANUAL COOKING

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. Touch **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 4 times power level 7 (70% power). **PL-70** appears in the display (70 % power). Power Level
4. 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 **Time Cook**. 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 3 times for **PL80** (80 % power). Power Level
4. Press **Time Cook** pad for 2nd stage. Time Cook
5. 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
6. Press **Power Level** pad for 2nd stage. Power Level
7. Press **Power Level** pad for 6 times for **PL50** (50 %). 50 %
8. Press **START** pad. START

When heating has finished you will hear beeps and "End" will display.

Note:

Power level must always be programmed for first stage.

Using the Stop/Cancel key

This feature will let you quickly stop or cancel the cooking process.

Touch the **Stop/Cancel** pad to :

STOP
Cancel
Hold 3s to lock

1. Erase if you have entered wrong information.
2. Cancel timer setting process.
3. Press pad once to pause the oven temporarily during cooking. START
(Touch **START** pad again to resume cooking.)
4. Return the time of day (clock) to the display after cooking cycle is completed.
5. Cancel a program during cooking, touch twice.

Using +10 sec or +30 sec key

This feature will let you quickly add 10 or 30 seconds

1. Press time cook pad once. Time Cook
2. Press +10 sec or +30 sec pad to increase for cooking time 10 seconds or 30 seconds.
3. Extend cooking time in multiples of 10 or 30 seconds by pressing +10 sec or +30 sec pad for multiple times during microwave cooking.

MANUAL COOKING

NOTE

"Food" will be displayed for 5s once you start cooking if a cooking cycle is not selected or open and close door within 5 minutes. You must open then close the door to start cooking.

Setting Defrost (by Weight)

Example: to defrost 1lb. of food with the default power level and cook time determined automatically:

- Press **Defrost** pad once. **0.0** will appear in the display. Defrost wt/time
- 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**
- 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 for 5 minutes:

- Press **Defrost** pad twice. **00:00** will appear in the display. Defrost wt/time
- Use the number pads to enter desired defrost time (defrost time may be set up to 99 minutes and 99 seconds). **5 0 0**
- 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 weight and 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 and remove any portions that have already thawed. Touch the

START key to resume the defrost cycle.

- When heating has finished you will hear beeps.

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.

- Press **Reheat** pad 3 times (see reheat category table) to reheat 24oz. of food. **24 oz** will appear in the display. Reheat
- 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.

- Press **Melt/Soften** pad 4 times to reheat 8oz. of food. **So-4** will appear in the display (see Melt/Soften category table). Then press **2** number pad, 8 oz will appear in the display. Melt Soften
- Press **START** pad. **START**

MELT / SOFTEN CATEGORY

PRESS	DISPLAY	CATEGORY	AMOUNT	KEY
Melt Soften x 1	So-1	BUTTER	1 stick 2 sticks	1 2
Melt Soften x 2	So-2	CHOCOLATE	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:
PLHI	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.
PL90	90 %	<ul style="list-style-type: none"> Reheating meat slices quickly. Saute onions, celery & green peppers.
PL80	80 %	<ul style="list-style-type: none"> All reheating. Cooking scrambled eggs.
PL70	70 %	<ul style="list-style-type: none"> Cooking breads & cereal products. Cooking cheese dishes & veal. Cakes, muffins, brownies & cupcakes.
PL60	60 %	<ul style="list-style-type: none"> Cooking pasta.
PL50	50 %	<ul style="list-style-type: none"> Cooking meats & whole poultry. Cooking custard. Cooking spare ribs, rib roast & sirloin roast.
PL40	40 %	<ul style="list-style-type: none"> Cooking less tender cuts of meat. Reheating frozen packaged foods.
PL30	30 %	<ul style="list-style-type: none"> Thawing meat, poultry & seafood. Cooking small quantities of food. Finish cooking casseroles, stew & some sauces.
PL20	20 %	<ul style="list-style-type: none"> Softening butter & cream cheese. Heating small amounts of food.
PL10	10 %	<ul style="list-style-type: none"> Softening ice cream. Raise yeast dough.
PL-0	0 %	<ul style="list-style-type: none"> Demo mode.

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.

AUTO COOKING

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.

1. Press **Popcorn** pad 2 times. **Popcorn**
2. Press **START** pad. **START**

The microwave will beep when finished.

Potato

The potato feature cooks 1, 2, 3 or 4 (cooking times based on 8 to 32 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 cook 1 potato automatically.

1. Press **Potato** pad once. **Potato**
2. Press **START** pad. **START**

The microwave will beep when finished.

Notes:

- 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 8,16,24,32 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 +30sec 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.

CONVENIENT FEATURES

Setting the Sound

Turning Sound Low/nor/Hi/Off

Audible signals are available to guide you when setting and using your oven.

- **A programming tone** will sound each time you touch a pad.
- **Three tones** signal the end of a Kitchen Timer count down.
- **Three tones** signal the end of a cooking cycle.

Example: setting audible signal off:

1. Touch **Settings** pad once 
2. **Op-1** will display
- 3.

Sound Level	Press
Lo	1
Nor	2
HI	3
OFF	4

4. Touch **Settings** pad to confirm 

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 lb/Kg

Example: setting weight between pounds & kilograms:

1. Touch **Settings** pad 2 times. 
2. **Op-2** will display 
- 3.

Units	Press
Lb	1
kg	2

4. Touch **Settings** pad to confirm your selection. 

TURNING OFF THE CLOCK DISPLAY

1. Touch **Settings** pad 3 times. 
2. **Op-3** will display

3.

Clock Dbplay	Press
ON	1
OFF	2

4. Touch **Settings** pad to confirm the LED shows on. 

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. Touch **Settings** pad 4 times. 
2. **Op-4** will display
- 3.

Demo	Press
ON	1
OFF	2

4. Touch **Settings** pad to confirm when the display shows on. 

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:

Touch number pads 1,2 or 3 for desired minutes of cook time.

2

NOTE

"Food" will be displayed if a quick start cooking cycle or +30 sec key 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.

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.

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_PROOF™ 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.

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 5304522066

To order parts call 800-599-7569

⚠ CAUTION

Filters should be cleaned at least once a month. Never operate the fan or oven without the filters in place. Pull down slightly on the tab toward the front of the oven and remove the filter. Repeat for the other filter. Soak the filter in a sink or dish pan filled with hot water and detergent. **DO NOT** use ammonia or other alkali; they will react with the filter material and darken it. Agitate and scrub with a brush to remove embedded dirt.

Rinse thoroughly and shake dry.

Replace by fitting the filter back into the opening.

Surface light replacement

⚠ CAUTION

To avoid risk of personal injury or property damage, wear gloves when replacing the light bulbs.

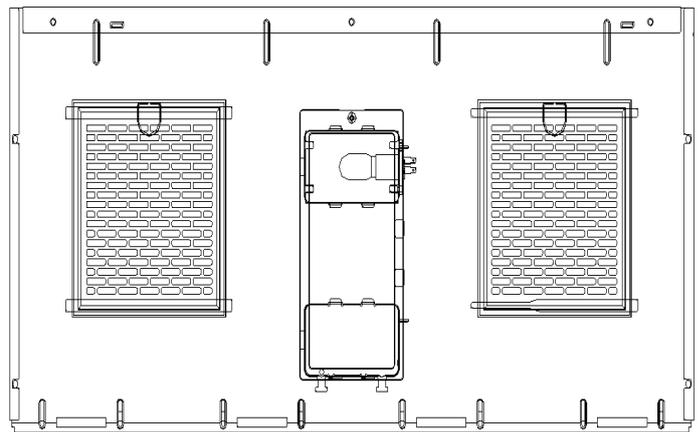
To replace light bulbs, first disconnect power to the oven at the circuit breaker panel or by unplugging.

To release cover, remove the screw on the light cover. (See illustration.)

DO NOT USE A BULB LARGER THAN 30 WATTS.

Close light cover and secure with screw removed in step 2.

CAUTION: Light cover may become very hot. Do not touch glass when light is on.



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.

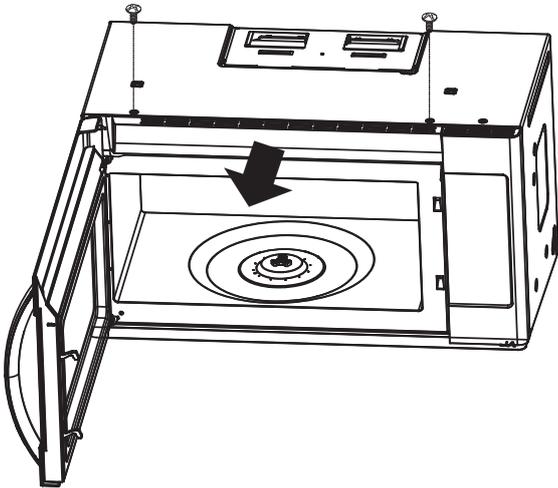
Charcoal filter replacement

Charcoal filter part number 5304522067

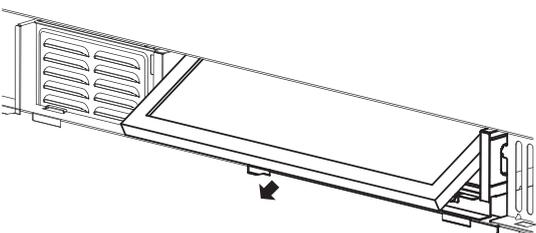
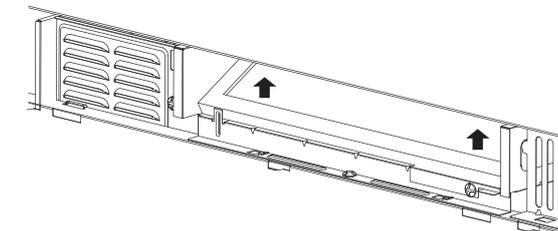
To order parts call 800-599-7569

Charcoal Filter when installed in your microwave oven, is used for nonvented, recirculated Installation. The filter should be changed every 6 to 12 months depending on use.

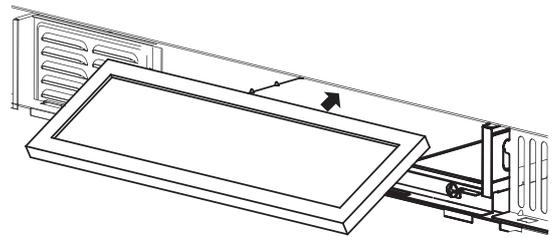
1. Disconnect power to the microwave oven at the circuit breaker panel or by unplugging.
2. Remove the vent grill mounting screws.
3. Pull the vent grill away from the unit.



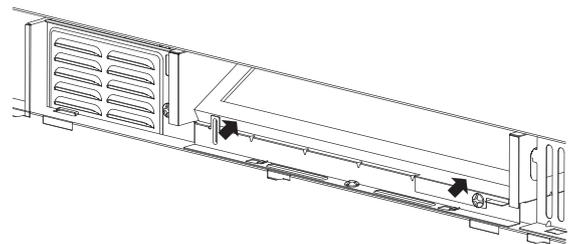
4. Remove the charcoal filter by pushing the top of the filter inwards, then pull it forward out from the unit.



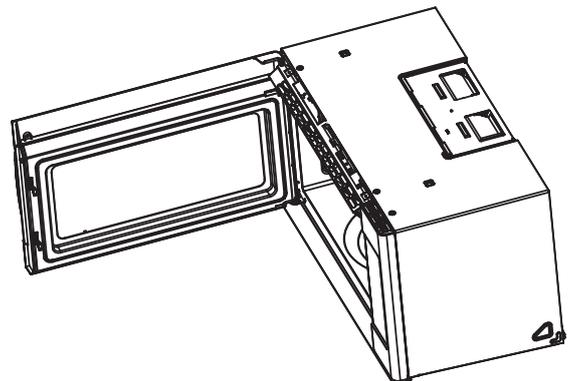
5. Slide the top of the new charcoal filter into the top area of the filter cavity.



6. Press the bottom of charcoal filter to place it into the correct position.



7. Put the vent grille bottom tabs into the slots then push the top of the vent grille into place.



8. Reinstall the vent grille screws.

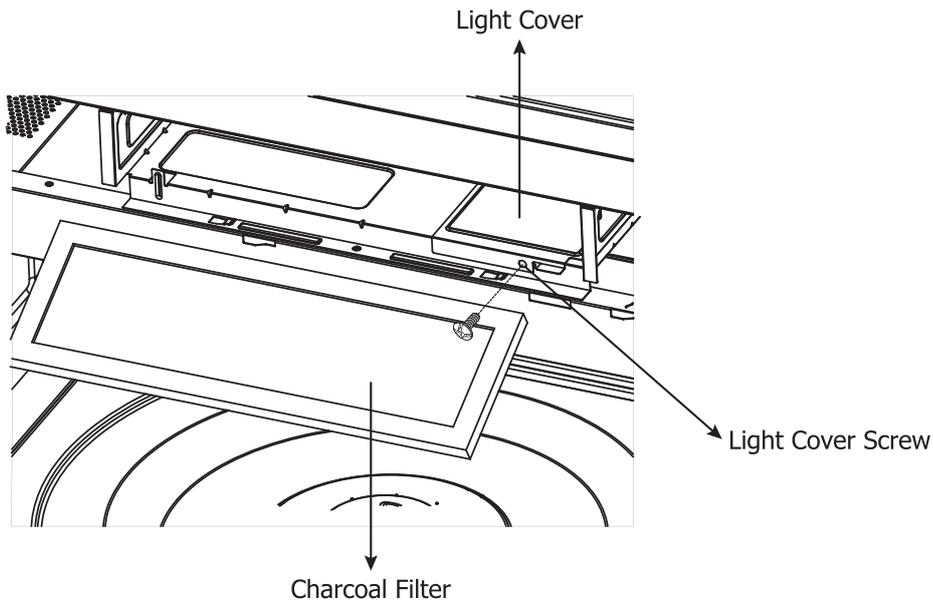
CLEANING AND CARE

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 louver per instructions 1~3 above and charcoal filter, if used.

1. Open light cover located behind filter mounting by carefully pulling up on the front edge.



2. DO NOT USE A BULB LARGER THAN 30 WATTS.

3. Replace the oven light cover by carefully pushing into place. Replace the charcoal filter, if used. Push the louver back into place and replace the louver mounting screw.

SERVICE CALL CHECK

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 SERVICER.

A microwave oven should never be serviced by a "do-it-yourself" repair person.

NOTES

1. If time appearing in the display is counting down very rapidly, check Demonstration Mode on page 22.
2. If the oven is set for more than 30 minutes at 00 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:	1550W 14.0 amps. (for FFMV1845VS)
Output Power*:	1000 W
Frequency:	2450 MHz (Class B/Group2)**
Outside Dimensions (including handle):	29.9 "(W) x 17.83 "(D) x 16.9 "(H)
Cavity Dimensions:	22.16"(W) x 13.80 "(D) x 10.55"(H)
Microwave oven Capacity***:	1.8 Cu.Ft.
Cooking Uniformity:	Turntable
Weight:	Approx. (net) 58.64 lb, (gross) 66.6 lb
Work/Night Light:	1.5*W LED, the part number is 5304522068
Oven Light:	1*30W incandescent, the part number is 5304522069

* The International Electrotechnical Commission's standardized method for measuring output wattage. This test method is widely recognized.

** 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.

MAJOR APPLIANCE WARRANTY INFORMATION

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



Printed in China

PN.: ECP10050AL-JEUC001

FRIGIDAIRE®

All about the

Use & Care

of your Dishwasher

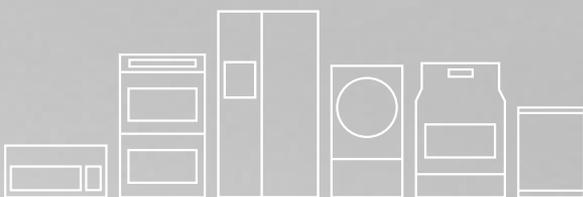


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IMPORTANT SAFETY INSTRUCTIONS



WARNING

Please read all instructions before using this dishwasher.

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.



WARNING

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



WARNING

This symbols will help alert you to such dangers as personal injury, burns, fire and electrical shock..

PRODUCT REGISTRATION

Thank you for choosing **Frigidaire**

This Use & Care Guide is part of our commitment to customer satisfaction and product quality throughout the service life of your new appliance.

We view your purchase as the beginning of a relationship. To ensure our ability to continue serving you, please use this page to record important product information.

Purchase Date

Model Number

Serial Number

Registering your product with Frigidaire enhances our ability to serve you. You can register online at **www.frigidaire.com** or by dropping your Product Registration Card in the mail.



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 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.



NOTE

Not all cycles and options available on all models.



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.



NOTE

Very Important Information - Read Before Operating Your Dishwasher!

Normal Operating Sounds

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

Your dishwasher with it's Precision Direct Wash System has many enhancements to reduce it's sound level. Still, it is normal to hear some of what is going on inside. The wash cycles include several instances of water entering the unit (splashing), the wash pump running to spray water on the dishware (motor & splashing) and the drain pump running to discharge the dirty water and soils. Variations in the pumping/spraying sounds are normal. During a cycle the pump switches on and off many times, and operation switches back and forth between wash arms to provide the best cleaning performance.

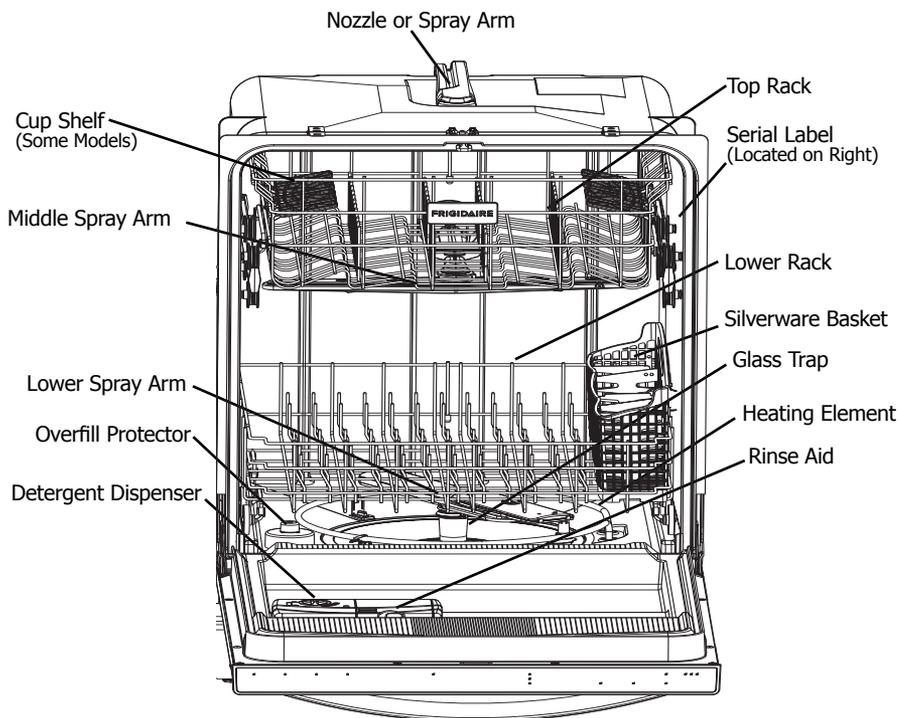
PLEASE BE ADVISED: If you compare this dishwasher to previous models, you may be surprised at what you DON'T hear.

Getting Started

1. Load Dishwasher (See Preparing and Loading Dishes).
2. Add detergent (See Dishwasher Dispenser & Detergents).
3. Add Rinse Aid, if needed (See Rinse Aid).
4. Select desired CYCLE (See Cycle Chart). *The indicator light above the pad will glow when selected.*
5. Select desired OPTION (See Energy Options). *The indicator light above the pad will glow 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.

FEATURES AT A GLANCE

Your dishwasher cleans by spraying a mixture of hot water and detergent through the spray arms against soiled surfaces. First, the dishwasher 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 vary with the cycle being used.



Features may vary according to model

Operating Instructions

Option Selections

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 HI-TEMP WASH option has not been selected. When HI-TEMP WASH is selected, an even higher temperature will be reached to handle heavier soil loads.

Hi-Temp Wash Option

When HI-TEMP WASH option is selected, the dishwasher heats water in the main wash to approximately 140°F (60°C).

This increase in water temperature helps the dishwasher detergent remove food grease and soil from dishes more effectively and aids in drying. HI-TEMP WASH option can be used with all cycles except RINSE ONLY. HI-TEMP WASH is automatically provided when the HEAVY WASH cycle is selected.

When HI-TEMP WASH option is selected, the light above the pad will come on and remain on until end of cycle. To turn off the HI-TEMP WASH option, press the pad a second time. The light above the pad will turn off.

OPERATING INSTRUCTIONS

Sanitize Option

To sanitize your dishes and glassware, select SANITIZE option. When selected, the light above the pad 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 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).

To turn off the SANITIZE option, press the pad a second time. The light above the pad will turn off.

Delay Start

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

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

Air Dry

When AIR DRY is selected the heater will be de-activated during the drying phase of the selected wash cycle. This will slightly lower the energy use but will increase the likelihood that the dishware will not dry completely. If AIR DRY is not selected the heater will be activated during the drying phase of the selected wash cycle.

Child Lock Controls

To prevent children from accidentally changing the dishwasher cycle or starting the dishwasher, lock the dishwasher controls by pressing and releasing the AIR 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 AIR DRY pad 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 above 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.

Status Indicator Lights

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

Whether heated or unheated dry is selected the DRYING light will come on during the drying portion of the cycle.

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.

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

The DishSense™ Technology checks the soil level on your dishes in the HEAVY WASH, NORMAL WASH and TOP RACK 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.

OPERATING INSTRUCTIONS



Not all Cycles available on all models.

Cycle Chart

Cycle and intended use	Available Options Temperature; Drying	Water per Cycle (approx.)	Duration* (approx.)
Heavy Wash Recommended for pots, pans, casseroles and dinnerware having light to heavily soiled loads.	Hi-Temp, Sanitize*; Air Dry	7 - 9 gal. 25 - 34 L.	2 - 2 1/4 Hours
Normal Wash Recommended for lightly to heavily soiled loads.	Hi-Temp, Sanitize; Air Dry	4 - 7 gal. 13 - 26 L.	2 - 1 3/4 Hours
Top Rack Recommended for small loads in the upper rack only that are light to heavily soiled.	Air Dry	4 gal. 14 L.	1 1/4 Hours
Rinse Only For rinsing dishware that will be washed later.		2 gal. 9 L.	1/4 Hour

* Hi-Temp and Sanitize are automatically selected with this cycle for best Wash and Dry performance.

Preparing and Loading Dishes

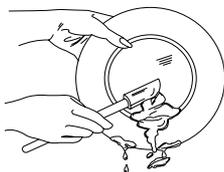
Dish Preparation

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.

PREPARING AND LOADING DISHES

- 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.

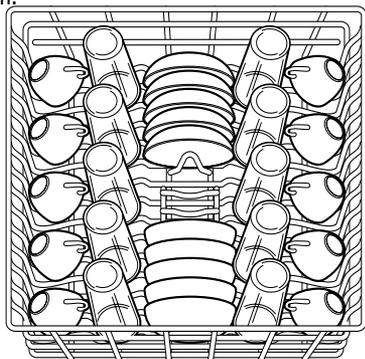
Load plastic items in top rack only. Melting may occur if placed in bottom rack.

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

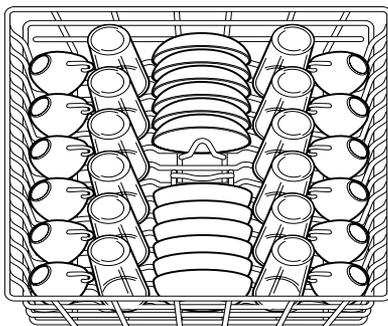
Damage may occur if delicate items touch each other during dishwasher operation.

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.



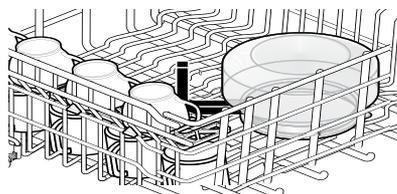
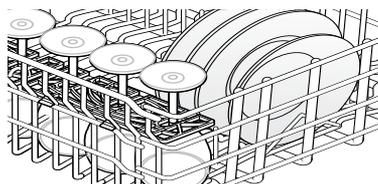
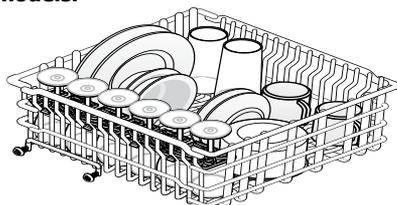
10 place settings standard loading pattern



12 place settings standard loading pattern

Top Rack

The TOP RACK cycle directs cleaning only to items in the upper rack and can be used to wash a wide assortment of items. It is useful for washing partial loads - especially when the upper rack fills up with glasses and the lower rack is still empty. **STEMWARE HOLDER/ CUPSHELVES are not available on all models.**



Some models have 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.

PREPARING AND LOADING DISHES

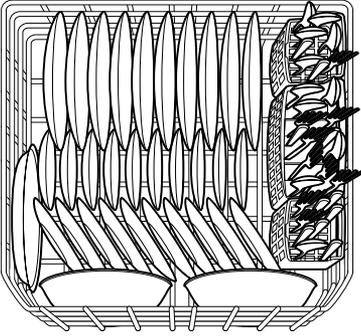
Loading the Bottom Rack

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

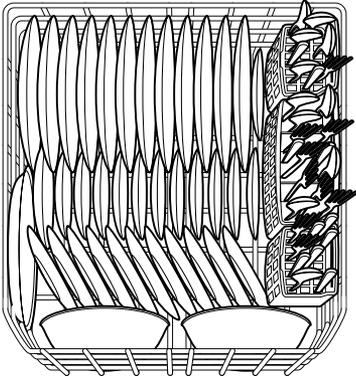
The lower rack is best for plates, saucers, bowls, and cookware. Large items should be placed along the edge so they do not block the spray arm rotation. For best results, place bowls, casseroles, and sauce pans with soiled surface facing down or toward the center. Tilt slightly for better drainage.

Spin the middle spray arm to make sure that tall items do not block the rotation.

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



10 place settings standard loading pattern.



12 place settings standard loading pattern.

Loading the Silverware Basket



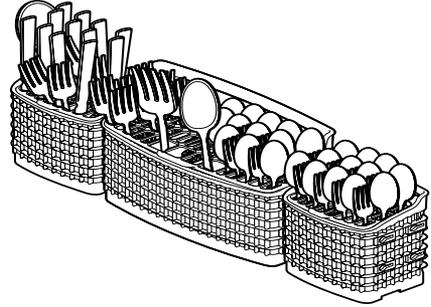
CAUTION

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.

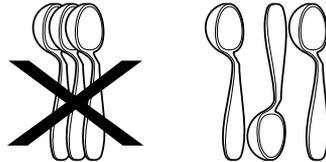


Use suggested loading patterns, as shown, to increase washability of the silverware.

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.

Mix items in each section of the basket with some pointing up and some down to avoid nesting. Water spray cannot reach nested items.



To add or remove items after wash cycle starts:

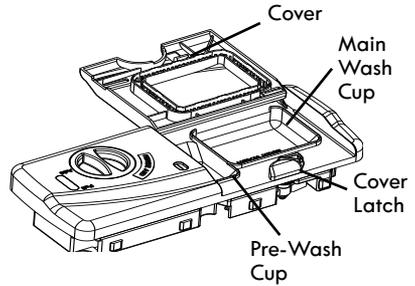
- Unlatch door and wait a few seconds until wash action stops before opening.
- Add the item and wait a few seconds to allow cold air to slowly expand inside dishwasher.
- Close the door firmly to latch and press the START/CANCEL pad to resume.

DISHWASHER DISPENSER & DETERGENTS



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.



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 tablets or packets, use only one tablet or packet, place in the main wash cup and close.
- 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.

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)
Top Rack	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)
Rinse Only	No Detergent	No Detergent	No Detergent	No Detergent (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.

FACTORS AFFECTING PERFORMANCE

Rinse Aid

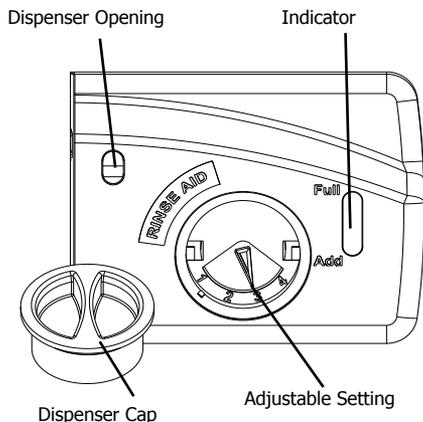
Rinse aid greatly improves drying and reduces water spots. With it water “sheets” off dishes rather than forming water droplets that cling and leave spots.

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

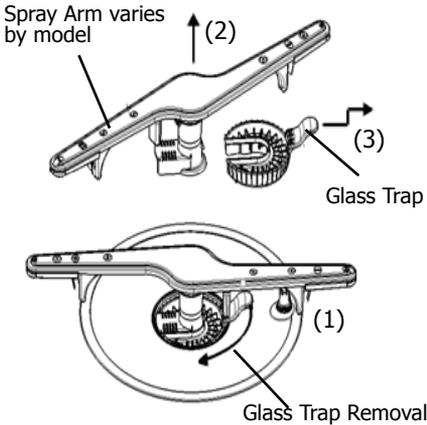
Before starting a cycle, run hot water to clear cool water from pipe.



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.

CARE AND CLEANING



To empty the glass trap:

1. Grasp the glass trap's handle and rotate it 90° clockwise while pressing down on the center of the wash arm.
2. Grab the spray arm in the center and lift the spray arm and glass trap assembly up and out from the dishwasher.
3. Tip the assembly over an appropriate container and tap it to empty the glass trap.

OR, separate the glass trap - pull the glass trap handle toward you, then up, then further toward you to slide it away from the rest of the assembly; empty it into an appropriate container; then slide the glass trap back into the assembly.

4. Place the assembly back into position, press down on the arm at the center and rotate the glass trap handle 90° counterclockwise being sure the glass trap ends in the orientation shown in the image above. **To avoid damage to your unit make sure the spray arm and glass trap are fully snapped in place.**

NOTE

See Installation Instructions for more details on disconnecting and restoring service to your dishwasher.



WARNING



Burn Hazard

Allow heating element to cool before cleaning the interior.

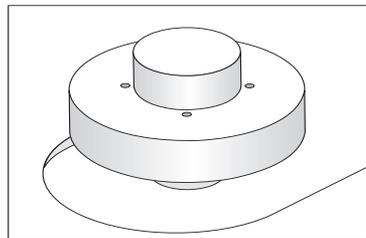
Failure to do so can result in burns.

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.



NOTE

Hard water may cause lime deposit buildup on the interior of the dishwasher. For cleaning instructions see "Removing Spots and Film" section.

CARE AND CLEANING

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.

Before calling for service, review this list. 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

- 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.

- 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.

BEFORE YOU CALL

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. Use the Rinse Only cycle or 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 Start 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.

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 Start Option?
- Make sure door is closed and latched.
- Make sure START/CANCEL pad is pressed after cycle has been selected.

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. Use Rinse Only cycle.
- 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 or using the Rinse Only cycle 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.

MAJOR APPLIANCE 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.

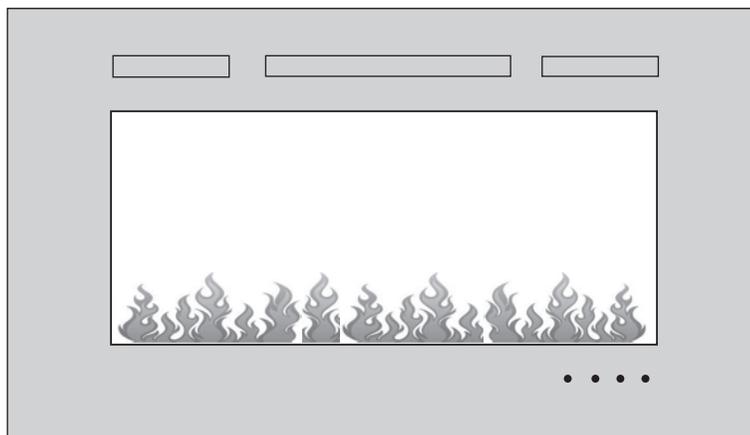
USA
1.800.944.9044
Frigidaire
10200 David Taylor Drive
Charlotte, NC 28262

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

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 Inc. disclaims any responsibility for, and the warranty and agency listing will be voided by the above actions.

WARNING! DO NOT operate appliance before reading and understanding operating instructions. Failure to operate appliance according to operating instructions could cause fire or injury.

WARNING! Improper installation, adjustment, alteration, service or maintenance can cause injury or property damage. Failure to install appliance according to Owner's Manual could cause property damage or injury.

NOTICE! This appliance is not intended for use as a primary heat source and should not be factored as such in residential heating calculations.

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 exhaust in any manner.
- A heater has hot and sparking 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 malfunctions, 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 cover 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 excess 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, and 10 years from the beginning date of warranty coverage for wood and pellet appliances. 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 Covered by this Warranty
Component Parts	Labor	Gas	Pellet	Wood	Electric	Venting		
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	1 year	X					Vent Free Burners, Vent Free Logs	
			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	
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 supplemental room heat or as a decorative appliance. It should not be factored as primary heat in residential heating calculations.

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.

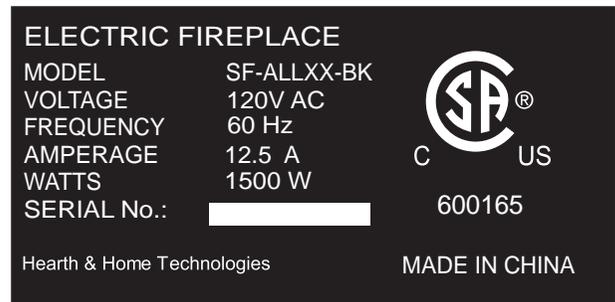
B. Unpacking and Inspecting Appliance

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. Discard packaging.
- Carefully inspect components for any damage.
- Reference 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: _____

Dealership purchased from: _____ Dealer Phone: _____

Notes: _____

3 GETTING STARTED

A. Parts and Hardware

Parts and Hardware List	
Part	Quantity
Appliance	1
Glass Panel	1
Instruction Manual	1
Remote Control	1
AAA Battery	2
Fixing Brackets (Shipped attached to appliance with ST4X10 black screw (x4) 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-sheathed 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

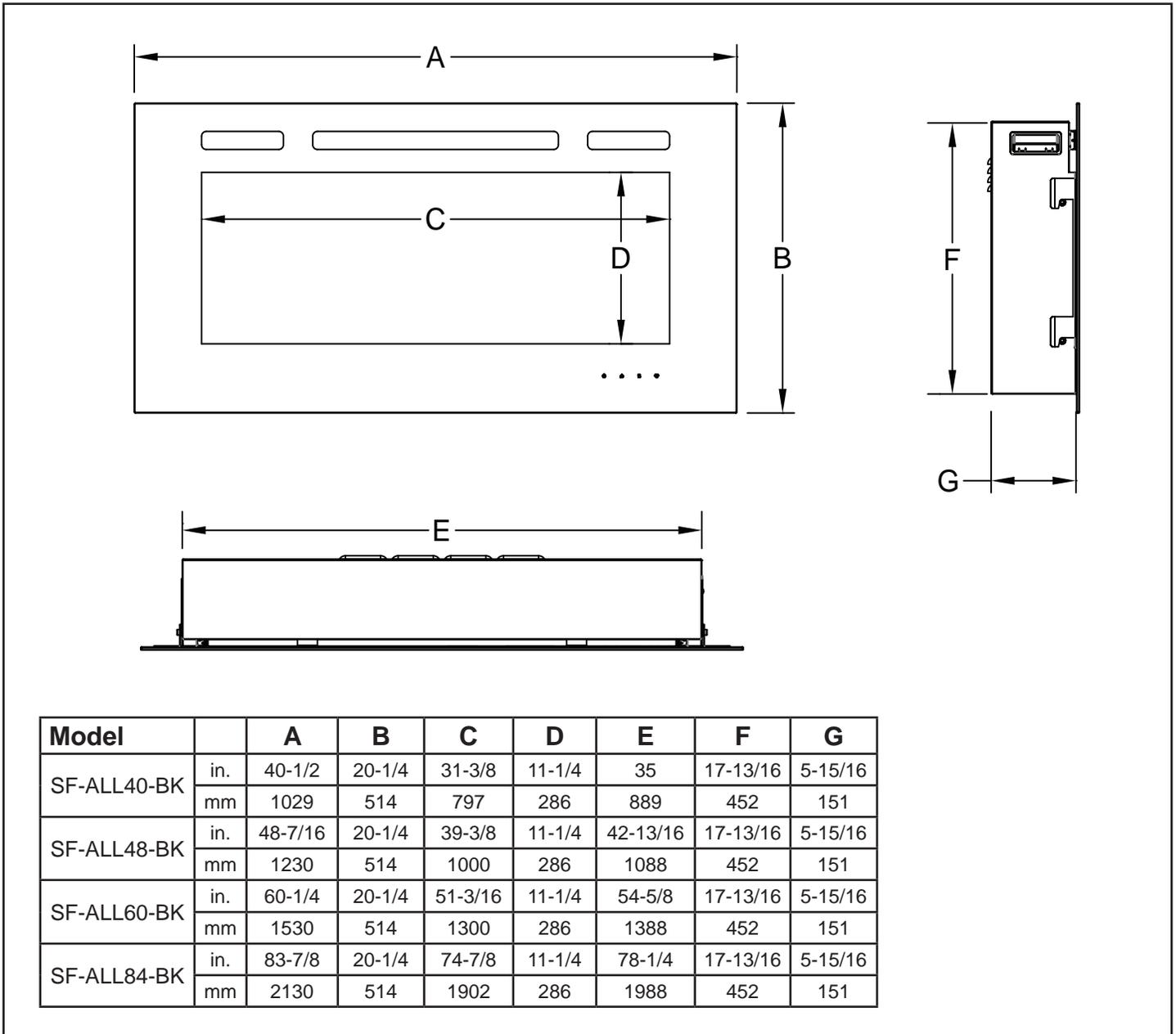


Figure 3.1 Appliance Dimensions

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 service must be installed within proximity of electric fireplace prior to finishing to avoid reconstruction.
- Appliance should be mounted so the front glass panel is located outside the swing 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.

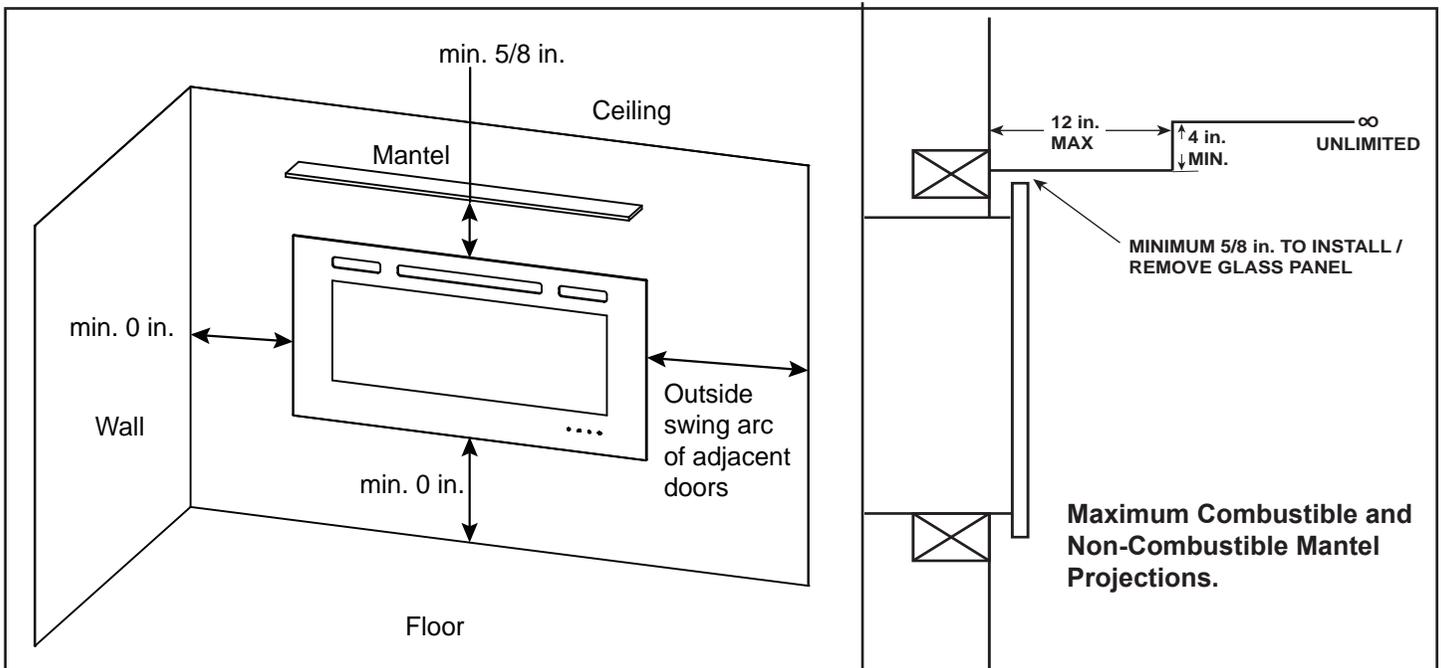


Figure 3.2 Location and Clearances Requirements

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.

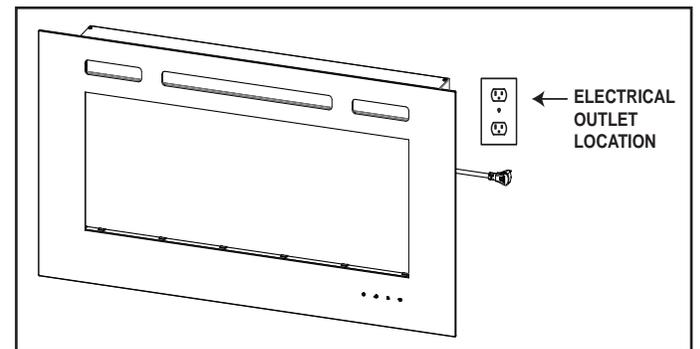


Figure 3.3 Electrical Outlet Location

4 INSTALLATION

WARNING! Risk of Personal Injury or Property Damage! Failure to install the appliance as instructed below may result in damage to the equipment and or may expose the user to the risk of fire, serious injury, illness or death.

NOTICE: These instructions are not substitutes for the requirements of local building codes.

There are three options for the appliance installation:

- Recessed into a 2 x 6 in. wall - Section 4.B.
- Recessed into a 2 x 4 in. wall - Section 4.C.
- Mounted directly on the wall - Section 4.D.

The appliance can be recessed into the wall, but the glass front must overlap the opening in the wall construction. The glass front cannot be finished into the wall, or overlapped with any finishing materials.

When installed in a recessed opening on an exterior wall in cooler climates, a chase may be required by local building codes to accommodate insulation. The chase should be constructed in a manner of all outside walls of the home to prevent cold air drafting problems. The chase should not break the outside building envelop in any manner. Walls, ceiling, baseplate, and cantilever floor of the chase should be insulated. Vapor and air infiltration barriers should be installed in the chase as per regional codes for the rest of the home. Additionally, in regions where cold air infiltration may be an issue, the inside surfaces may be drywalled and taped (or equivalent method may be used) to achieve maximum air tightness.

NOTICE: Insulation and other loose materials must be secured to maintain the air clearance between the appliance and interior envelope of the wall opening. This will ensure that the appliance can circulate air to its room temperature sensor for maximum performance of the Thermostat function.

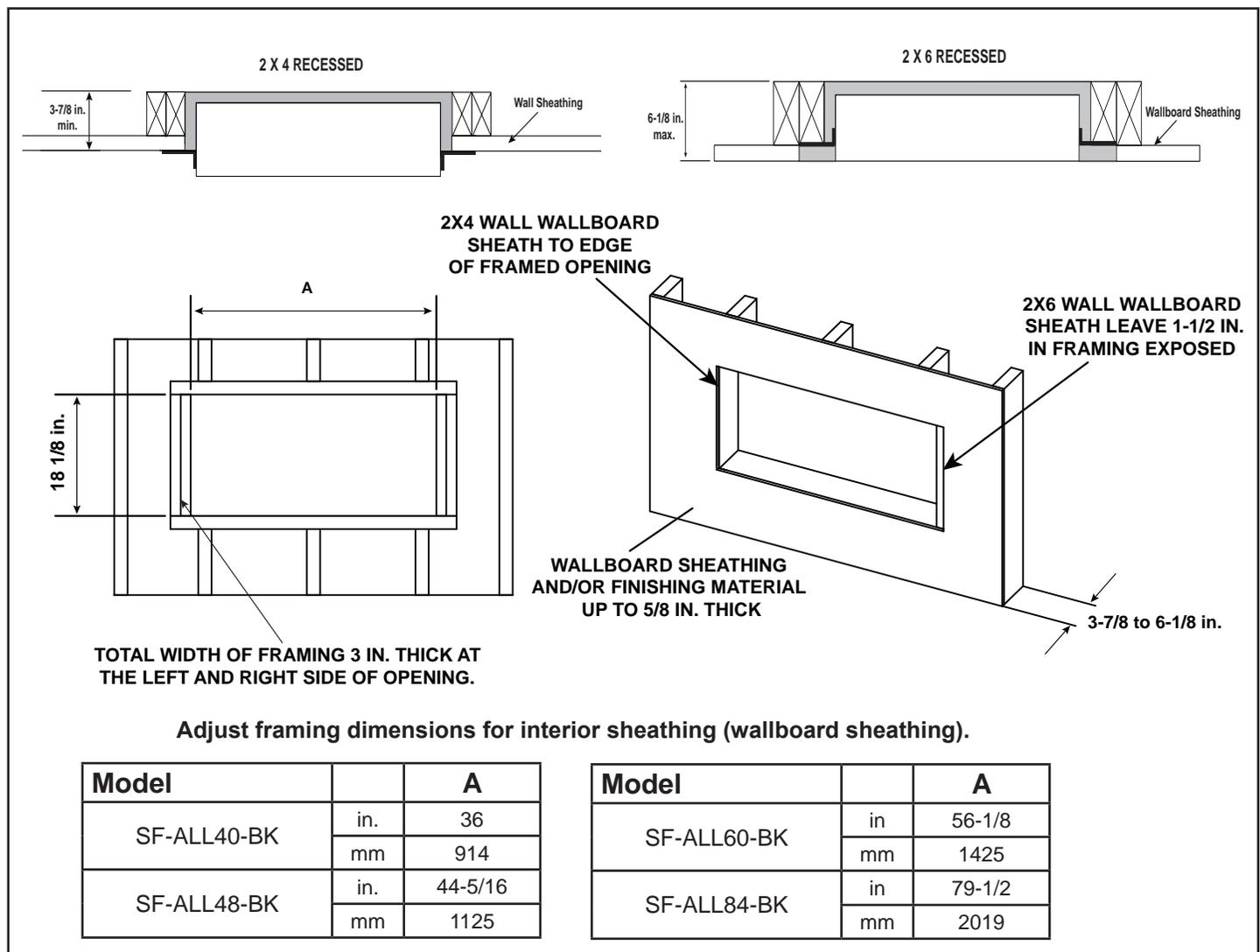


Figure 4.1 Framing and Wall Finishing for Recessed Installation

A. Appliance Preparation

After determining the location and framing dimensions, the appliance must be prepared for installation.

The appliance is shipped with its wall mounting bracket attached. Remove the bracket by removing the two (2) M5X10 screws on the bottom of the appliance, then disengage the bracket from the appliance. Set the wall mounting bracket aside for future use.

If the appliance is to be recessed into 2 X 6 in. framed wall construction, refer to Section 4.B for installation instructions.

If the appliance is to be recessed into 2 X 4 in. framed wall construction, refer to Section 4.C for installation instructions.

If the appliance is to be installed directly to the face of the wall, refer to Section 4.D for installation.

B. Recessed in 2 x 6 Framed Wall

1. Finish wall construction per requirements in Figure 4.1.

The width of the framing on each side of the opening must be 3 in. with 1-1/2 in. framing on the left and right sides of the opening exposed. This is needed for the wallboard finishing and to secure the appliance into the opening. See Figure 4.1.

Allow 1-1/2 in. of wood exposed after finishing the wallboard. See Figure 4.1 and Figure 4.6.

2. Verify that the Fixing Brackets are securely attached to the appliance with four (4) ST4X10 screws and washers. See Figure 4.3. The attachment holes for the brackets into the appliance are slotted to allow adjustment for the thickness of the wallboard and/or any finishing materials up to a total 5/8 in. thick. It may be necessary to test fit the appliance and adjust the location of the brackets on the appliance so that the front face of the unit protrudes 1/16 to 1/8 in. from the outside face of the finished wall. See Figure 4.4 and 4.5.
3. Connect to electrical service. Reference Section 4.E.
4. Install the appliance into the opening so the weight of the appliance is supported by the bottom framing. Level with shims if necessary. Ensure that it is centered left to right, then fasten it directly to the framing with four (4) ST4X40 screws through both the left and right brackets. See Figure 4.6.

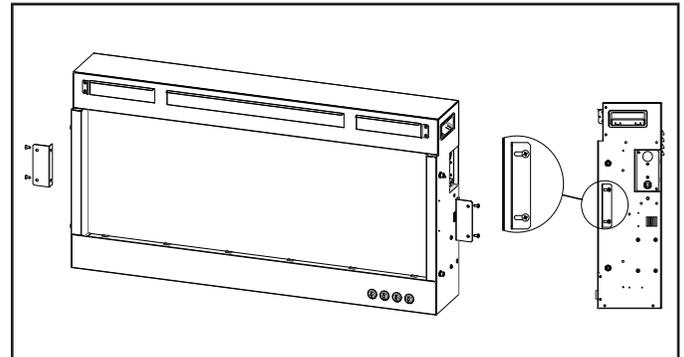


Figure 4.3 Fixing Brackets Attachment for Recessed Mounting in 2 X 6 in. Framing

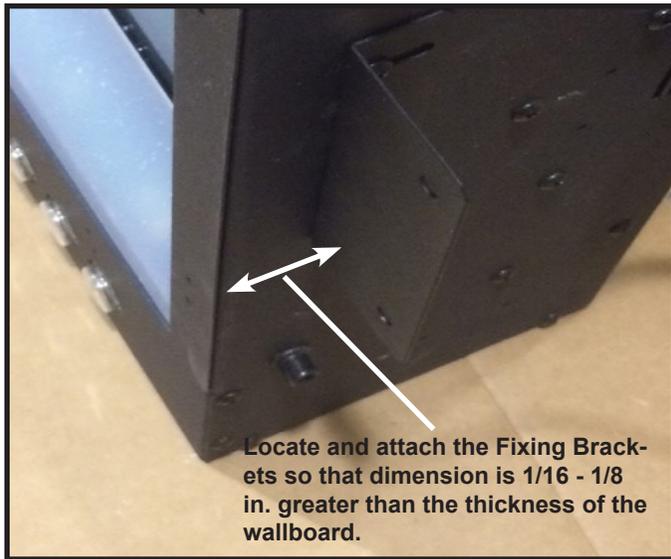


Figure 4.4 Adjust Bracket Location

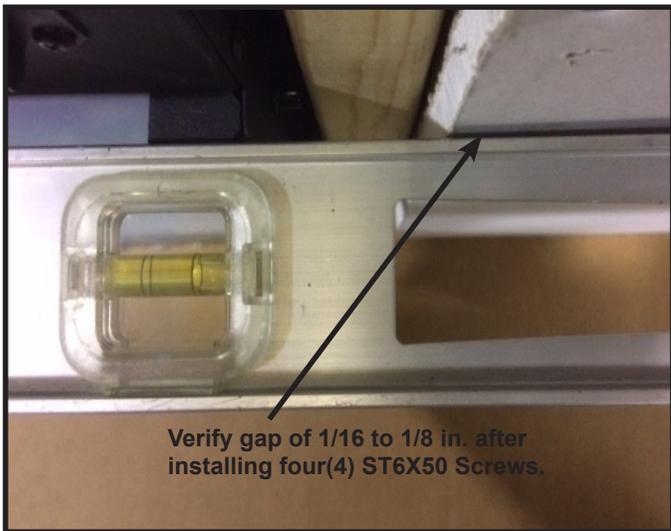


Figure 4.5 Adjust Bracket Location

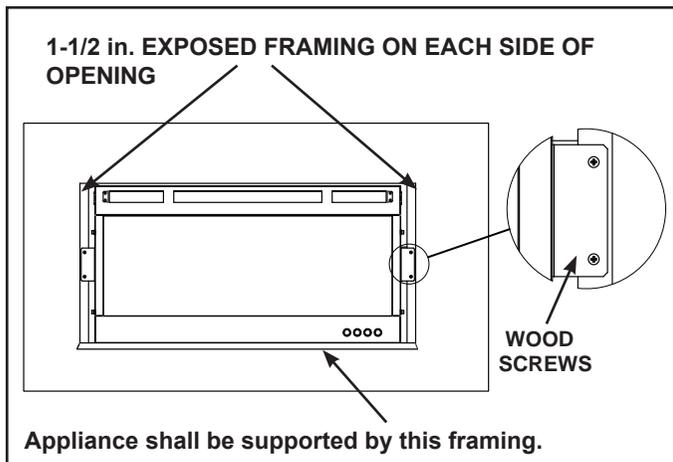


Figure 4.6 Securing the Appliance in 2 X 6 Framing

C. Recessed in 2 x 4 Framed Wall

1. Finish wall construction per requirements in Figure 4.1.

The width of the framing on the left and right sides of the opening must be 3 in.. This is needed for the wallboard finishing and to secure the appliance into the opening. See Figure 4.1 and Figure 4.8.

Wallboard should be finished up to the edge of the framed opening. See Figures 4.1 and 4.8.

2. Install the Fixing Brackets to the right and left side of the appliance. If necessary, remove the Fixing Brackets, and reorient them to the position of 2X4 framing. See Figure 4.1 and 4.7. Attach each Fixing Bracket to the appliance with two (2) ST4X40 screws and washers. See Figure 4.7 for proper bracket orientation.
3. Connect to electrical service. Reference Section 4.E.
4. Install the appliance into the opening so the weight of the appliance is supported by the bottom framing. Level the appliance. Ensure that it is centered left to right, then fasten it directly to the framing with two (2) ST4X40 screws through both the left and right brackets. See Figure 4.8.

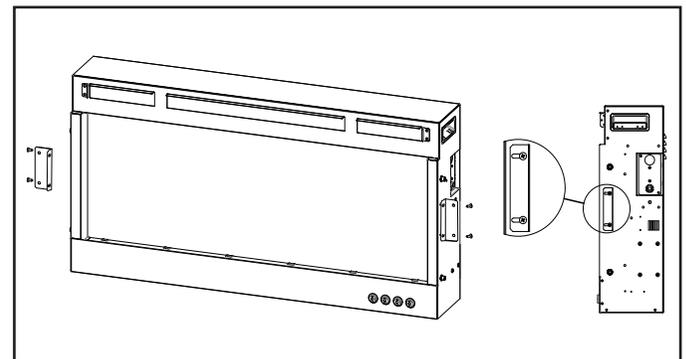


Figure 4.7 Fixing Brackets Attachment for Recessed Mounting in 2 X 4 in. Framing

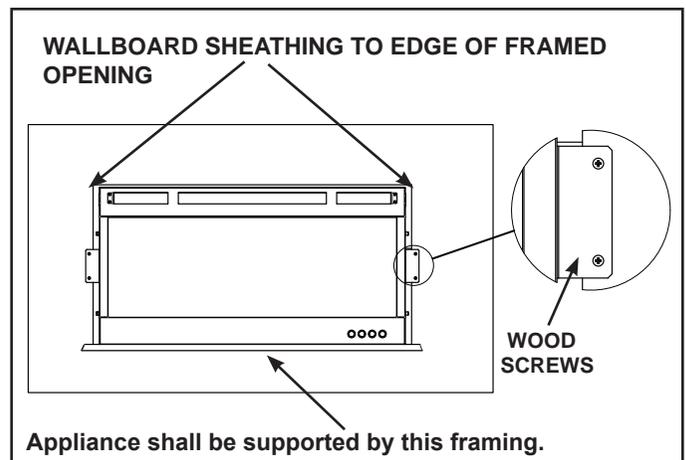


Figure 4.8 Securing the Appliance in 2 X 4 Framing

D. Direct Wall Mounting with Wall Mounting Bracket

The wall mounting bracket can be installed on masonry walls such as those constructed of brick or concrete, or to framed walls constructed of wood or steel framing sheathed with gypsum wallboard, drywall, wood, etc. The method used to mount the mounting bracket is different between masonry walls and framed walls. Refer to the following sections for more detail on the method applicable to this installation.

Framed Wall

- Locate the mounting bracket on the wall in the desired location of the appliance. Level the bracket, then mark its location on the wall, including a marking for each of the fastener holes in the bracket.
- For each of the marked mounting point locations, determine which points align with a structural framing member.
- At the points where a wood or metal framing member exists, the ST6X50 screw can be installed directly into that structural member. See Figure 4.13.
- For every mounting hole that does not align with a structural framing member, a wall board toggle-bolt anchor must be used. See Figure 4.9.



Figure 4.9 3/16 Toggle-Bolt Anchor

- The toggle-bolt anchors are provided to accommodate the required anchor points based on the appliance. Use of toggle bolt anchors requires drywall thickness of minimum 1/2 in. and drilled holes size of 1/2 in. diameter.
- Insert the bolt through the front side of the mounting bracket and thread the toggle onto it from the rear of the bracket. See Figure 4.10.
- Fold the toggle wings flush against the bolt and push them through a drilled hole until the toggle wings expand open on the other side. See Figure 4.11.
- Pull back on the bolt and tighten. See Figure 4.11.

Note: This product cannot be installed on a wall sheathed with drywall less than 1/2 in. thick, unless all required anchor points in the mounting bracket align with structural framing members.

NOTICE: Minimum six screw(s) and/or toggle bolt anchors are required for wall mounting the SF-ALL40-BK, SF-ALL48-BK, and SF-ALL60-BK. Minimum of eight (8) screw(s) and/or toggle bolt anchors are required for wall mounting the SF-ALL84-BK.

WARNING! Risk of Damage or Personal Injury! Allowable pull-out and shear strength are 25% of ultimate values or less, as required by building authorities.



Figure 4.10 Toggle Bolt Installation through Mounting Bracket



Figure 4.11 Installing Anchors in Hollow Wall

Masonry Wall

- Locate the mounting bracket on the wall in the desired location of the appliance. Level the bracket, then mark its location on the wall, including a marking for each of the fastener holes in the bracket.

NOTICE: Minimum six (6) anchored screws are required for wall mounting the SF-ALL40-BK, SF-ALL48-BK, and SF-ALL60-BK. Minimum of eight (8) anchored screws are required for wall mounting the SF-ALL84-BK.

- In the marked locations, drill 5/16 in. diameter x 1-1/2 in. deep holes. See Figure 4.12.

NOTICE: The supplied wall anchors are designed for solid masonry wall such as brick or poured concrete. Do not use the supplied wall anchors when mounting this product to hollow concrete block walls. If mounting this product to concrete block, contact your local building supply retailer to source a fastener system that is compatible with concrete block and rated minimum 120 lbs. load capacity at each required anchor point.

- Insert the provided wall anchors into the holes.
- Gently tap the anchors with a hammer until they are flush with the wall surface.
- With mounting hooks pointed up, attach the bracket to the masonry anchors with ST6X50 screws. See Figure 4.13.

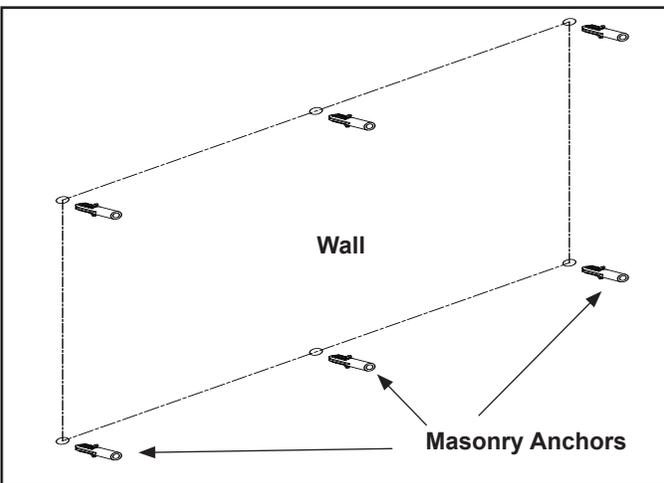


Figure 4.12 Masonry Anchor Placement

WARNING! Risk of Damage or Personal Injury! Do not use supplied masonry anchors on concrete block walls or hollow walls sheathed with wood, gypsum wall-board, drywall, or other materials.

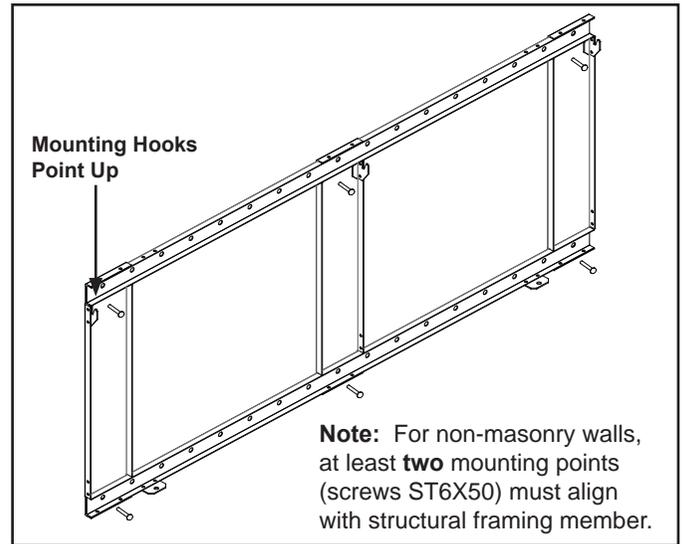


Figure 4.13 Bracket Attachment

Appliance Installation

- Hang appliance on the mounting bracket.
- Align the slots on the back of the appliance with the hooks on the top two corners of the bracket.
- Hang the appliance and pull down to ensure the hooks are fully engaged. See Figure 4.14.
- Secure the appliance to the bracket with two M5X10 screws. See Figure 4.14.

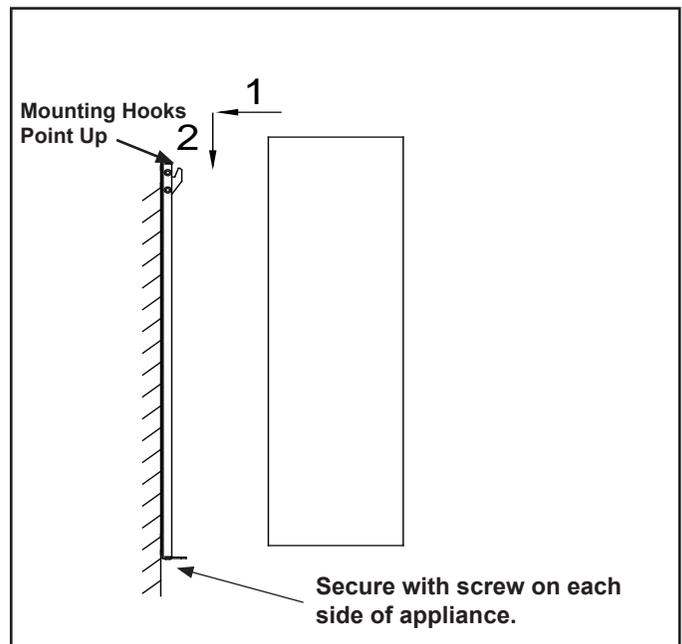


Figure 4.14 Attaching Appliance to Bracket

E. Electrical Connection / Installation

Note: All wiring must be completed prior to finishing the unit.

All electrical connections shall be performed by a qualified electrician.

WARNING! Risk of Fire, Electrical Shock and Injury!
Electrical wiring must comply with local building codes and other applicable regulations.

WARNING! Risk of Shock! Label all wires prior to disconnection when servicing the appliance. Wiring errors can cause improper and dangerous operation. Verify proper operation after servicing.

This appliance has been designed to be hard-wired for 120V. A supplied plug-in kit is also available for installations mounted directly on the face of the wall.

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.

Hard-Wired Installation:

Note: The appliance must be electrically connected and grounded in accordance with local codes.

1. Remove terminal block cover plate located on the right end of the appliance.
2. Install a wire strain relief bushing into the cover plate.
3. Terminate type NM-B wire to the terminal block, ensure connections are secure, and tighten the strain relief.
4. Replace terminal block cover plate and retaining screws.

Power Cord Installation

The appliance power cord has a three pin NEMA-5-15P plug. The power cord should not be used unless a grounded receptacle is available.

1. Remove the terminal block cover plate located on the right end of the appliance.
2. Disconnect the terminal block from the three wires inside the appliance. Wires are released by disconnecting the three conductor wire connector. Discard the terminal block cover plate.
3. Connect the three conductor wire connector to the connector on the block supplied with the power cord kit. See Figure 4.15.
4. Replace cord kit terminal block cover plate and retaining screws. Plug cord into nearest outlet. See Figure 3.3.

WARNING! Risk of Fire, Electrical Shock and Injury!
Ensure the power cord is not installed so that it is pinched or against a sharp edge and ensure that the power cord is stored or secure to avoid tripping and snagging.

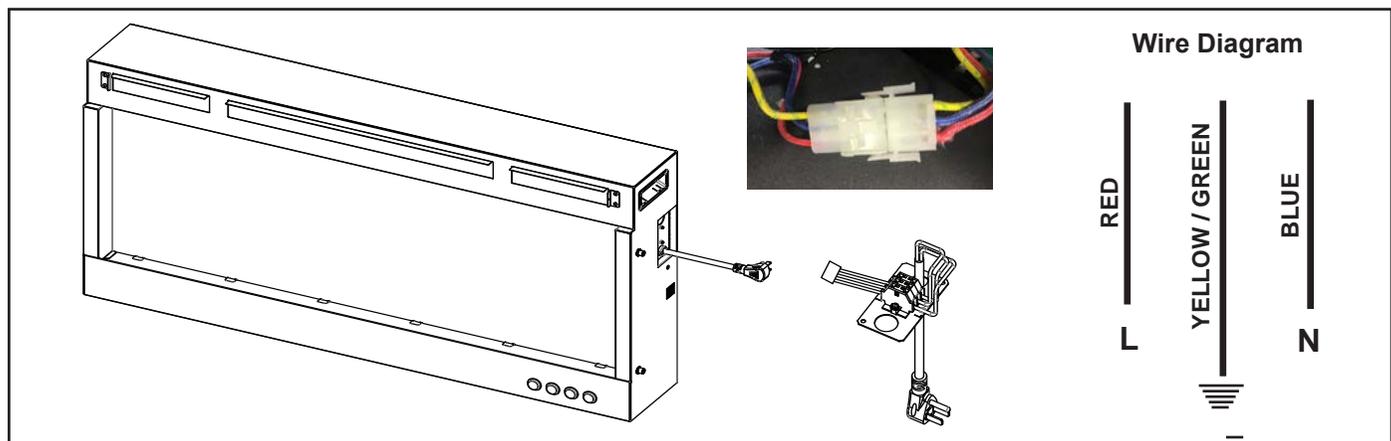


Figure 4.15 Optional Power Cord Assembly

F. Appliance Final Setup

1. Carefully spread the small crystal stones across the ember bed. Then evenly arrange the larger crystal stones along the inset window ledge at the front of the firebox.

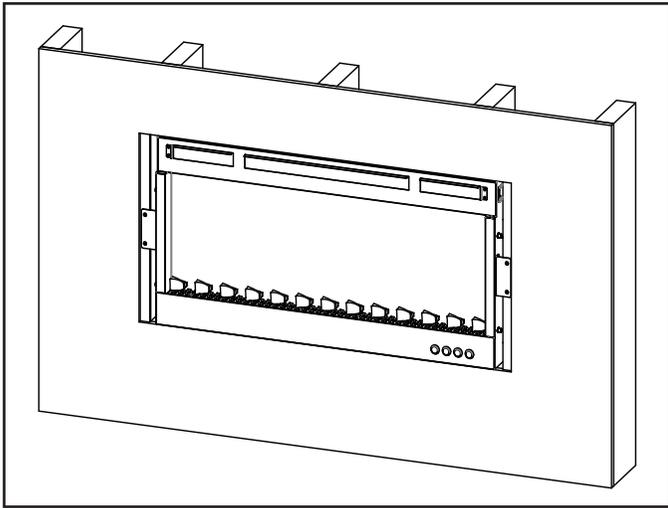


Figure 4.16 Stone Installation

Note: If optional logs are purchased, arrange the logs on top of the crystal stones as desired.

CAUTION! *Two adults are recommended for the installation of glass front. Use caution when handling glass. Failure to do so could result in personal injury or property damage.*

2. Install front panel. Locate the J-hooks on the back side of the glass on the four rivnuts on the appliance opening. Press down on top edge of glass to fully engage J-hooks on the rivnuts. See Figure 4.17.

Note: Make sure the glass is fully attached to the firebox so that the control panel can work properly.

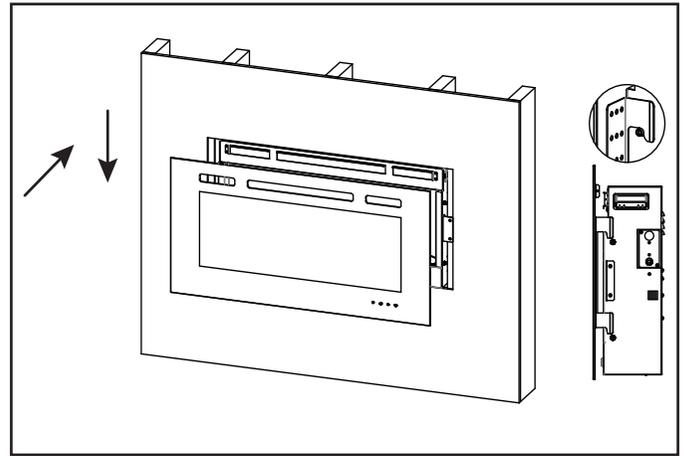


Figure 4.17 Glass Front Installation

3. Thread the two (2) ST3X8 screws into the threaded holes on the glass panel. Check the alignment of the glass panel and securely tighten the screws. See Figure 4.18.

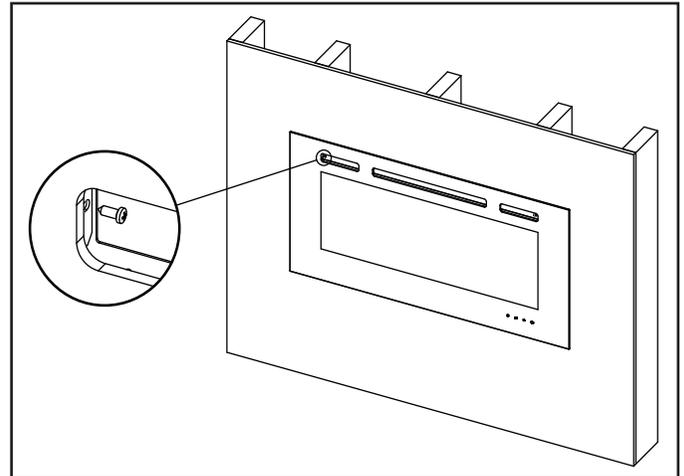


Figure 4.18 Secure Glass Front

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).

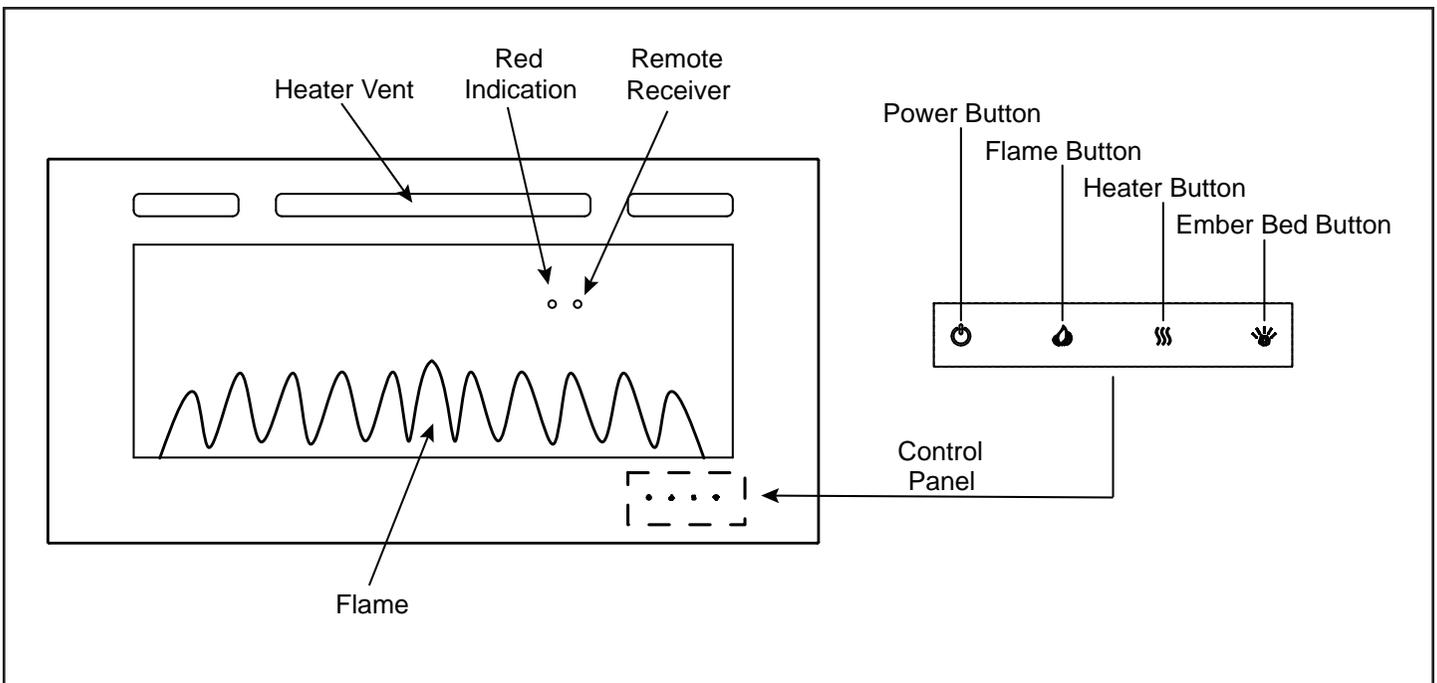
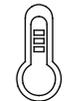


Figure 5.1 Manual Operating Switches

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 also 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 micro fiber 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

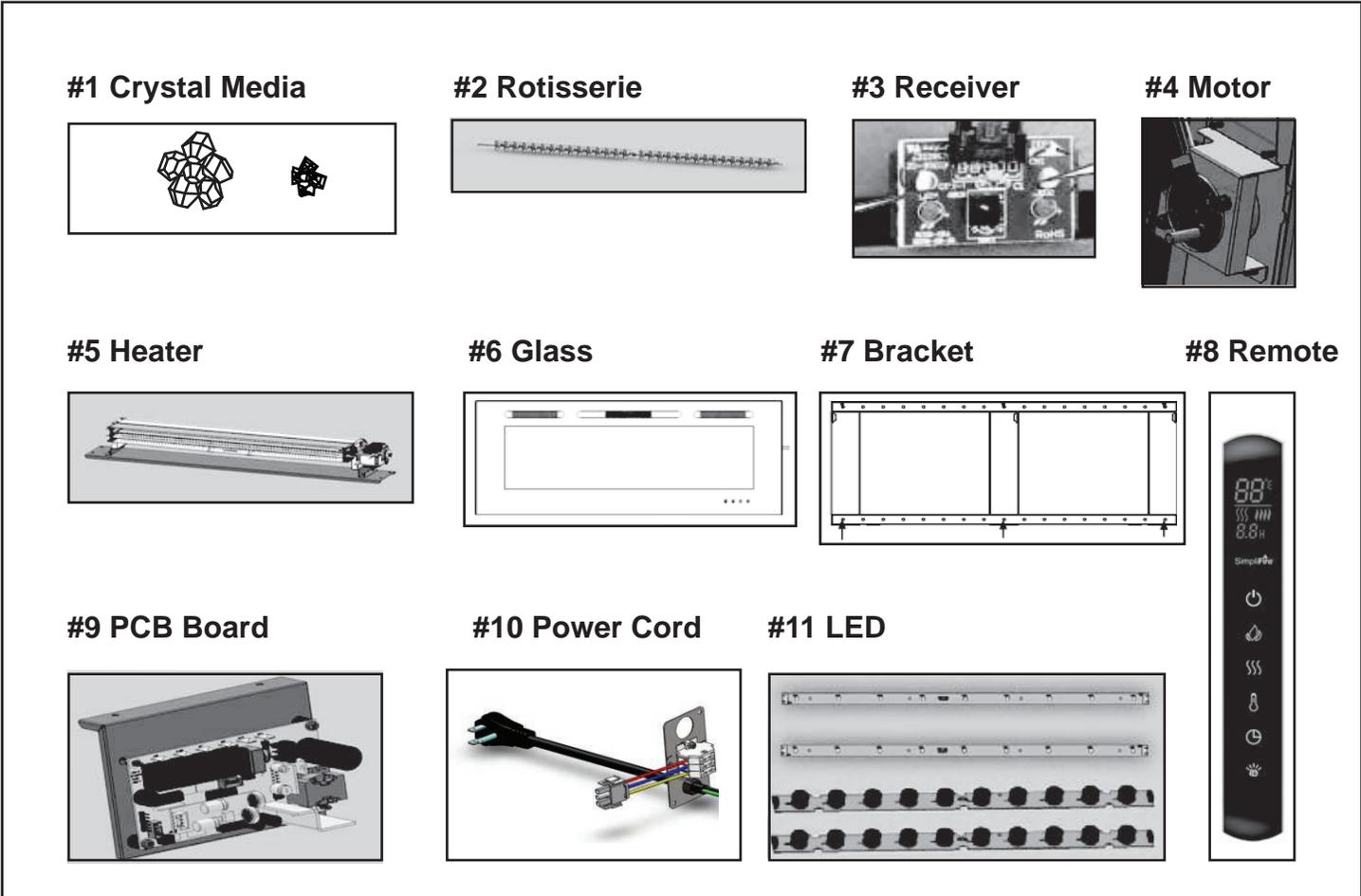
Except for cleaning, an authorized service representative should perform any other service.

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 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.
	Defect in 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 thermistor) 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 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 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 shudder	Flame rotisserie contacting other internal components when spinning	Ensure rod is straight and mounted properly and is spinning freely without spindles 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 causing 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 spindles hitting other components. If sound is coming from friction with the rotisserie bracket, apply grease to contact point.

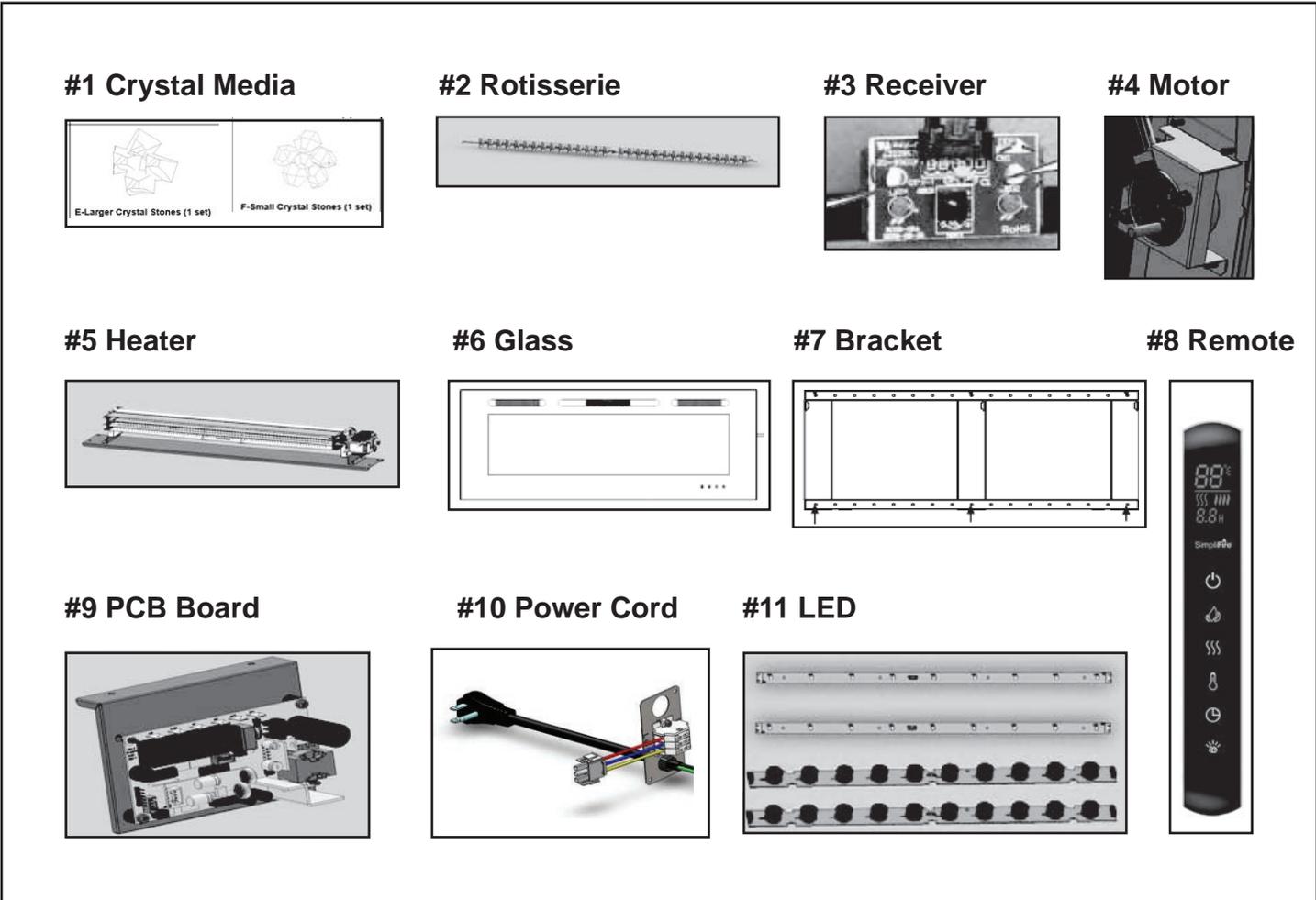


IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



Stocked at Depot

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Crystal Media		CRYSTAL-ALLUS	
2	Rotisserie, 40"		ROTISS-ALL40	Y
3	Remote Receiver		RECEIV-ALLUS-E	Y
4	Allusion Motor		MOTOR-ALLUS	Y
5	Heater Assembly		HEATER-ALLUS	Y
6	Glass Front, 40"		GLA-ALL40	
7	Hanging Bracket		BRACKET-ALL48	
8	Remote		REMOT-ELECT-ALL	Y
9	PCB Board Assembly		PCB-ALLUS	Y
10	Power Cord		PLUGIN-ALLP	Y
11	LED Assembly, 40"	Emberbed & Flame	LED-ALL40	Y
	Allusion Hardware Kit	Fixing Brackets & Screws	HDWR-ALLUS	

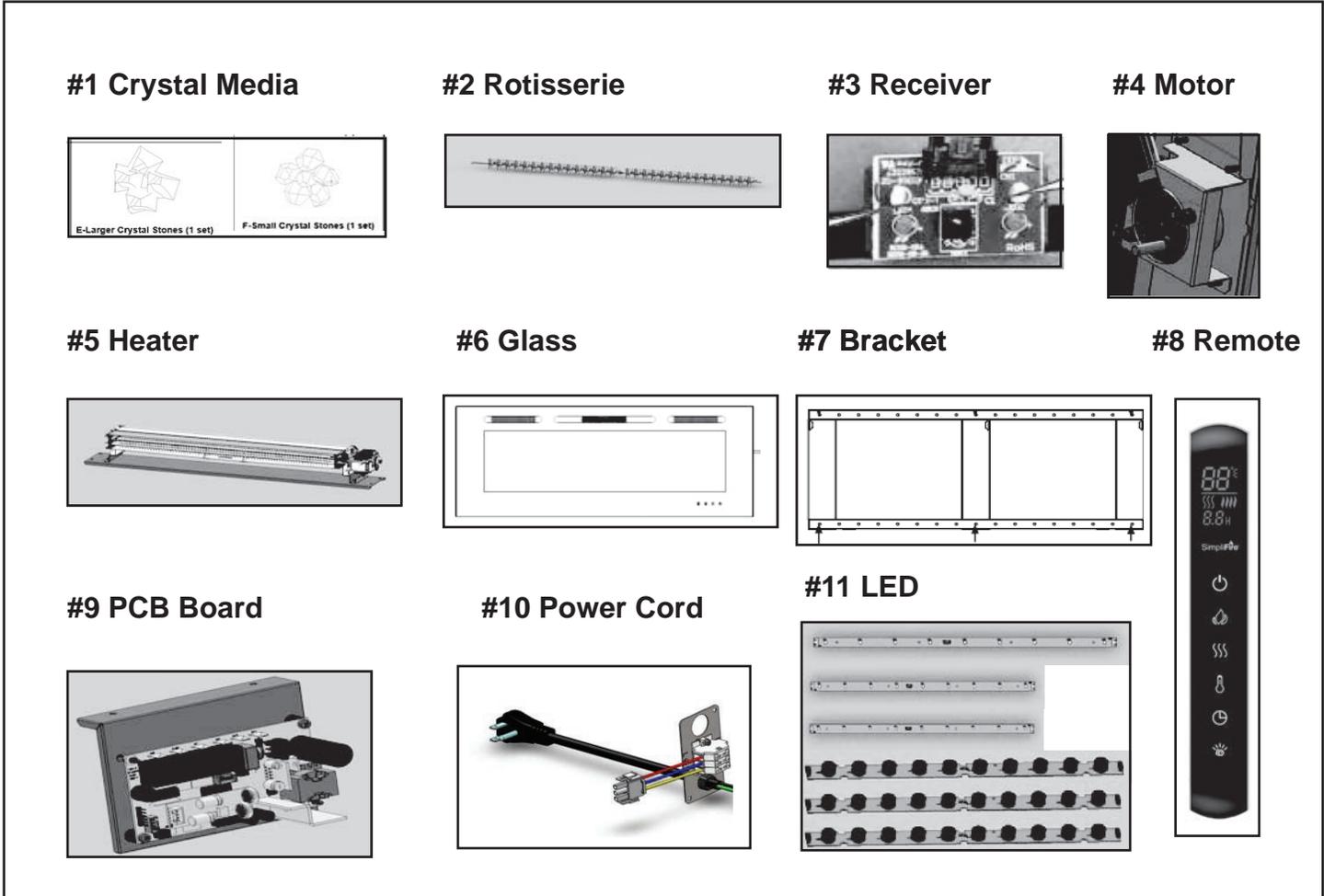


IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



Stocked at Depot

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Crystal Media		CRYSTAL-ALLUS	
2	Rotisserie, 48"		ROTISS-ALL48	Y
3	Remote Receiver		RECEIV-ALLUS-E	Y
4	Allusion Motor		MOTOR-ALLUS	Y
5	Heater Assembly		HEATER-ALLUS	Y
6	Glass Front, 48"		GLA-ALL48	
7	Hanging Bracket		BRACKET-ALL48	
8	Remote		REMOT-ELECT-ALL	Y
9	PCB Board Assembly		PCB-ALLUS	Y
10	Power Cord		PLUGIN-ALLP	Y
11	LED Assembly, 48"		LED-ALL48	Y
	Allusion Hardware Kit	Fixing Brackets & Screws	HDWR-ALLUS	



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Stocked at Depot

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Crystal Media		CRYSTAL-ALLUS	
2	Rotisserie, 60"		ROTISS-ALL60	Y
3	Remote Receiver		RECEIV-ALLUS-E	Y
4	Allusion Motor		MOTOR-ALLUS	Y
5	Heater Assembly		HEATER-ALLUS	Y
6	Glass Front, 60"		GLA-ALL60	
7	Hanging Bracket		BRACKET-ALL60	
8	Remote		REMOT-ELECT-ALL	Y
9	PCB Board Assembly		PCB-ALLUS	Y
10	Power Cord		PLUGIN-ALLP	Y
11	LED Assembly, 60"		LED-ALL60	Y
	Allusion Hardware Kit	Fixing Brackets & Screws	HDWR-ALLUS	

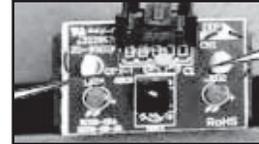
#1 Crystal Media



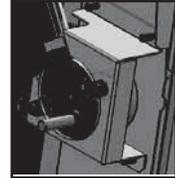
#2 Rotisserie



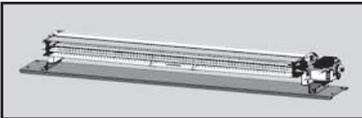
#3 Receiver



#4 Motor



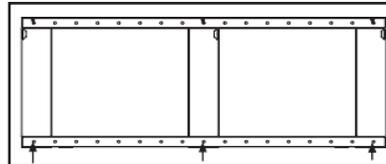
#5 Heater



#6 Glass



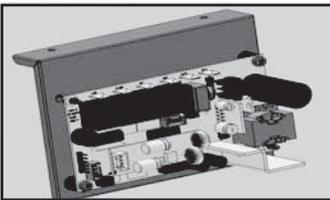
#7 Bracket



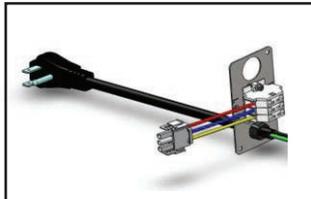
#8 Remote



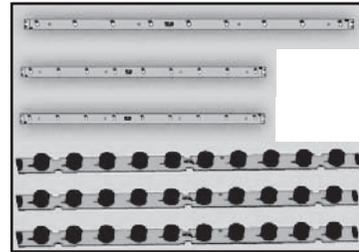
#9 PCB Board



#10 Power Cord



#11 LED Assembly



IMPORTANT: THIS IS DATED INFORMATION. Parts must be ordered from a dealer or distributor. **Hearth and Home Technologies does not sell directly to consumers.** Provide model number and serial number when requesting service parts from your dealer or distributor.



Stocked at Depot

ITEM	DESCRIPTION	COMMENTS	PART NUMBER	
1	Crystal Media		CRYSTAL-ALLUS	
2	Rotisserie, 84"		ROTISS-ALL84	Y
3	Remote Receiver		RECEIV-ALLUS-E	Y
4	Allusion Motor		MOTOR-ALLUS	Y
5	Heater Assembly		HEATER-ALLUS	Y
6	Glass Front, 84"		GLA-ALL84	
7	Hanging Bracket		BRACKET-ALL84	
8	Remote		REMOT-ELECT-ALL	Y
9	PCB Board Assembly		PCB-ALLUS	Y
10	Power Cord		PLUGIN-ALLP	Y
11	LED Assembly, 84"	Emberbed & Flame	LED-ALL84	Y
	Allusion Hardware Kit	Fixing Brackets & Screws	HDWR-ALLUS	



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WARNINGS

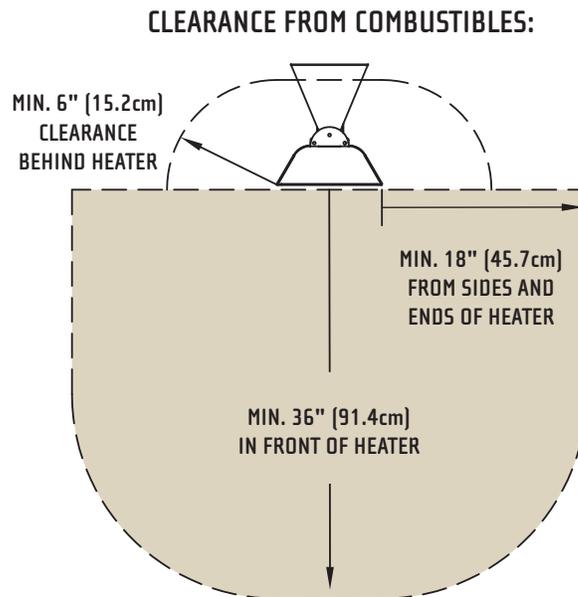
READ ALL INSTRUCTIONS BEFORE USING HEATER

Unit may be a source of possible shock. NEVER attempt to service heater without disconnecting its power source. Source of possible ignition.

CAUTION

High Temperature, risk of fire, keep electrical cords, drapery, furnishings and other combustibles at least 3' (0.9m) from the front of heater and away from sides and rear.

MOUNTING HEIGHT/CLEARANCES



- For Wall-Mounting, do not install heater closer than 18" (45.7cm) from adjacent walls and 6" (15.2cm) from ceiling and do not install less than 6' (1.8m) if the heater is labeled as UL Listed and 8' (2.4m) if the heater is labeled as UL/CUL Listed from floor, while heater is set at a downward angle of 30 to 60 degrees.
- For Ceiling-Mounting, do not install heater closer than 18" (45.7cm) from adjacent walls and 6" (15.2cm) from ceiling and do not install less than 6' (1.8m) if the heater is labeled as UL Listed and 8' (2.4m) if the heater is labeled as UL/CUL Listed from floor, while heater is at a maximum 30 degrees.
- Adjacent Heaters to be installed no less than 3' (0.9m) apart.
- Do NOT operate within 25' (7.6m) of flammable/explosive material.
- Never block heater.
- Heaters greater than 240 Volts are for "Commercial Use Only. Risk of fire. Do not use as a residential or household heater."
- A means for disconnection of the appliance must be incorporated in accordance with the local wiring codes.
- Do not use if the heating element is damaged or cracked.

"IMPORTANT INSTRUCTIONS"
"SAVE THESE INSTRUCTIONS"

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/CE 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.

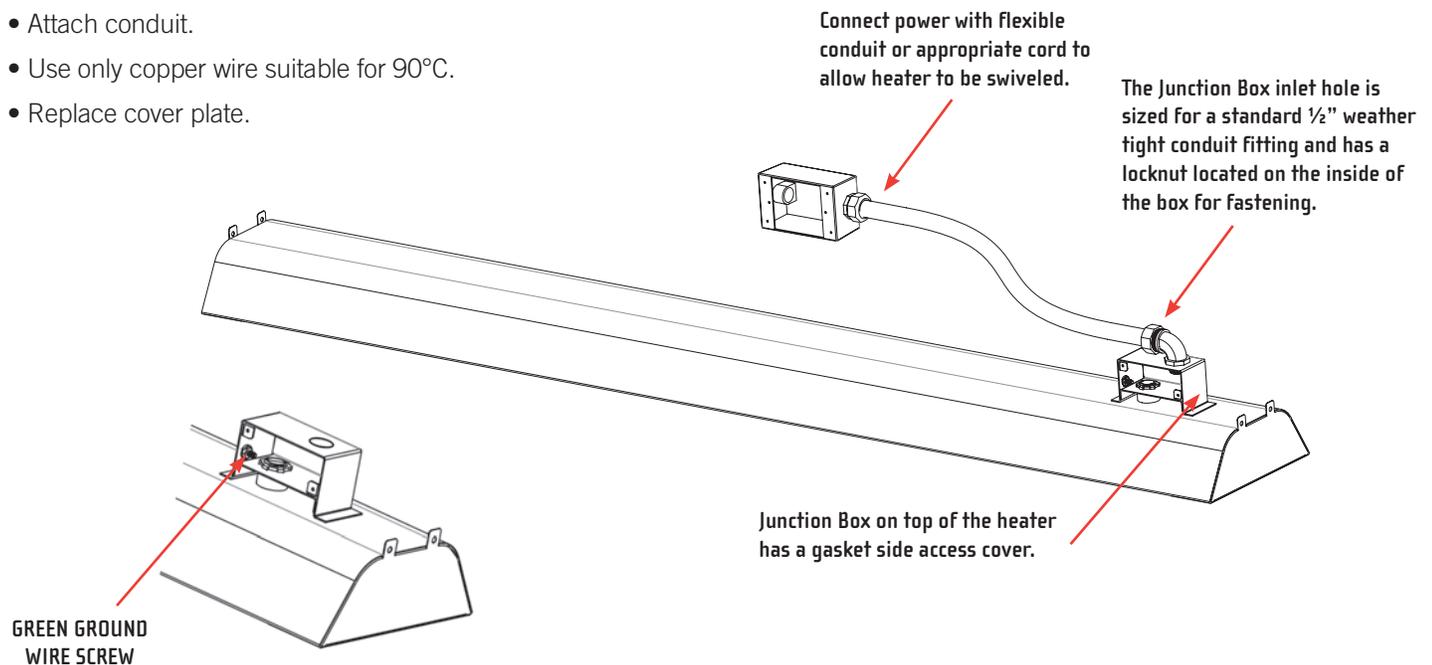
Step 4: All electrical connections must be in compliance with the National Electric Code (NEC) and local codes for outdoor wiring.

Step 5: Use only wiring components UL/CUL/CE listed for outdoor use with IPX4 minimum rating.

WIRING INSTRUCTIONS

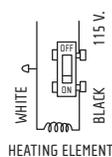
The heater is drilled and threaded for standard 1/2" conduit fittings. The installing electrician will need to provide the appropriate rigid metallic, flexible or liquid tight conduit for the installation location.

- Observe local electrical code regulations.
- Remove cover plate from junction box.
- Attach conduit.
- Use only copper wire suitable for 90°C.
- Replace cover plate.

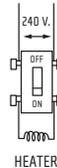


TYPICAL WIRING OPTIONS

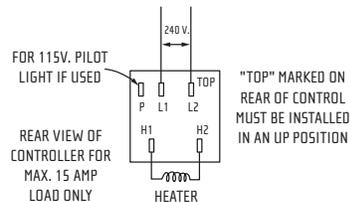
TYPICAL 120V WIRING FOR A SINGLE POLE SWITCH



TYPICAL 240V WIRING FOR A TWO POLE SWITCH

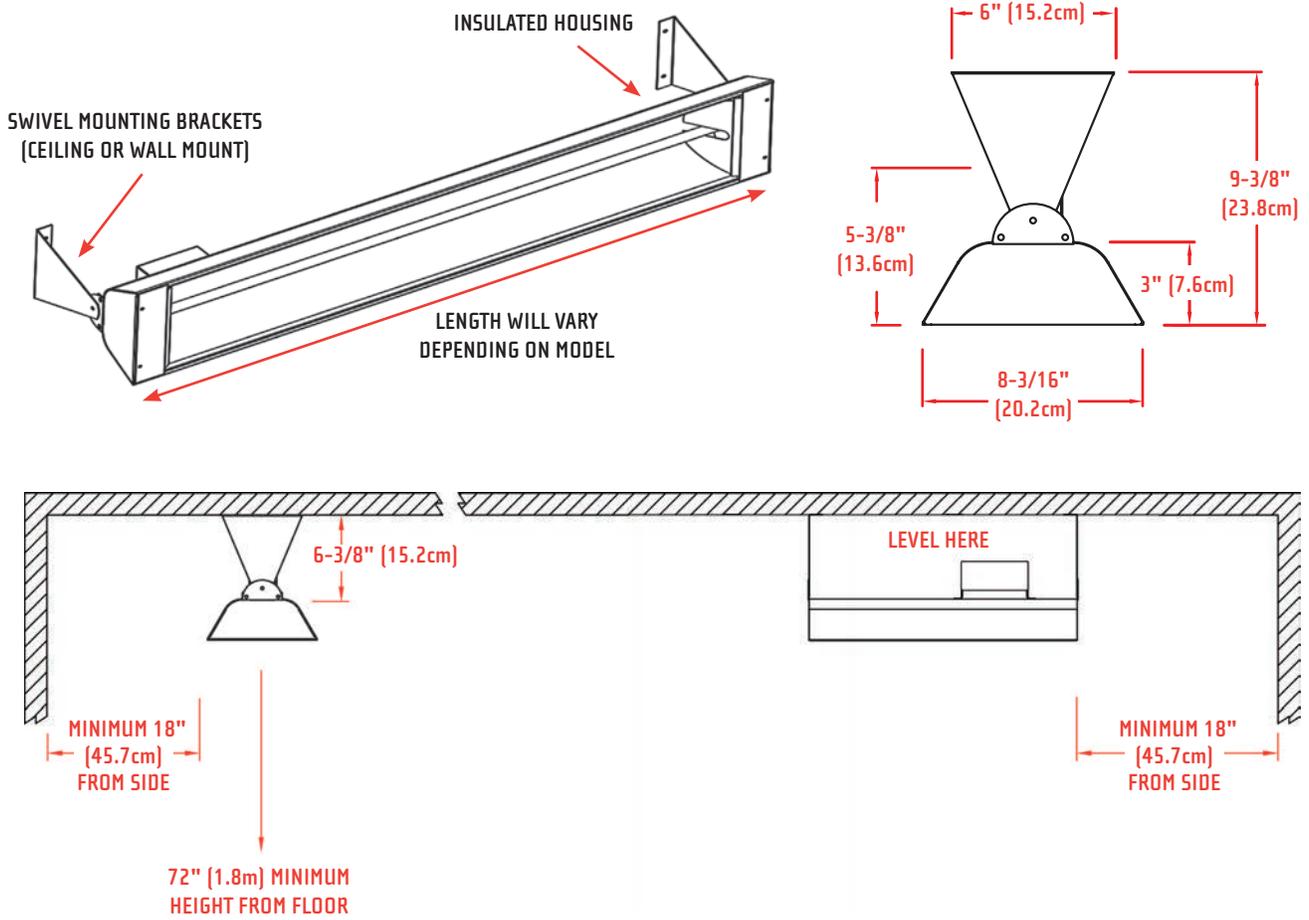


WIRING FOR OPTIONAL 120V/240V CONTROLS

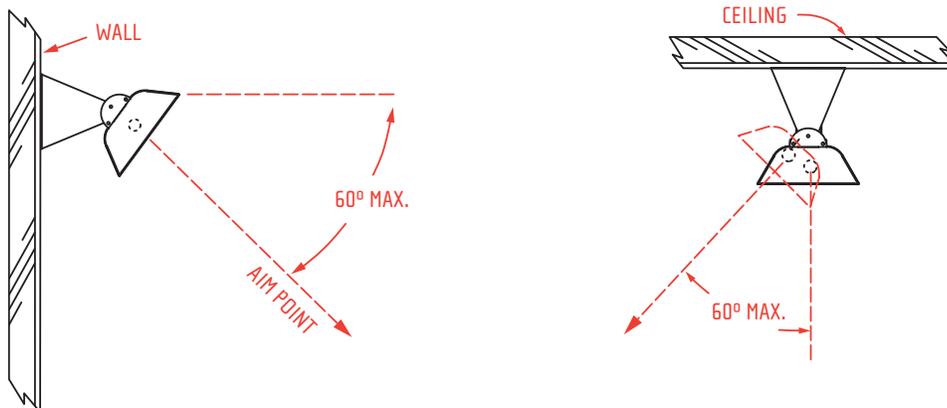


MOUNTING INSTRUCTIONS

These models may be chain or bracket mounted to any ceiling or horizontal surface. Installation must be such that 18" (45.7cm) minimum clearance is maintained around the heater on all four sides and 36" (91.4cm) directly in front. A minimum of 6" (15.24cm) of clearance provided by mounting brackets is required behind the plane of the face. Heater can be hung using chains or custom brackets. Heater must be level, but can be rotated around its horizontal axis.



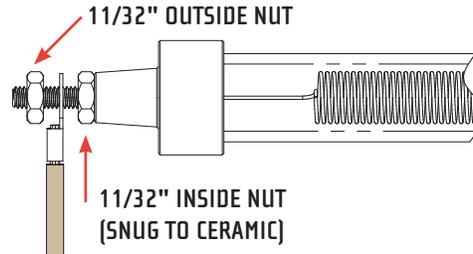
Heater must be installed with the quartz tube horizontally level. For maximum tube life, use a carpenter's level tool to find the optimum level position for the heater's body. Always maintain the minimum clearances from the heater body to any combustible materials.



REPLACEMENT ELEMENT INSTALLATION (VISIT INFRA TECH-USA.COM FOR VIDEO INSTRUCTIONS)

Disconnect the power at the breaker. Remove the grill by grasping it in the middle, flex grill up and lift it off. Unscrew and remove both end reflectors. Unhook element clips at each end of the heater and remove nuts from end of element to remove the existing quartz tube. Carefully install the new element. Remove one nut from end of the new element. Install wire by sliding high temperature ring terminal onto element screw and replace nut. Use a thin 11/32" wrench to hold inside nut. Nuts must make a tight connection. Close element clips over tube, reinstall end reflectors, then snap protective grill back in place.

NOTE: Hold ceramic element firmly while tightening nut to prevent damage to element. Nut should be tightened snug. A loose connection can cause the element to short or fail prematurely.



SCAN FOR
VIDEO
INSTRUCTIONS



REPLACEMENT ELEMENTS (OTHER VOLTAGES ALSO AVAILABLE)

PART NUMBER	ELEMENT NUMBER	LENGTH	WATTS	VOLTS	FITS
10-1020	E-7512	16-1/2" (0.4m)	750	120	W-7512
10-1050	E-1412	30" (0.8m)	1500	120	W-1512
10-1055	E-1424	30" (0.8m)	1500	240	W-1524/WD-3024
10-1085	E-2024	36" (0.9m)	2000	240	W-2024/WD-4024
10-2010	E-2524	36" (0.9m)	2500	240	W-2524/WD-5024
10-2030	E-3024	58" (1.5m)	3000	240	W-3024/WD-6024
10-2055	E-4024	58" (1.5m)	4000	240	W-4024

Consult the label on back of heater for proper watts, voltage, and replacement element part number.

Need help? To order replacement elements for your Infratech heating system, please contact us via phone or visit our website.

REPLACEMENT PARTS

PART NUMBER	PART DESCRIPTION	QUANTITY
13-1210	Single Element End Reflector (Set of 2)	1
13-1252	Dual Element End Reflector (Set of 2)	1
13-1202, 13-1200, 13-1205	Body Reflector – Fits 33" (0.8m), 39" (1.0m), 61-1/4" (1.6m)	1
13-1242, 13-1240, 13-1245	Grill Guard – Fits 33" (0.8m), 39" (1.0m), 61-1/4" (1.6m)	1
13-1232, 13-1230, 13-1235	Lead Wire Set – Fits 33" (0.8m), 39" (1.0m), 61-1/4" (1.6m)*	1
22-1151	SS Mounting Bracket (Set of 2)	1
18-2295, 18-2300, 18-2305	Flush Mount SS Plaster Frame – Fits 33" (0.8m), 39" (1.0m), 61-1/4" (1.6m)	1

* Note: Dual Element Heaters require 2 Lead Wire Sets per Heater

SINGLE ELEMENT AREAS COVERED (FEET)

MODEL	WATTS	MOUNTING HEIGHT	AVERAGE	COLD	PROTECTED
W-1512 SS	1,500	6' - 8' (1.8m - 2.4m)	5' x 5' (1.5m x 1.5m)	3' x 3' (0.91m x 0.91m)	7' x 7' (2.1m x 2.1m)
W-2024 SS	2,000	7' - 9' (2.1m - 2.7m)	6' x 6' (1.8m x 1.8m)	4' x 4' (1.2m x 1.2m)	8' x 8' (2.4m x 2.4m)
W-2524 SS	2,500	7' - 9' (2.1m - 2.7m)	7' x 7' (2.1m x 2.1m)	5' x 5' (1.5m x 1.5m)	9' x 9' (2.7m x 2. m)
W-3024 SS	3,000	7' - 9' (2.1m - 2.7m)	8' x 8' (2.4m x 2.4m)	6' x 6' (1.8m x 1.8m)	10' x 10' (3.0m x 3.0m)
W-4024 SS	4,000	8' - 11' (2.4m - 3.4m)	10' x 10' (3.0m x 3.0m)	8' x 8' (2.4m x 2.4m)	12' x 12' (3.7m x 3.7m)

DUAL ELEMENT AREAS COVERED (FEET)

MODEL	WATTS	MOUNTING HEIGHT	AVERAGE	COLD	PROTECTED
WD-3024 SS	3,000	7' - 9' (2.1m x 2.7m)	7' x 7' (2.1m x 2.1m)	5' x 5' (1.5m x 1.5m)	9' x 9' (2.7m x 2.7m)
WD-4024 SS	4,000	8' - 12' (2.4m - 3.7m)	8' x 10' (2.4m x 3.0m)	6' x 8' (1.8m x 2.4m)	10' x 12' (3.0m x 3.7m)
WD-5024 SS	5,000	8' - 12' (2.4m - 3.7m)	9' x 10' (2.7m x 3.0m)	7' x 8' (2.1m x 2.4m)	11' x 12' (3.4m x 3.7m)
WD-6024 SS	6,000	10' - 14' (3.0m - 4.3m)	11' x 11' (3.4m x 3.4m)	10' x 10' (3.0m x 3.0m)	12' x 12' (3.7m x 3.7m)

NOTE: Mounting height should not be less than 6' (1.8m) if the heater is labeled as UL Listed and 8' (2.4m) if the heater is labeled as CUL Listed. Indoor or well-protected environments will generally exceed average. Heaters can provide less than average coverage in extremely cold/windy conditions.

GENERAL NOTES

- INFRATECH QUARTZ TUBE ELECTRIC HEATERS are furnished with wall/ceiling mount swivel brackets. These brackets may be discarded when the heater is hung with chains, special bracketing, or used in conjunction with our flush mount frame.
- See sales literature and price list for full listing of models, descriptions, amperages, and voltages. At times, especially when the mounting height might be quite low, an increased number of smaller heaters can help prevent overheating.
- Heaters up to 15 AMPS can be controlled with a simple INF Input Regulator. This low cost controller, which is actually an infinite switch, gently pulses the heat on and off at regular intervals when not on full power.
- Dual Element Heaters can be wired with our Duplex/Stack Switch, which enables the ability to turn on and off each element independently, providing for half power/full power capabilities.
- For ideal comfort heat, the best solution is to heat from two sides rather than from just one side. However, there are times when this is not practical.
- Coverage areas are approximate dimensions and will vary depending on prevailing and personal comfort levels.
- Indoor or well-protected environments will generally exceed average (see charts). Heaters can provide less than average coverage in extremely cold/windy conditions.

MAINTENANCE INSTRUCTIONS

- Before performing any maintenance, power must be disconnected and the heater cool to touch.
- Heater housing, reflectors, and heating element can be rinsed with a hose or wiped down with isopropyl alcohol, acetone, or glass cleaner. Use a clean, scratch-free rag or paper towel. Any oxidation, surface rust, or discoloration can be removed with a stainless steel cleaner or metal polish on the bare metal surface.
- Make sure all water, solvents, or cleaners are removed and the heater is dry before reconnecting the power.

TROUBLESHOOTING

PROBLEM

WHAT TO DO

Heater does not glow

- Check supply voltage to confirm it matches voltage of heating element.

Low heat output

- A 240V element connected to 110V or 208V will warm, but not glow orange or generate sufficient heat for typical applications (Matching your voltage is extremely important). If element is visibly orange, but there is insufficient heat, refer to the areas covered with respect to conditions and mounting heights.
- Replace or clean dirty or non reflective reflectors.

Heater does not work

- Disconnect power and check element with an ohm meter for continuity. If there is any continuity across the bulb, the problem is in the wiring/controls.
- Check that there is proper voltage to the heater.
- Check that the control/switch is working.
- Check main power circuit breaker.
- Check wiring for a loose connection or burned wire.

LOCATION SUGGESTIONS

Unless heaters are installed over 12' (3.7m) high, it is generally recommended that all radiant heaters be mounted on an angle to assure that radiant warmth is distributed from the sides rather than straight down on the heads and shoulders of the people being warmed.

RECOMMENDED POSITIONING



Angle fixture 30° to 60° from horizontal face down. Best angle is approximately 45°.

INSTALLATION DIRECTION



Install fixture to heat the area from the “cold side” if possible. This helps compensate for increased body heat losses due to exposure. Warm floors reradiate heat. Warmer air rises from floor. Some heat reflects from floor. Mounting a heater directly over a table or other obstruction will block the energy, primarily heating the object. It is best to move heater to the side, allowing complete body and floor coverage.

OUTDOORS



When outdoors, hang heater under protective roof or weather cover whenever possible. Even though heater is all-weather construction, it will last longer and look better if it is protected from rain and snow.

LIMITED PRODUCT WARRANTY

Model #: _____ Serial #: _____

Date of Purchase: _____ Purchased From: _____

Thank you very much for purchasing a INFRATECH Quartz Tube Electric Heater.

We have designed this heater to provide you and your family with many years of great outdoor experiences. Please fill in the Model and Serial number as well as date of purchase in the areas indicated above. Please save this information for future reference. To get the full and safe enjoyment of your electric heater please read your Owner's Manual carefully and review the proper operating and safety instructions with any family members that may be using the heater.

Manufacturer Warranty:

INFRATECH warrants that this electric heater is designed and manufactured to be free from defects in materials and workmanship for a period of TWO YEARS from original date of purchase.

Extent of Warranty:

This warranty extends to the selling dealers to the original purchaser at the original site of installation: This warranty becomes valid at the time of purchase and ends either by specified time frame listed above, owner transfer or relocation. In order to activate the warranty we require that you send in the attached warranty registration form. This registration is for our internal use only and will only be used in the event we need to send you important safety related product information. The information will not be sold or used for any marketing related purposes.

Warranty Limitations and Exclusions:

This warranty does not apply to damages resulting from negligence, alteration, misuse, abuse, accident, natural disaster, improper installation or improper operation, unauthorized adjustments or calibrations, dings, dents, scratches, nor damages due to harsh chemicals (i.e. cleaning products improperly applied). Warrantor is not responsible for consequential or incidental damages. Under no circumstances shall INFRATECH or any of its representatives be held liable for injury to any person or damage to any property, however arising.

Important: Please retain original proof of purchase to establish warranty period.

Any implied warranties of merchantability and fitness applicable to the equipment are limited in duration to the period of coverage of this express written warranty. This warranty grants specific legal rights to the purchaser. Other rights, which may vary from state to state, may also apply. Title to the merchandise passes to the consignee upon acceptance by the carrier. After acceptance by the carrier, the merchandise travels at the risk of the purchaser. In the event of freight damage, do not refuse shipment. Advise both the freight agent and the shipper of the damage. Note the details of that damage on the freight bill before any freight charges are paid and file a claim for damages with the freight agent.

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----- CUT HERE -----

INFRATECH WARRANTY REGISTRATION

Customer Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: _____ E-mail: _____

Model #: _____ Serial #: _____

Dealer's Name: _____ Date Purchased: _____

Dealer's Address: _____

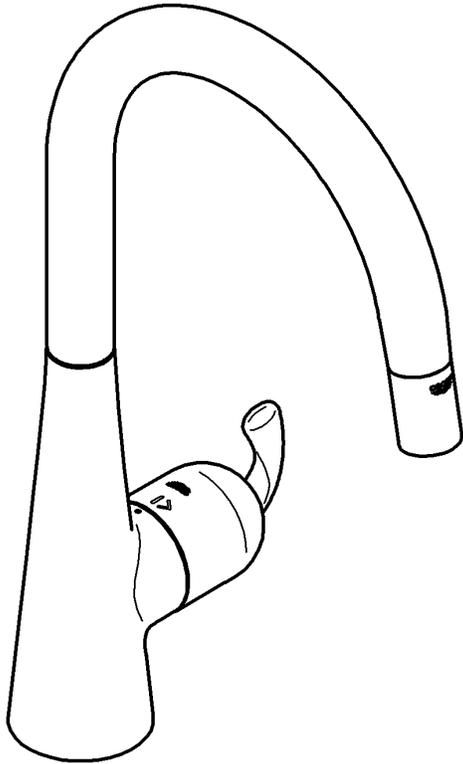
This Warranty Registration Card must be returned within thirty days of purchase to properly activate your warranty. This information is for our internal use only.

INFRATECH
COMFORT

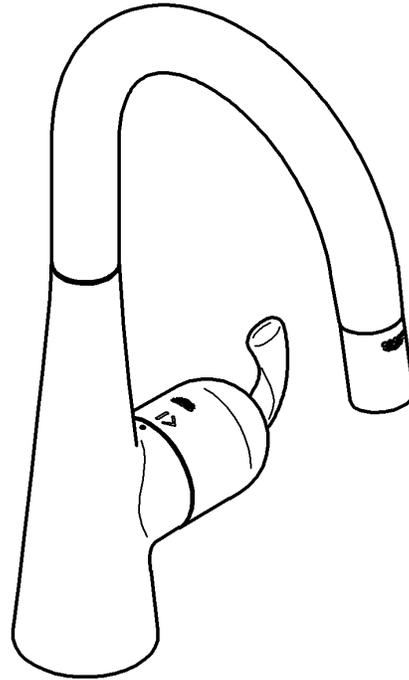
15700 South Figueroa Street Gardena, CA 90248

TEL 800-421-9455 or 310-354-1250 FAX 310-523-3674 WWW.INFRATECH-USA.COM

32 226



32 283



Ladylux Pro

Ladylux Pro

English1

Français2

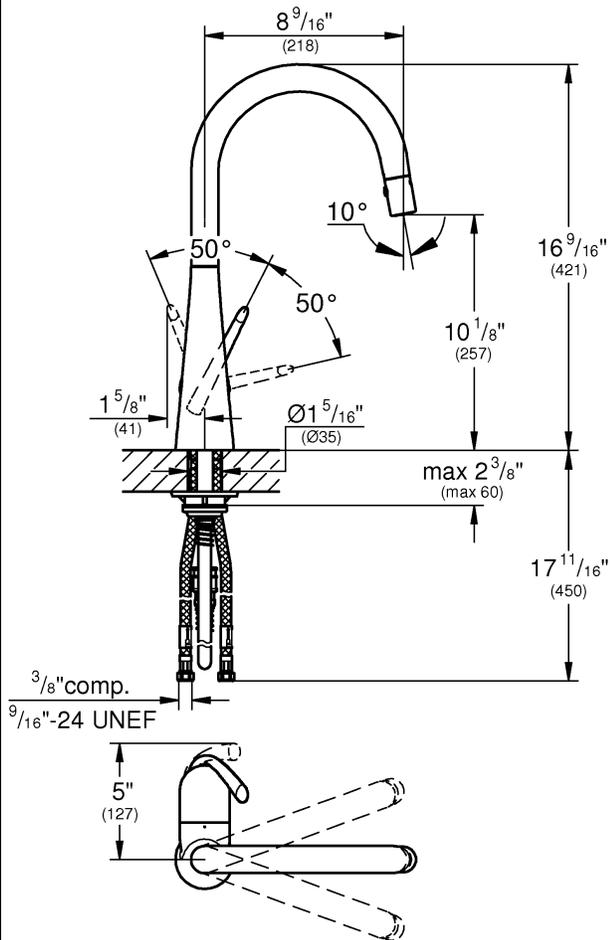
Español3

Design + Engineering GROHE Germany

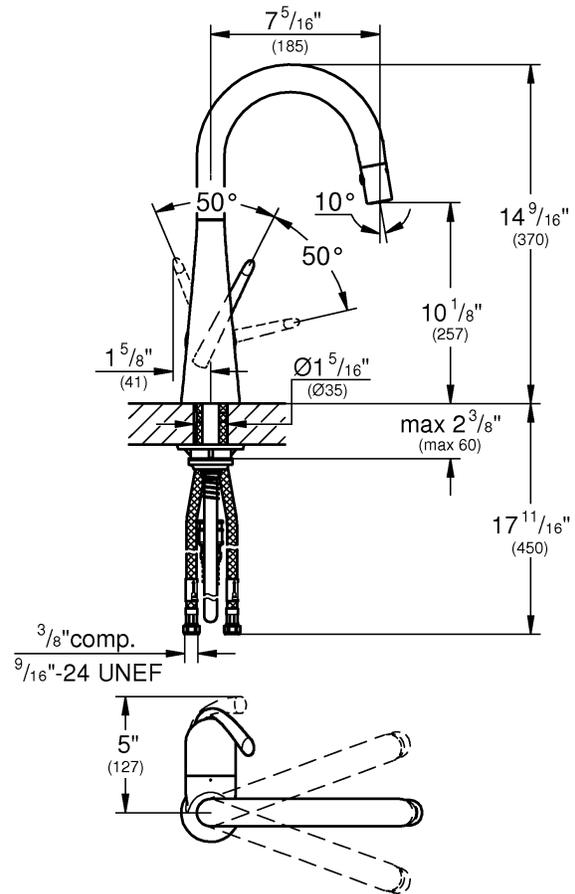
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GROHE
ENJOY WATER®

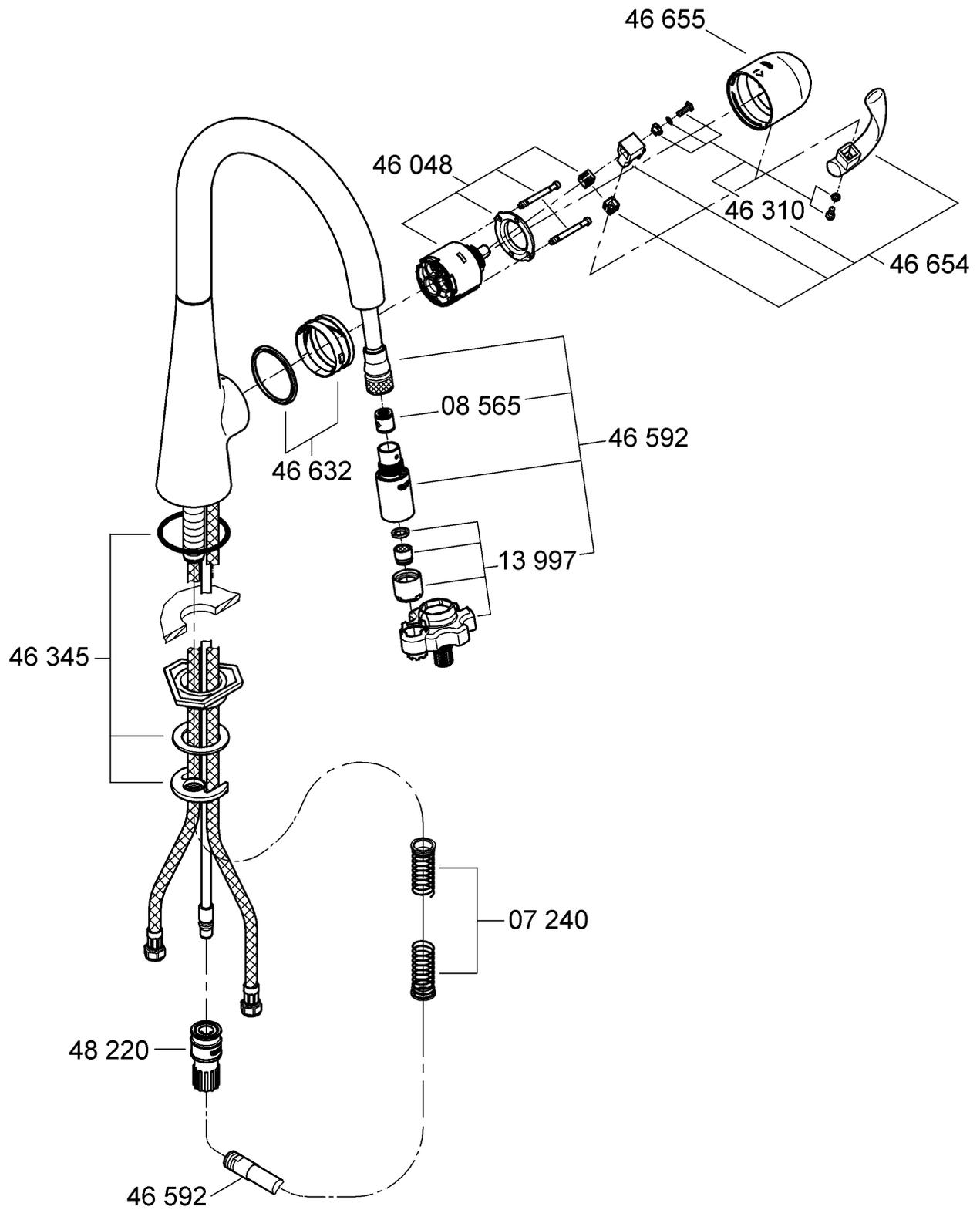
32 226



32 283



Please pass these instructions on to the end user of the fitting!
 S.v.p remettre cette instruction à l'utilisateur de la robinetterie!
 Entregue estas instrucciones al usuario final de la grifería!



English

Application

Operation is possible in conjunction with:

- Pressurized storage heaters

Operation is **not** possible with:

- Low-pressure storage heaters (displacement water heaters)

Specification

- Max. flow
6.6 L/min or 1.75 gpm/60 psi
- Flow pressure
 - min. 7.25 psi
 - recommended 14.5 - 72.5 psi
 - greater than 72.5 psi, fit pressure reducing valve
- Max. operating pressure 145 psi
- Test pressure 232 psi
- Temperature
 - max. (hot water inlet) 176 °F
- Water connection: cold - RH hot - LH
- Deck thickness max. 2 3/8"
- Non reversible cartridge

Notes:

- Major pressure differences between cold and hot water supply should be avoided.
- To be installed according to local codes and regulations.
- This faucet is not intended for the use with portable appliances.

Installation

Flush piping system prior and after installation of faucet thoroughly!

Prepare sink faucet

Refer to the dimensional drawing on fold-out page I.

Mount sink faucet, see fold-out page III, Fig. [1].

1. Fit O-Ring (A).
2. Insert faucet into sink. Feed the connection hoses separately through the sink.
3. Fit brace (B), if necessary, with washer (C) and connect nut (D) with tube (E). To do this, insert fitting key (G) into tube (E) and turn fitting key (G) clockwise to fasten faucet.
(Tube may also have to be turned with an 22mm open ended wrench.)

Note:

If brace (B) is omitted, deck thickness can be increased by 9/16" to a total of 2 3/8".

Connect sink faucet, see Figs. [1] and [2].

- Cold water connection (marked blue) = right
- Hot water connection (marked red) = left

Avoid cross connection. The cartridge is not reversible.

Connect spray hose (H) and rinse spray (K), see Figs. [3] and [4].

1. Feed the spray hose (H) through the spout (J), see Fig. [3].
2. Feed the spray hose (H) through the faucet body from above and fit spout (J) so that it snaps into place, see Fig. [4].
3. Connect the rinse spray (K) without using any additional seals to the spray hose (H).
4. With rinse spray inserted slide on spring (L) onto spray hose (H) from below.
5. Install the snap coupling (M) on the end of the spray hose (H) and tighten by hand.
6. Pull the sleeve (M1) of the snap coupling (M) downwards and fit to the union (N).

To ensure that the rinse spray (K) is correctly seated when inserted, lug (J1) on the spout must engage in recess on the rinse spray (K1).

Open cold and hot water supply and check connections for leakage!

Operation

1. Lever head

- Slide lever to right = open (water flow)
- Slide lever to left = closed
- Slide lever towards front = cold water
- Slide lever towards back = hot water

2. Rinse spray

Open faucet. Water will always emerge first from the flow straightener.

Diverter button:

Switching to spray flow by pushing the diverter button.

Turning off the faucet automatically diverts the water flow from spray to flow straightener.

Flow rate limiter

This faucet is fitted with a flow rate limiter, permitting an infinitely variable individual reduction of the flow rate. The highest possible flow rate is set by the plant before despatch.

The use of flow rate limiters in combination with hydraulic instantaneous water heaters is not recommended.

To activate see "Replacing the cartridge" point 1 to 3, Figs. [5] and [6].

Maintenance

Inspect and clean all parts, replace as necessary and grease with special grease.

Shut off cold and hot water supply!

I. Replacing the cartridge, see fold-out page III, Fig. [5].

1. Remove fixing screw (O) using a 3mm allen wrench.
 2. Pull off lever (P).
 3. Turn cap (R) through 180° (slot pointing upwards) and pull off the cap.
 4. Remove fixing screw (S) and pull off adjusting lever (T).
 5. Remove screws (U) and detach complete cartridge (V).
 6. Change the complete cartridge (V).
- Assemble in reverse order.

Observe the correct installation position!

Make sure that the cartridge seals engage in the grooves on the housing. Fit screws (U) and tighten **evenly and alternately**.

II. Flow straightener and spray, see fold-out page III, Fig. [7].

1. Unscrew rinse spray (K) and remove non-return valve (W).
2. Unscrew flow straightener (X) with fitting key (G).

Assemble in reverse order.

Replacement parts, see fold-out page II (* = special accessories).

Care

Instructions for care of this faucet will be found in the Limited Warranty supplement.

Français

Domaine d'application

Le service est possible en combinaison avec:

- Des chauffe-eau à accumulateur sous pression

Le service **n'est pas** possible en combinaison avec:

- Des systèmes d'eau chaude à écoulement libre

Caractéristiques techniques

- Débit maxi.
6,6 l/min ou 1,75 g/min/4,1 bar
- Pression dynamique
 - mini. 0,5 bar
 - recommandée 1 - 5 bar
 - supérieure à 5 bar, installer un réducteur de pression
- Pression de service maxi. 10 bar
- Pression d'épreuve 16 bar
- Température:
 - maxi. (admission d'eau chaude) 80 °C
- Raccord d'eau: froide - à droite chaude - à gauche
- Longueur de serrage maxi. 60mm
- Cartouche non réversible

Remarques:

- Il convient d'éviter toute différence de pression importante entre l'alimentation en eau froide et chaude.
- A installer conformément aux prescriptions et réglementations locales.
- Ce robinet n'est pas destiné à être utilisé dans des appareils portatif.

Installation

Bien rincer les canalisations avant et après l'installation!

Préparer l'évier

Tenir compte de la cote du schéma sur la volet I.

Monter la robinetterie de l'évier, voir volet III, fig. [1].

1. Engager le joint torique (A).
2. Placer la robinetterie dans l'évier. Insérer les flexibles d'alimentation l'un après l'autre dans les trous de l'évier.
3. Si nécessaire, insérer la plaque de stabilisation (B) avec la rondelle (C) et visser l'écrou (D) par le tube fileté (E). Insérer la clé de montage (G) dans le tube fileté (E) et la tourner vers la droite pour fixer la robinetterie.
(Utiliser si nécessaire une clé plate de 22mm pour tourner le tube fileté).

Remarque:

Si on n'a pas d'étau (B), la longueur de serrage peut être augmentée de 15mm, soit 60mm au total.

Raccorder la robinetterie de l'évier, voir fig. [1] et [2].

- Raccordement d'eau froide (repère bleu) = droite
- Raccordement d'eau chaude (repère rouge) = gauche

Éviter de croiser les raccords. La cartouche n'est pas réversible.

Raccordement du flexible de douchette (H) et douchettette (K), voir figs. [3] et [4].

1. Engager le flexible de douchette (H) dans le bec (J), voir fig. [3].
2. Introduire le flexible de douchette (H) par le haut dans le corps du mitigeur, puis enfoncer le bec (J) jusqu'à ce qu'il s'enclenche, voir fig. [4].
3. Raccorder la douchettette (K) sans joints supplémentaires au flexible de douchette (H).
4. La douchettette étant encliquetée, pousser le ressort (L) par le bas sur le flexible de douchette (H).
5. Visser le raccord rapide (M) sur le flexible de douche (H) et serrer à la main.
6. Enfoncer la douille (M1) du raccord rapide (M) et enficher sur le raccord (N).

Pour une bonne assise de la douchettette (K), l'ergot du bec (J1) et la rainure doivent s'engager dans la douchette (K1).

Ouvrir l'arrivée d'eau froide et d'eau chaude et vérifier l'étanchéité des raccords!

Utilisation

1. Tête de manoeuvre

- Faire pivoter le levier vers la droite = pour ouvrir (l'eau coule)
- Faire pivoter le levier vers la gauche = pour fermer
- Faire pivoter le levier vers l'avant = pour l'eau froide
- Faire pivoter le levier vers l'arrière = pour l'eau chaude

2. Douchettette

Par principe, l'eau commence par s'écouler au brise-jet laminaire.

Bouton d'inverseur:

Appuyer le bouton d'inverseur pour obtenir un jet pluie.

La fermeture de la robinetterie entraîne automatiquement une commutation du jet de la douchette à celui du brise-jet laminaire.

Limiteur de débit

Ce mitigeur est équipé d'un limiteur de débit. Celui-ci permet une limitation individualisée, en continu, du débit. Le débit maximal est préréglé en usine.

L'utilisation du limiteur de débit est déconseillée avec des chauffe-eau instantanés à commande hydraulique.

Pour l'activer, voir "Remplacement de la cartouche", points 1 à 3, fig. [5] et [6].

Maintenance

Contrôler toutes les pièces, les nettoyer, les remplacer si nécessaire et les graisser avec de la graisse spéciale pour robinetterie.

Fermer les arrivées d'eau chaude et d'eau froide!

I. Remplacement de la cartouche, voir volet III, fig. [5].

1. Dévisser la vis (O) avec une clé Allen de 3mm.
2. Déposer le levier (P).
3. Tourner le capot (R) de 180° (l'ouverture est dirigée vers le haut et tirer).
4. Dévisser la vis de fixation (S) et déposer le levier réglable (T).
5. Dévisser les vis (U) et enlever la cartouche (V) complète.
6. Remplacer la cartouche complète (V).

Montage dans l'ordre inverse.

Respecter la position de montage!

Veiller à ce que les joints de la cartouche s'engagent correctement dans les logements du corps de robinetterie. Engager les vis (U) et les serrer **de manière homogène et en alternance**.

II. Brise-jet laminaire et design du jet, voir volet III, fig. [7].

1. Dévisser la douchettette (K) et enlever le clapet de non-retour (W).
2. Dévisser le brise-jet laminaire (X) avec la clé de montage (G).

Montage dans l'ordre inverse.

Pièces de rechange, voir volet II (* = accessoires spéciaux).

Entretien

Vous trouverez les instructions d'entretien de ce mitigeur dans le supplément Garantie Limitée.

Español

Campo de aplicación

Es posible el funcionamiento en conjunción con:

- Acumuladores de presión

No instalar con:

- Acumuladores de baja presión (calentadores de agua sin presión)

Datos técnicos

- Caudal máx. 6.6 L/min o 1.75 gpm/60 psi
- Presión
 - mín. 7.25 psi
 - recomendada 14.5 - 72.5 psi
 - si la presión es superior a 72.5 psi, se deberá instalar una válvula reductora de presión
- Presión de utilización máx. 145 psi
- Presión de verificación 232 psi
- Temperatura
 - máx. (entrada del agua caliente) 176 °F
- Acometida del agua: fría - a la derecha caliente - a la izquierda
- Longitud de aprieta para fijación máx. 2 3/8"
- Cartucho irreversible

Notas:

- Deberán evitarse las diferencias de presión entre las acometidas del agua fría y del agua caliente.
- A ser instalado conforme a códigos y reglamentos locales.
- Este mezclador no está previsto para utilizar en enseres móviles.

Instalación

¡Purgar a fondo el sistema de tuberías antes y después de la instalación!

Preparar la grifería

Respetar el croquis de la página despegable I.

Montar la grifería, véase la página desplegable III, fig. [1].

1. Colocar la junta tórica (A).
2. Introducir la grifería en el fregadero. Introducir los flexos de conexión individualmente a través del fregadero.
3. En caso necesario, colocar la placa estabilizadora (B) con la arandela (C) y unir la tuerca (D) al tubo de fijación (E). Para ello, acoplar la llave de montaje (G) al tubo de fijación (E), y fijar la grifería a base de girar la llave de montaje (G) hacia la derecha. (En caso necesario, el tubo de fijación también puede girarse con una llave de boca de 22mm).

Nota:

Si se omite la placa tensora (B), la longitud de fijación puede incrementarse 9/16" para totalizar 2 3/8".

Conectar la grifería, véanse las figs. [1] y [2].

- Acometida del agua fría (marca azul) = a la derecha
- Acometida del agua caliente (marca roja) = a la izquierda

Evite conexiones cruzadas. El cartucho no es reversible.

Conectar el flexo de la teleducha (H) y la teleducha (K), véanse las figs. [3] y [4].

1. Pasar el flexo de la teleducha (H) por el tubo de salida (J), véase la fig. [3].
2. Pasar desde arriba el flexo de la teleducha (H) a través del cuerpo de la grifería, e introducir el tubo de salida (J) hasta que quede encajado, véase la fig. [4].
3. Conectar la teleducha (K) sin utilizar juntas adicionales por el flexo de la teleducha (H).
4. Con la teleducha colocada, pasar desde abajo el muelle (L) por el flexo de la teleducha (H).
5. Enroscar manualmente el adaptador para toma rápida (M) al flexo (H) de la teleducha y apretarlo sólo con la mano.
6. Presionar hacia abajo el casquillo (M1) del adaptador para toma rápida (M), y encajar en la pieza de empalme (N).

Para un correcto montaje de la teleducha (K), deberán encajar uno dentro de otra la leva (J1) del caño y la ranura (K1) de la teleducha.

¡Abrir las llaves de paso del agua fría y del agua caliente y comprobar la estanqueidad de las conexiones!

Manejo

1. Cabezal de la palanca

- Girar la palanca hacia la derecha = abierta (sale el agua)
- Girar la palanca hacia la izquierda = cerrada
- Girar la palanca hacia delante = agua fría
- Girar la palanca hacia atrás = agua caliente

2. Teleducha

El agua sale por principio primeramente por el regulador de flujo laminar.

Botón selector:

- Cambiar a chorro de ducha manteniendo pulsado el botón selector.
- Al cerrar el monomando se pasa automáticamente de chorro de ducha a chorro regulador de flujo.

Limitador de caudal

Este monomando está equipado con una limitación de caudal. Gracias a ello es posible una limitación individual del caudal sin escalonamientos. El ajuste de fábrica corresponde al máximo caudal posible.

No es recomendable la aplicación de la limitación del caudal en combinación con calentadores instantáneos con control hidráulico.

Para la regulación, véase "Cambio del cartucho" puntos 1 a 3, figs. [5] y [6].

Mantenimiento

Revisar todas las piezas, limpiarlas, sustituirlas en caso necesario y engrasarlas con grasa especial para grifería.

¡Cerrar las llaves de paso del agua fría y del agua caliente!

I. Cambio del cartucho, véase la página desplegable III, fig. [5].

1. Desenroscar el tornillo de sujeción (O) con una llave macho hexagonal de 3mm.
2. Quitar la palanca (P).
3. Girar la tapa (R) 180° (la abertura quedará hacia arriba) y extraerla.
4. Desenroscar el tornillo de sujeción (S) y quitar la articulación (T).
5. Desenroscar los tornillos (U) y extraer el cartucho (V) completo.
6. Cambiar el cartucho (V) completo.

El montaje se efectúa en el orden inverso.

¡Atender a la posición de montaje!

Hay que asegurarse de que las juntas del cartucho encajen en las entallas del cuerpo del monomando. Enroscar los tornillos (U) y apretarlos **con uniformidad y alternativamente**.

II. Regulador de flujo laminar y aro de salida, véase la página desplegable III, fig. [7].

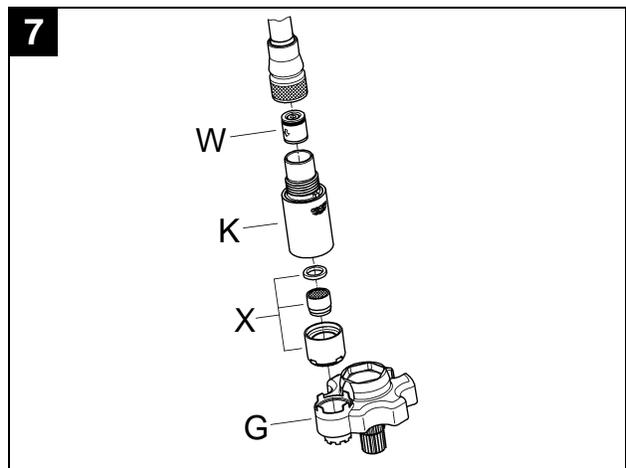
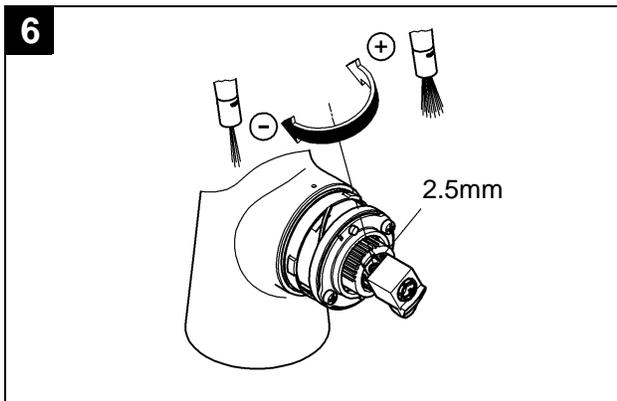
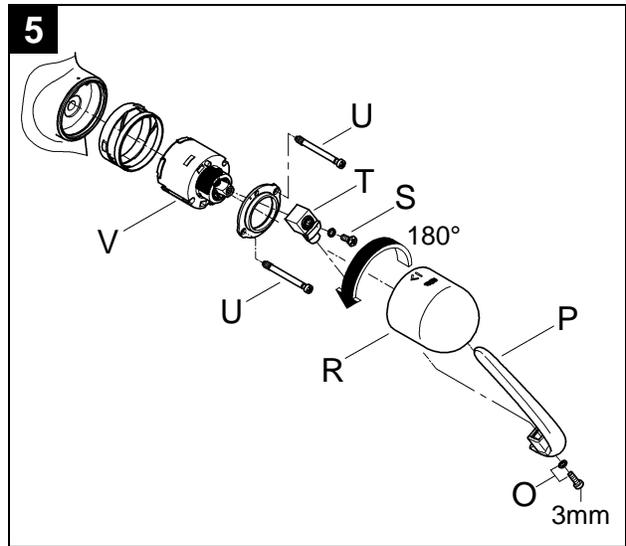
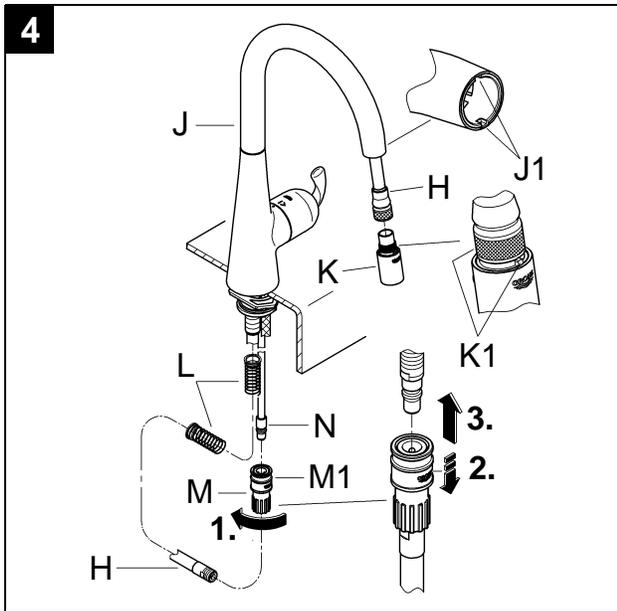
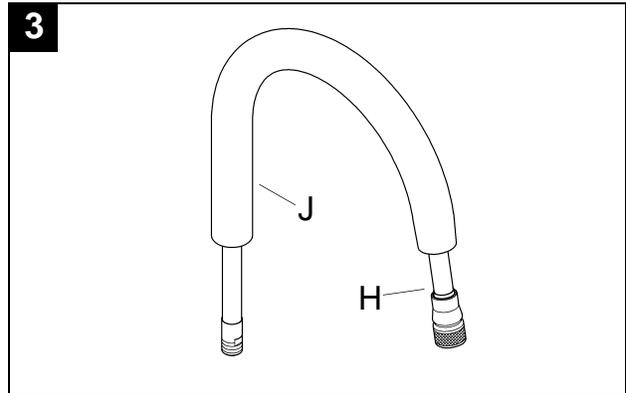
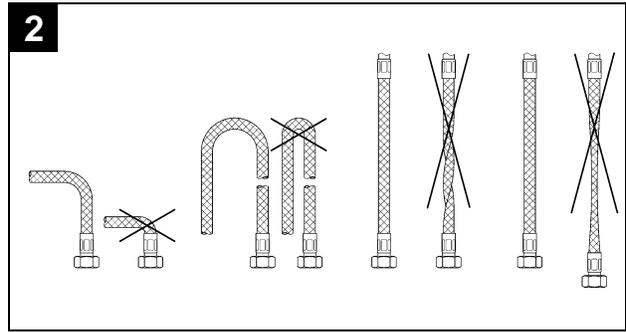
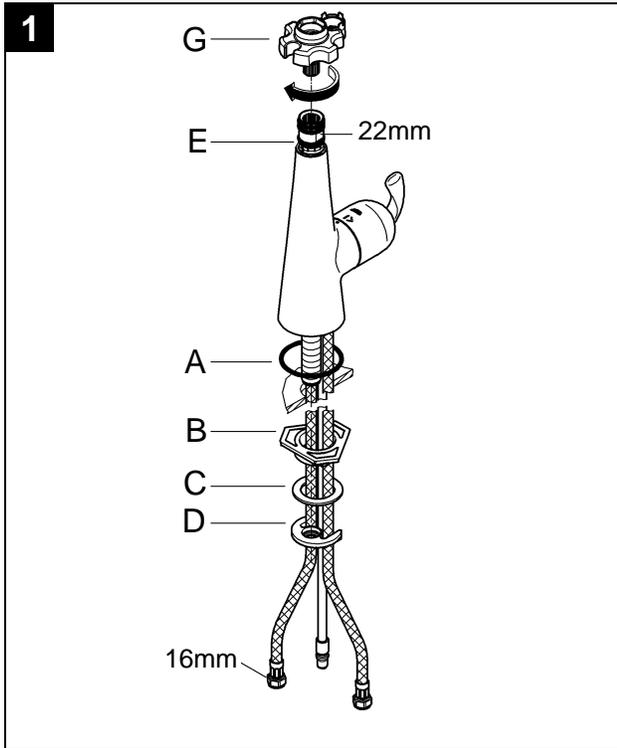
1. Desenroscar la teleducha (K) y quite el válvula antirretorno (W).
2. Desenroscar el regulador de flujo laminar (X) con la llave de montaje (G).

El montaje se efectúa en el orden inverso.

Componentes de sustitución, véase la página desplegable II (* = accesorios especiales).

Cuidados periódicos

En el suplemento Garantía a Limitada encontrará las instrucciones relativas al cuidado de esta batería.



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2013/10/22

GROHE

ENJOY WATER®



Sonoma panel, Custom finish, Stockbridge windows, Decorative hardware

DOOR FEATURES

Pinch-Resistant Panels

designed to push fingers out of harms way.

3-layer construction

Model 9100 utilizes a ToughGard® backer, while Model 9605 provides additional protection with a steel backer.

Foamed-In-Place Polyurethane Insulation

provides thermal efficiency with an R-value* of 10† for Model 9605 and 9 for Model 9100.

Integral Struts

add rigidity and strength for long life and smooth operation.



• High Cycle Spring Option

Choose a 25,000 cycle spring for more than twice the life of a standard torsion spring

• TorqueMaster® Plus Counter Balance System

Contains springs safely inside a steel tube to prevent accidental release of tension that could cause injury and features anti-drop safety technology

• Wind Load Options

Available with structural reinforcements for use in coastal or high wind region



• Limited Lifetime Warranty

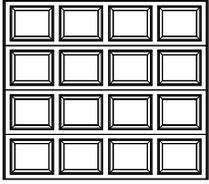


*Wayne Dalton uses a calculated door section R-value for our insulated doors.

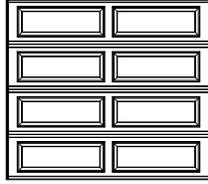
†R-value of 10 for 8' tall doors. R-value for other door heights may vary slightly. See website for warranty and wind load details.

1 Choose Your Style

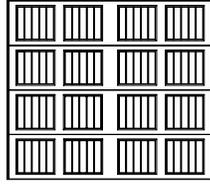
Doors shown are 8'x7'. Other sizes may have different panel configurations. See Dealer for details.



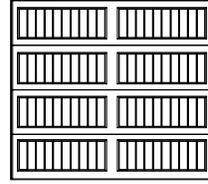
Colonial



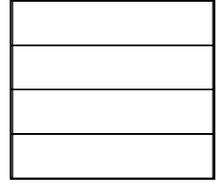
Ranch



Sonoma



Sonoma Ranch



Contemporary

2 Choose Your Color

Paint finishes



White



Almond



Desert Tan



Taupe



Gray



Green



Brown



Model 9605 is available with the TruChoice® Color System, Wayne Dalton's custom painting process that offers more than 6,000 colors. See dealer for details.

Actual colors may vary from brochure due to fluctuations in the printing process. Always request a color sample from your dealer for accurate color matching.

3 Choose Your Windows

For Colonial and Contemporary Panels



Cascade I



Cascade II*



Cascade III**



Cathedral I



Cathedral II*



Clear I



Clear II*



Clear III**



Prairie I



Prairie II*



Sherwood I



Sherwood II*



Stockbridge*



Stockton I



Stockton II*



Stockton III**



Arched Stockton*



Waterton I



Waterton II*



Waterton III**



Williamsburg I



Williamsburg II*

*Model 9100 Contemporary panel only

**Contemporary panel only

For Sonoma Panels



Cascade I



Cascade III



Cathedral I



Clear I



Clear III



Stockbridge



Stockton I



Stockton III



Arched Stockton

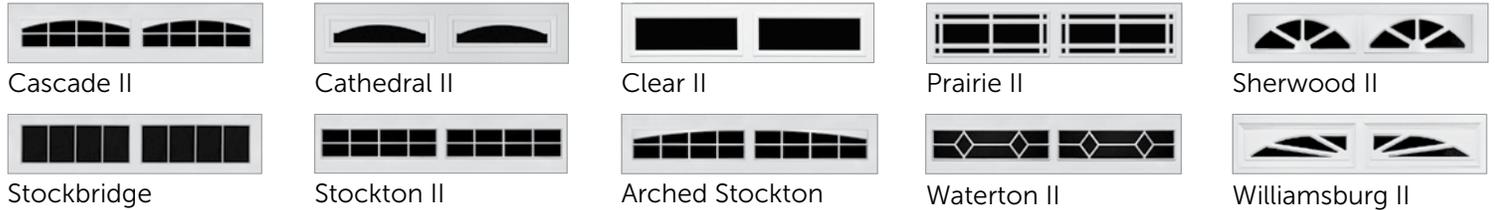


Waterton I

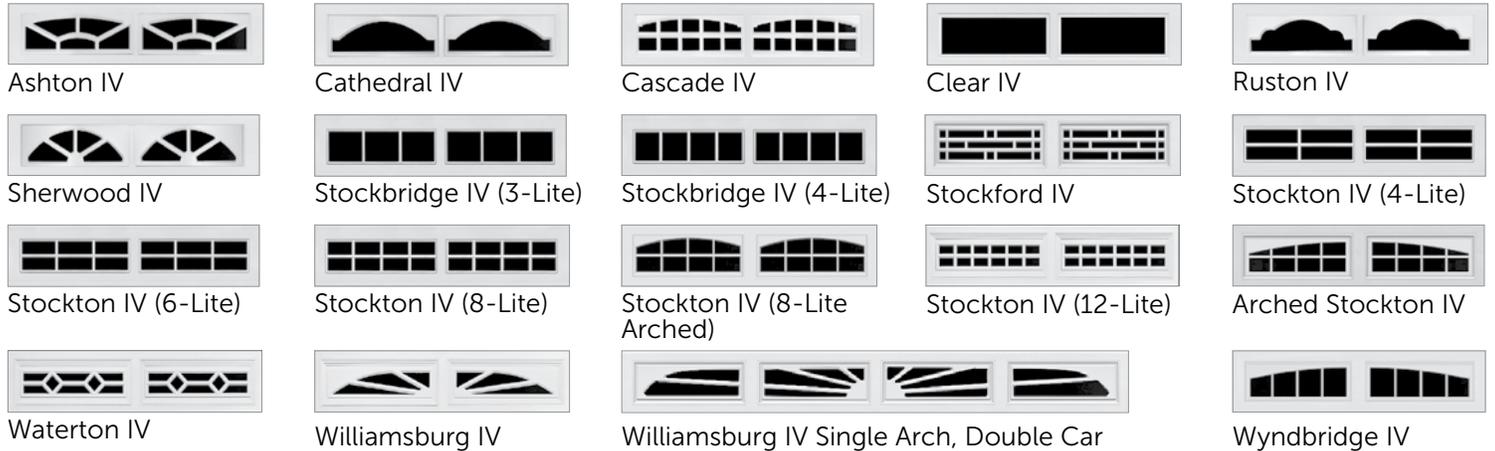


Waterton III

For Ranch Panels



For Sonoma Ranch and Model 9605 Colonial and Contemporary Panels



Not all windows available in all areas. Windows shown are typical of an 8' wide door and placement may vary by panel design. Consult your dealer for details.

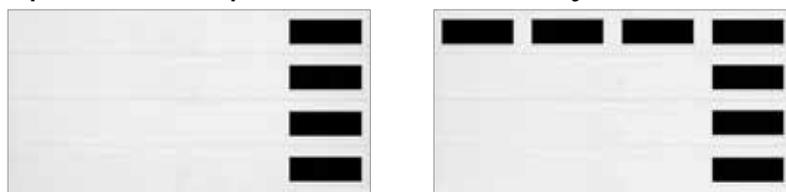
The following windows are available for double car doors



Glass Options



Optional window placement (Model 9605 only)



Contemporary panel, White finish with Clear III windows.

Clear windows may be arranged vertically or horizontally on Colonial, Ranch and Contemporary panels. Windows placed in the bottom section of a door must use DSB 1/8" or tempered glass.

4 Choose Your Hardware



See website for additional hardware options.

AFTER

BEFORE



Sonoma panel, Taupe finish, Stockbridge windows, Decorative hardware



Garage Door Design Center

To see this door on your home, visit wayne-dalton.com, or download our Garage Door Design Center app. Upload a photo of your home and experiment with panel designs, color options, window styles and decorative hardware designs. Instant curb appeal awaits you with just a click of your mouse.

Wayne Dalton
GARAGE DOORS

DISTRIBUTED BY:

2501 S. State Hwy. 121 Bus., Ste 200
Lewisville, TX 75067

wayne-dalton.com



Roomside / Flex™ Series Fan/Light

READ AND SAVE THESE INSTRUCTIONS

For Warranty Statement, Service Parts, Technical Support, or to Register your product, please visit our website or call:
In the United States - Broan.com 800-637-1453 or NuTone.com 888-336-6151. In Canada - Broan.ca or NuTone.ca 877-896-1119

WARNING

TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. Use this unit only in the manner intended by the manufacturer. If you have questions, contact the manufacturer at the address or telephone number listed in the warranty.
2. Before servicing or cleaning unit, switch power off at service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means cannot be locked, securely fasten a prominent warning device, such as a tag, to the service panel.
3. Installation work and electrical wiring must be done by a qualified person(s) in accordance with all applicable codes and standards, including fire-rated construction codes and standards.
4. Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent backdrafting. Follow the heating equipment manufacturer's guideline and safety standards such as those published by the National Fire Protection Association (NFPA), and the American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE), and the local code authorities.
5. When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
6. Ducted fans must always be vented to the outdoors.
7. Acceptable for use over a tub or shower when connected to a GFCI (Ground Fault Circuit Interrupter) - protected branch circuit (ceiling installation only).
8. This unit must be grounded.

CAUTION

1. For general ventilating use only. Do not use to exhaust hazardous or explosive materials and vapors.
2. This product can be installed in a wall if mounted 8-ft. or more above the floor.
3. To avoid motor bearing damage and noisy and/or unbalanced impellers, keep drywall spray, construction dust, etc. off power unit.
4. Please read specification label on product for further information and requirements.

CLEANING & MAINTENANCE

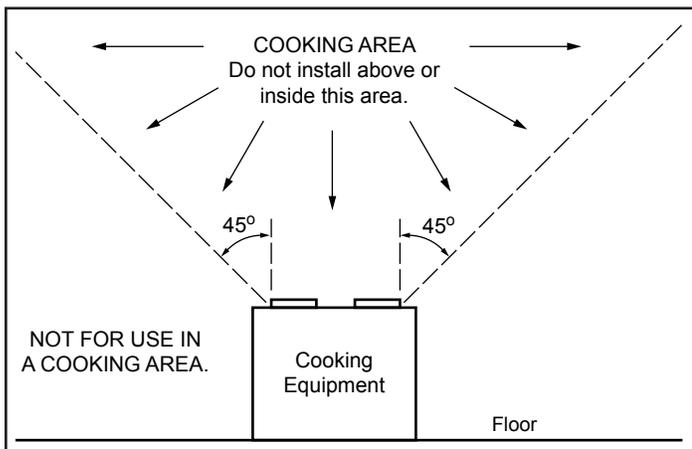
For quiet and efficient operation, long life, and attractive appearance - lower or remove grille and vacuum interior of unit with the dusting brush attachment.

The motor is permanently lubricated and never needs oiling. If the motor bearings are making excessive or unusual noises, replace the blower assembly (includes motor and impeller).

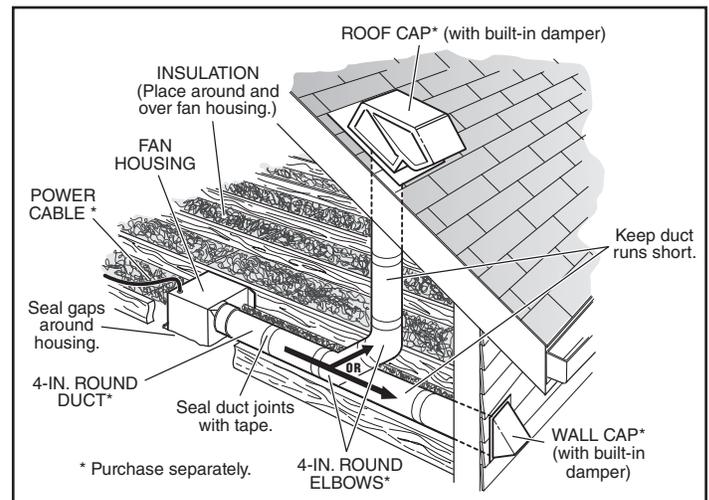
OPERATION

The fan and light can be operated separately. Use a 2-function wall control.

Flex™ Series Fan/Light ONLY: Do not use a speed control to operate the fan.



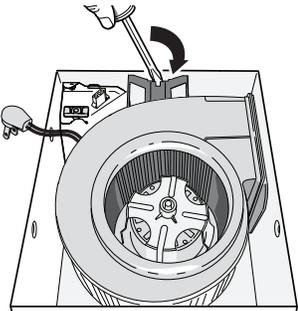
 **IMPORTANT** - The ducting from this fan to the outside of the building has a strong effect on the air flow, noise and energy use of the fan. Use the shortest, straightest duct routing possible for best performance, and avoid installing the fan with smaller ducts than recommended. Insulation around the ducts can reduce energy loss and inhibit mold growth. Fans installed with existing ducts may not achieve their rated airflow.



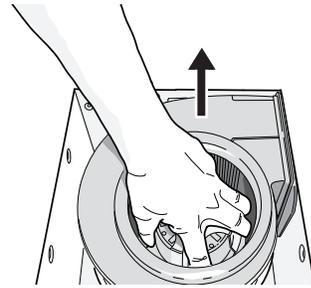
 **OPTION** - To mount housing anywhere between ceiling framing: Use optional Hanger Bar Kit (sold separately from local distributors or website). Follow mounting instructions included with kit.

ALL INSTALLATIONS

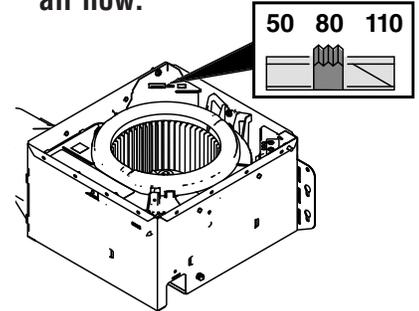
- 1** Remove all packing material, unplug and remove blower from fan housing.



- 2** Remove wiring panel from fan housing.

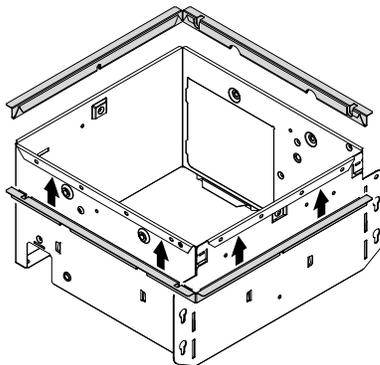


- 3** Some models only: Select 50, 80 or 110 CFM based on your room size and desired air flow.



- 4** Some models only: A pair of flanges may be attached to housing if desired or required.

Snap both flange pieces under rolled-over edge of housing (all four sides).



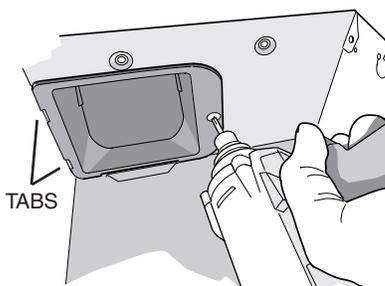
For Retrofit Installation - Skip to Page 3.

NEW INSTALLATION

- 5** Attach damper/duct connector to fan housing.

Push connector through opening from inside of housing.

Engage tabs and secure with screw from parts bag.

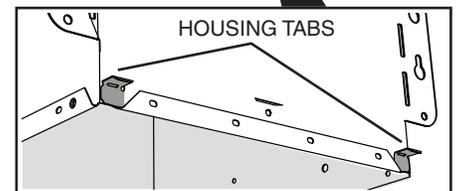
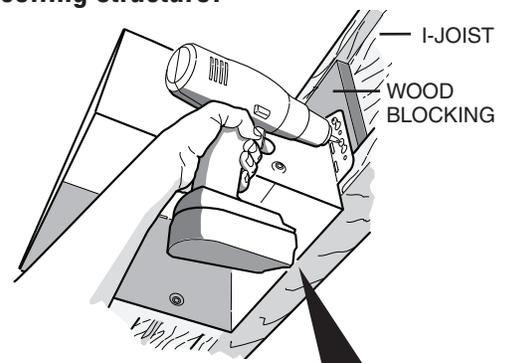


- 6** Mount housing to ceiling structure.

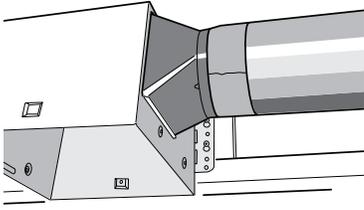
Make sure bottom of housing will be flush with finished ceiling.

For proper location using ½" ceiling material: Bend out housing tabs (on outside of housing) to fit against bottom of joist.

Secure housing through mounting ears with appropriate fasteners. If mounting housing to I-joist, use wood blocking as shown.

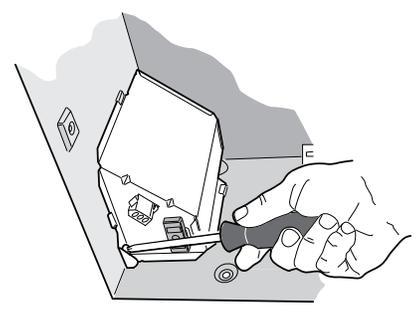
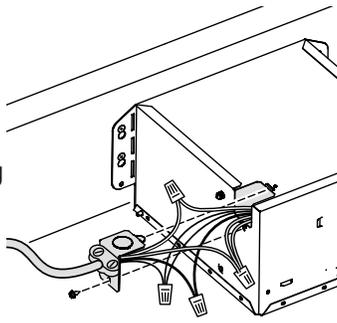


7 Connect 4-in. round duct.



8 Connect wiring.

Connect power cable to wiring plate (from parts bag) using UL approved connector. Connect house wiring to fan wiring. Refer to wiring diagram for connection details. Use screw (from parts bag) to secure wiring plate to fan housing. Re-install wiring panel and secure with screw from parts bag.

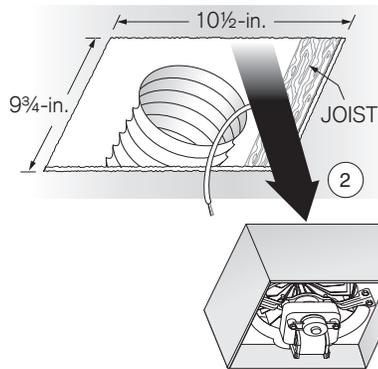
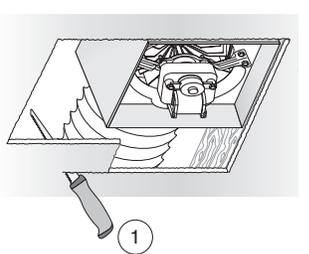


9 Finish ceiling. Then continue with Step 10.

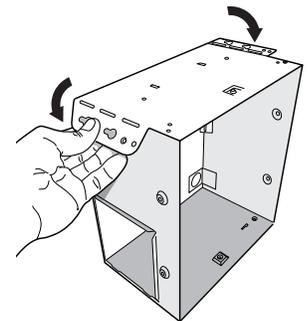
RETROFIT INSTALLATION

5 Remove old fan and prepare ceiling.

Enlarge ceiling opening (if necessary) to 9¾" parallel to joist) by 10½" (perpendicular to joist). (Some models have a cut-out template on side of carton.)



6 Fold mounting ears flat against housing.



Existing fan housings are typically attached to the structure:

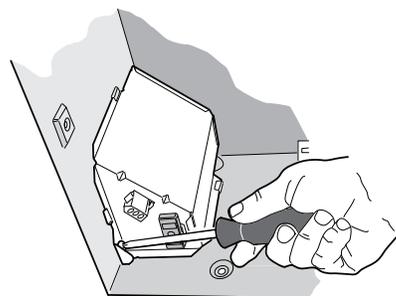
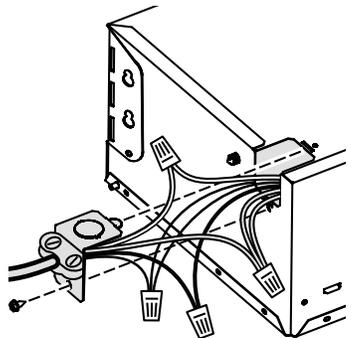
- with screws, nails, or staples, which must be removed.
- with hangers or rails which are fastened to joists and must be removed along with housing.

A pry bar may be needed to remove the old housing.

Leave ductwork and wiring in place.

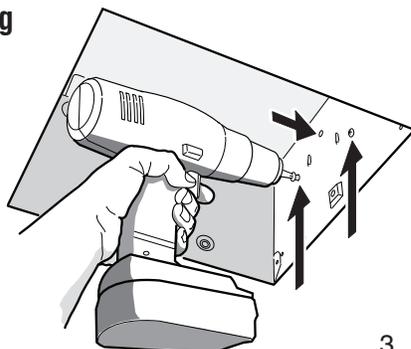
7 Connect wiring.

Connect power cable to wiring plate (from parts bag) using UL approved connector. Connect house wiring to fan wiring. Refer to wiring diagram for connection details. Use screw (from parts bag) to secure wiring plate to fan housing. Re-install wiring panel and secure with screw from parts bag.



8 Mount fan to ceiling structure.

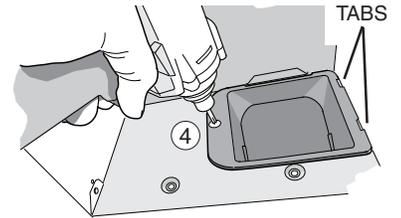
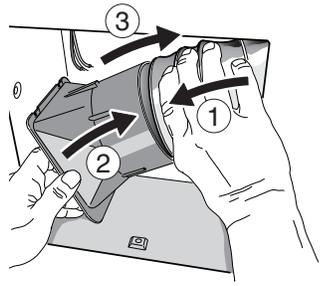
Mount housing to ceiling structure with appropriate fasteners in locations shown.



9

Connect 4-in. round duct.

① Pull existing ducting through housing discharge opening and ② tape ducting to duct connector. ③ Push connector/ducting back through opening. Engage tabs and ④ secure with screw from parts bag.



Continue with Step 10.

ALL INSTALLATIONS

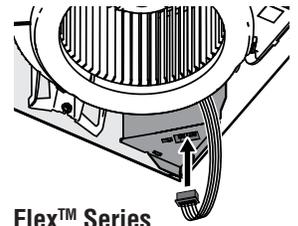
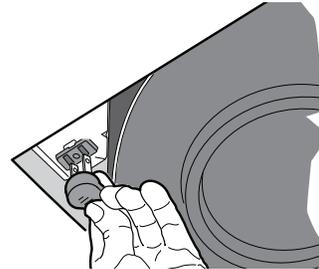
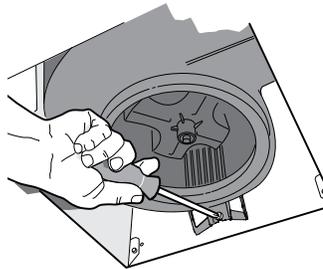
10

Install blower.

Re-install blower removed in Step 1. Secure blower with 2 screws from parts bag. Plug blower into black receptacle.

Flex™ Series Fan/Light

ONLY: Plug 5-wire plug into controller module.



Flex™ Series Fan/Light ONLY

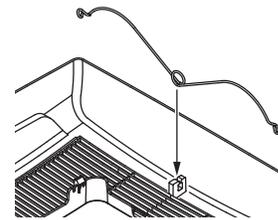
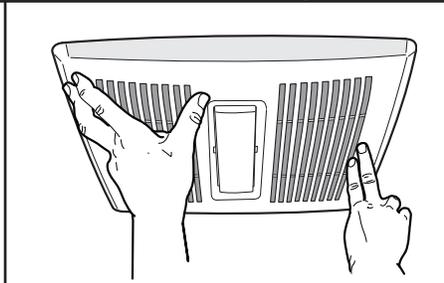
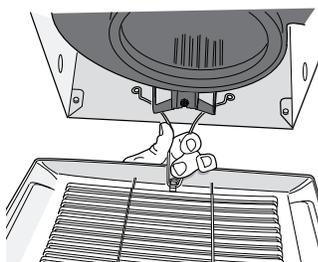
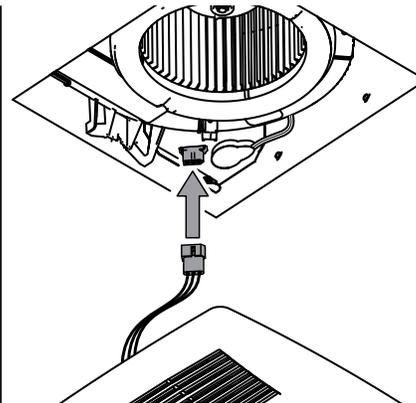
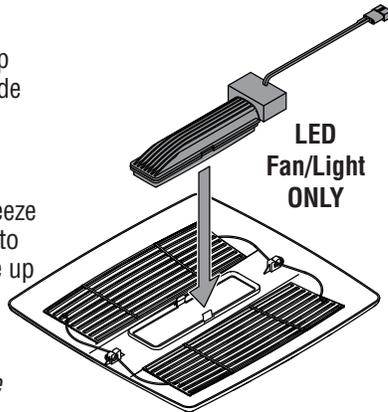
11

Install grille.

LED Fan/Light ONLY: Snap LED light module into inside of grille. Note: On some models, LED module may already be installed.

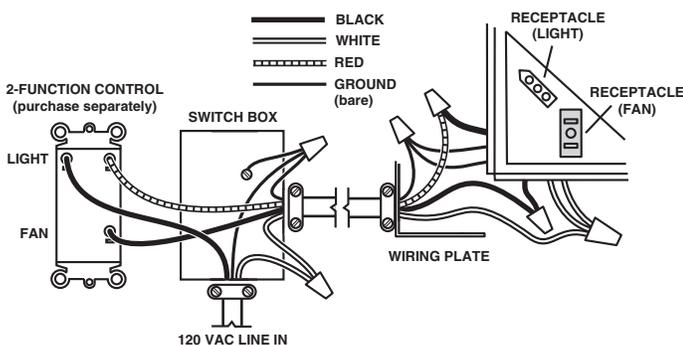
Plug in light module. Squeeze grille springs and insert into slots in blower. Push grille up against ceiling.

Depending upon model - your grille may look different.



If grille spring becomes dislodged from grille - snap it back into place as shown.

WIRING DIAGRAM



Ventilateur/Éclairage

Série Roomside / Flex™

LISEZ CES DIRECTIVES ET CONSERVEZ-LES

AVERTISSEMENT

OBSERVEZ LES DIRECTIVES CI-DESSOUS AFIN DE RÉDUIRE LES RISQUES D'INCENDIE, DE CHOC ÉLECTRIQUE OU DE BLESSURES CORPORELLES :

1. N'utilisez cet appareil que de la manière prévue par le fabricant. Si vous avez des questions, communiquez avec le fabricant à l'adresse ou au numéro de téléphone indiqués dans la garantie.
2. Avant de procéder à l'entretien ou au nettoyage de l'appareil, coupez l'alimentation du panneau électrique et verrouillez l'interrupteur principal afin d'empêcher que le courant ne soit accidentellement rétabli. S'il est impossible de verrouiller l'interrupteur principal, fixez solidement un message d'avertissement bien visible, par exemple une étiquette, sur le panneau électrique.
3. La pose de l'appareil et les travaux d'électricité doivent être effectués par des personnes qualifiées conformément à la réglementation en vigueur, notamment les normes de la construction ayant trait à la protection contre les incendies.
4. Pour éviter les refoulements, l'apport d'air doit être suffisant pour brûler les gaz produits par les appareils à combustion et les évacuer dans le conduit de fumée (cheminée). Respectez les directives du fabricant de l'appareil de chauffage et les normes de sécurité, notamment celles publiées par la National Fire Protection Association (NFPA), l'American Society for Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) et les codes des autorités locales.
5. Veillez à ne pas endommager le câblage électrique ou d'autres équipements non apparents lors de la découpe ou du perçage du mur ou du plafond.
6. Les ventilateurs canalisés doivent toujours rejeter l'air à l'extérieur.
7. Cet appareil peut être installé au-dessus d'une enceinte de baignoire ou de douche s'il est branché sur un circuit de dérivation protégé par un disjoncteur différentiel de fuite à la terre (installation au plafond seulement).
8. Cet appareil doit être relié à une mise à la terre.

Pour la déclaration de garantie, les pièces de rechange, l'assistance technique ou pour enregistrer votre produit, veuillez visiter notre site Web ou appeler :
Aux États-Unis : Broan.com 800-637-1453 ou NuTone.com 888-336-6151.
Au Canada : Broan.ca ou NuTone.ca 877-896-1119

ATTENTION

1. Pour ventilation générale uniquement. N'utilisez pas cet appareil pour évacuer des matières ou des vapeurs dangereuses ou explosives.
2. Ce produit peut être installé dans un mur s'il est fixé à 2,4 m (8 pi) au-dessus du plancher.
3. Pour éviter d'endommager les roulements du moteur, de déséquilibrer les pales ou de les rendre bruyantes, débarrassez l'appareil de la poussière de plâtre, de construction, etc.
4. Veuillez lire l'étiquette de spécifications du produit pour obtenir plus de renseignements, notamment sur les exigences.

NETTOYAGE ET ENTRETIEN

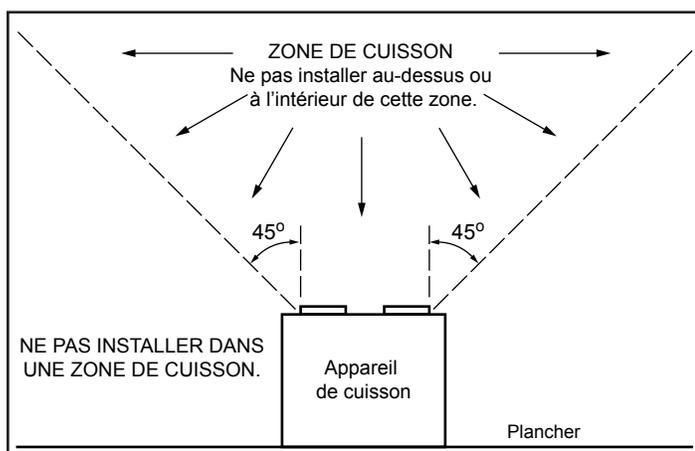
Pour un fonctionnement silencieux et efficace, ainsi qu'une durabilité et une apparence supérieures, abaissez ou enlevez la grille et nettoyez l'intérieur de l'appareil avec un aspirateur muni d'une brosse à épousseter.

Le moteur est lubrifié en permanence et n'a pas besoin d'être huilé. Si les roulements du moteur sont anormalement bruyants, remplacez l'ensemble de ventilateur (incluant le moteur et la roue à ailettes).

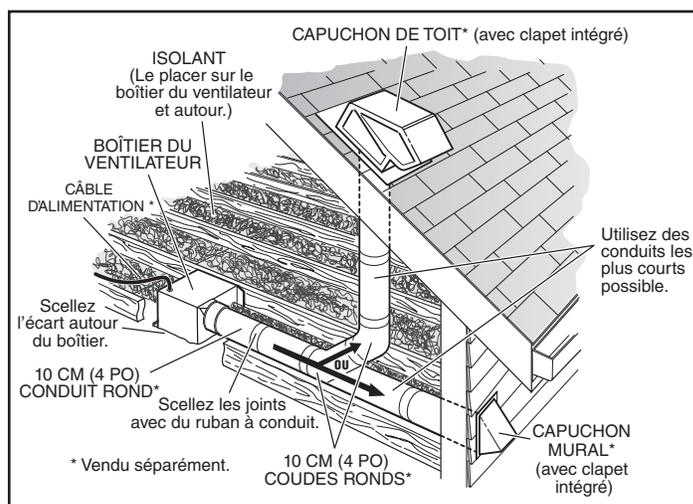
FONCTIONNEMENT

Il est possible de faire fonctionner le ventilateur et l'éclairage séparément. Utilisez une commande murale à deux fonctions.

Ventilateur/Éclairage Série Flex™ SEULEMENT : N'utilisez pas une commande de vitesse pour faire fonctionner le ventilateur.



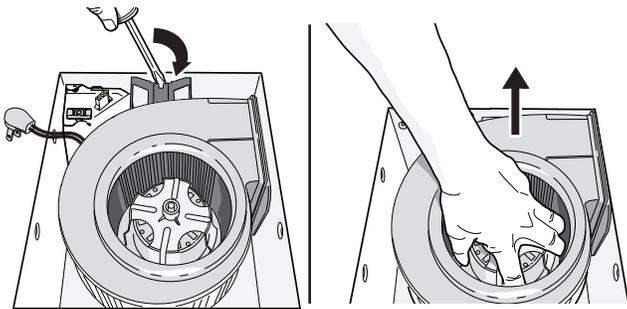
 **IMPORTANT** - Les conduits allant de ce ventilateur jusqu'à l'extérieur de l'habitation ont une grande influence sur le débit d'air, le bruit du ventilateur et sa consommation d'énergie. Pour obtenir le meilleur rendement, utilisez les conduits les plus courts et les plus droits possible et évitez d'utiliser des conduits plus petits que ceux recommandés. L'isolation des conduits peut contribuer à réduire les pertes d'énergie et éviter la prolifération de moisissures. Les ventilateurs installés sur d'anciens conduits pourraient ne pas produire leur débit d'air nominal.



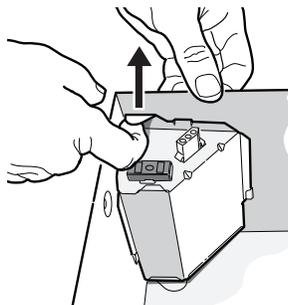
 **OPTION** - Pour installer le boîtier n'importe où entre les solives du plafond : Utilisez l'ensemble de barres de suspension offert en option (vendu séparément chez votre distributeur local ou site Web). Suivez les instructions accompagnant l'ensemble.

TOUS LES TYPES DE POSE

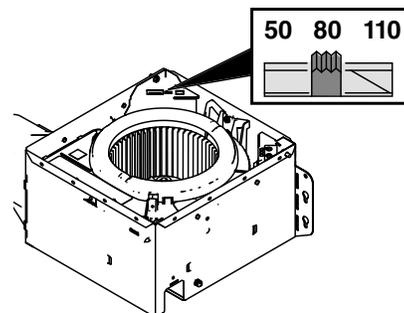
- 1** Retirez tous les matériaux d'emballage, débranchez le ventilateur et retirez-le de son boîtier.



- 2** Enlevez le panneau de câblage du boîtier de ventilateur.

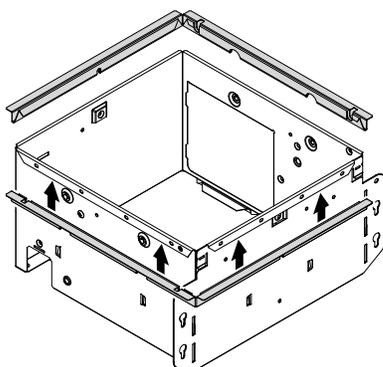


- 3** Certains modèles uniquement : Sélectionnez 50, 80 ou 110 CFM en fonction des dimensions de la pièce et du débit d'air souhaité.



- 4** Certains modèles uniquement : Il est possible de fixer une paire de brides sur le boîtier si cela est nécessaire ou souhaité.

Emboîtez les deux pièces de brides sous le bord retourné du boîtier (sur les quatre côtés).



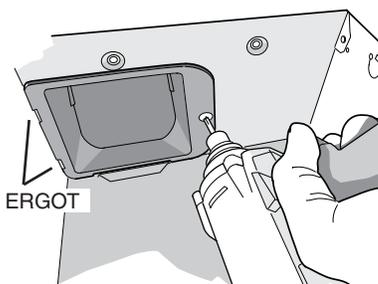
Pour une rénovation - passez à la page 7.

NOUVELLE INSTALLATION

- 5** Fixez le clapet/raccord de conduit au boîtier du ventilateur.

Poussez le raccord par l'ouverture à partir de l'intérieur du boîtier.

Engagez les ergots et fixez le tout avec les vis se trouvant dans le sachet de pièces.

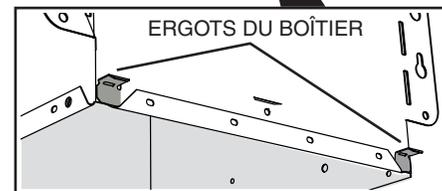
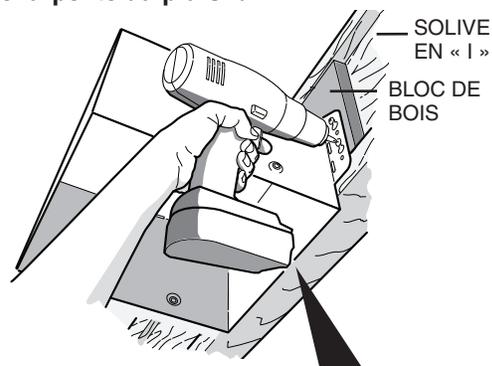


- 6** Fixez le boîtier à la charpente du plafond.

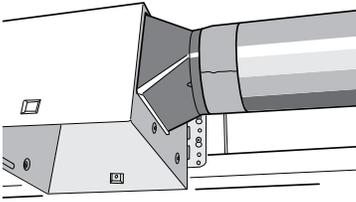
Assurez-vous que le dessous du boîtier affleure la surface finie du plafond.

Pour un emplacement approprié, utilisez le matériau de plafond de 13 mm (1/2 po) : Pliez les ergots du boîtier (sur l'extérieur du boîtier) pour qu'ils s'ajustent contre le bas de la solive.

Fixez le boîtier avec des oreilles de montage à l'aide des fixations appropriées. Si vous fixez le boîtier à une solive en « I », utilisez un bloc de bois comme illustré.

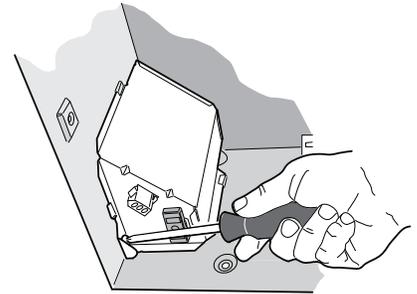
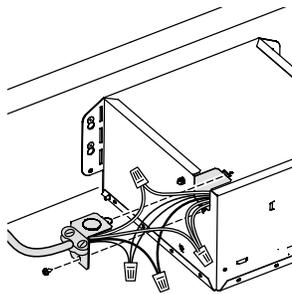


7 Raccordez un conduit rond de 10 cm (4 po).



8 Branchez les fils.

Raccordez le câble d'alimentation à la plaque de câblage (du sachet de pièces) à l'aide du connecteur homologué UL. Raccordez le câblage de la maison à celui du ventilateur. Reportez-vous au schéma de câblage pour les détails du branchement. Fixez la plaque de câblage sur le boîtier du ventilateur à l'aide de la vis (du sachet de pièces). Reposez le panneau de câblage et fixez-le avec les vis se trouvant dans le sachet de pièces.



9 Finissez la surface du plafond. Continuez ensuite avec l'étape 10.

INSTALLATION DE RÉNOVATION

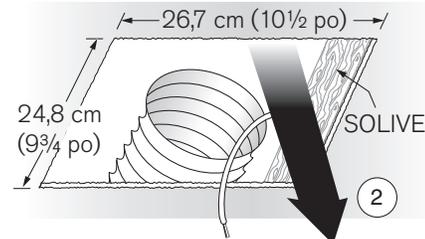
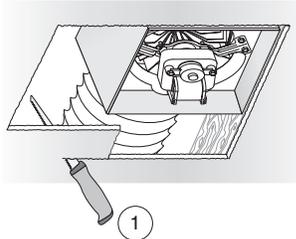
5 Enlevez l'ancien ventilateur et préparez le plafond.

Agrandissez l'ouverture (si nécessaire) à 24,8 cm (9¾ po) (parallèle aux solives) par 26,7 cm (10½ po) (perpendiculaire aux solives). (Certains modèles comportent un gabarit de découpe sur le côté du carton.)

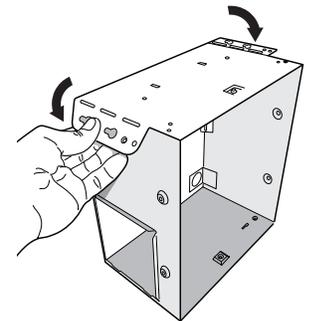
Les boîtiers de ventilateurs existants sont généralement fixés sur la structure :

- par des vis, des clous ou des agrafes, qui doivent être enlevés.
- par des supports ou des rails qui sont fixés aux solives et qui doivent être enlevés avec le boîtier.

Il peut être nécessaire d'utiliser un levier pour enlever l'ancien boîtier. Laissez les conduits et le câblage électrique en place.

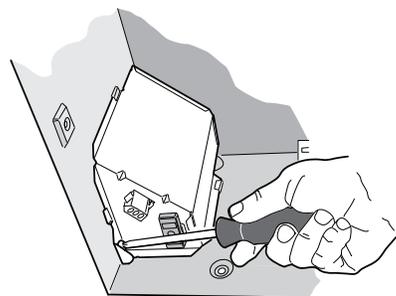
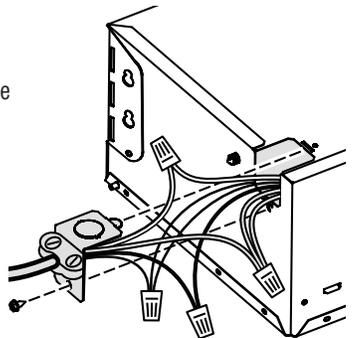


6 Pliez les oreilles de montage à plat contre le boîtier.



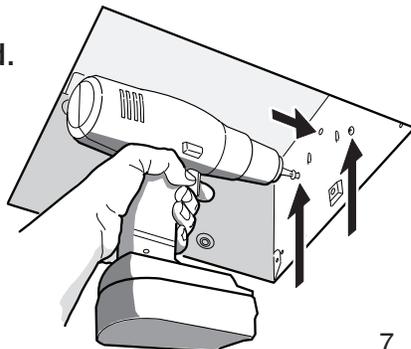
7 Branchez les fils.

Raccordez le câble d'alimentation à la plaque de câblage (du sachet de pièces) à l'aide du connecteur homologué UL. Raccordez le câblage de la maison à celui du ventilateur. Reportez-vous au schéma de câblage pour les détails du branchement. Fixez la plaque de câblage sur le boîtier du ventilateur à l'aide de la vis (du sachet de pièces). Reposez le panneau de câblage et fixez-le avec les vis se trouvant dans le sachet de pièces.



8 Fixez le boîtier à la charpente du plafond.

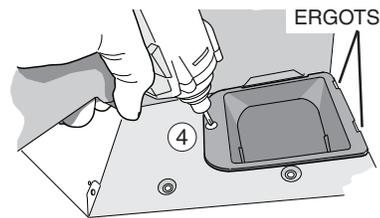
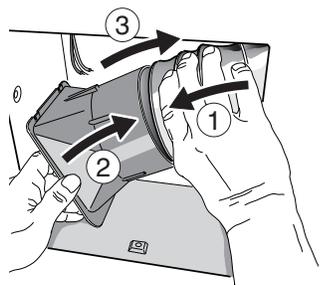
Fixez le boîtier sur la charpente du plafond à l'aide des fixations appropriées aux endroits indiqués.



9

Raccordez un conduit rond de 10 cm (4 po).

① Tirez le conduit existant par la sortie et ② fixez-le au raccord avec du ruban à conduit. ③ Repoussez le raccord/conduit par l'ouverture. Engagez les ergots et ④ fixez le tout avec les vis se trouvant dans le sachet de pièces.



Continuez avec l'étape 10.

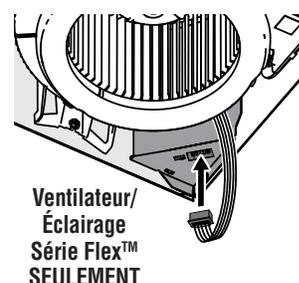
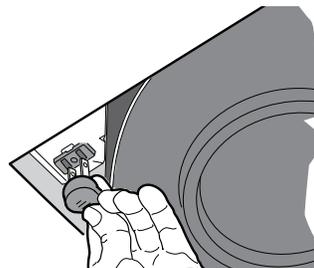
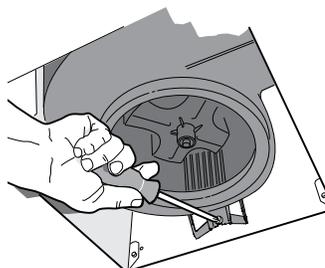
TOUS LES TYPES DE POSE

10

Installez le ventilateur.

Réinstallez le ventilateur enlevé à l'étape 1. Fixez le ventilateur à l'aide de 2 vis du sachet de pièces. Branchez le ventilateur dans la prise noire.

Ventilateur/Éclairage Série Flex™ SEULEMENT : Branchez la fiche à 5 fils dans le module du contrôleur.



11

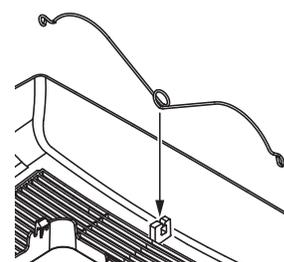
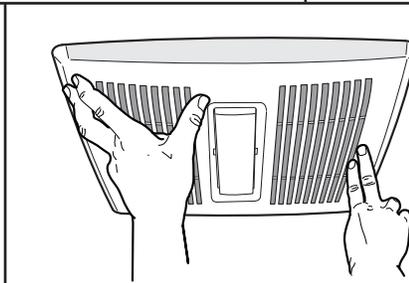
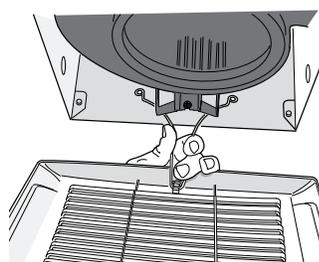
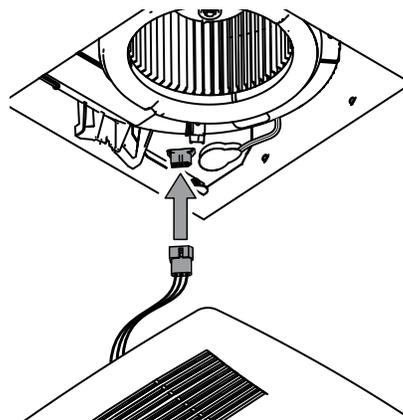
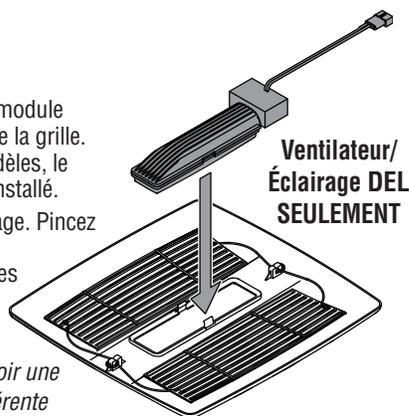
Installez la grille.

Ventilateur/Éclairage DEL SEULEMENT

Emboîtez le module d'éclairage dans l'intérieur de la grille. Remarque: Sur certains modèles, le module LED peut déjà être installé.

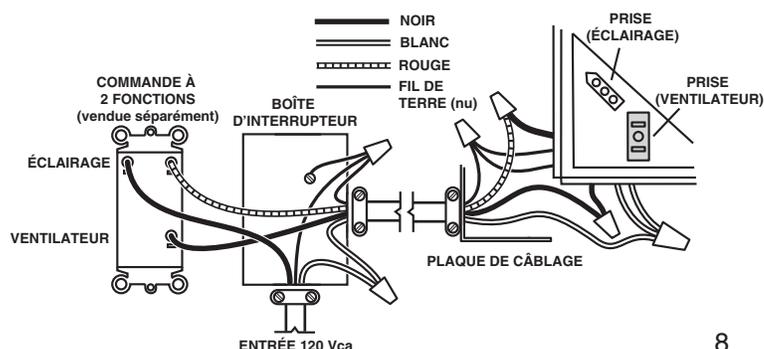
Branchez le module d'éclairage. Pincez les ressorts de la grille et introduisez-les dans les fentes du ventilateur. Poussez la grille contre le plafond.

La grille peut avoir une apparence différente selon le modèle.



Si le ressort de la grille se déloge de celle-ci, remettez-le en place comme indiqué.

DIAGRAMME DE CÂBLAGE



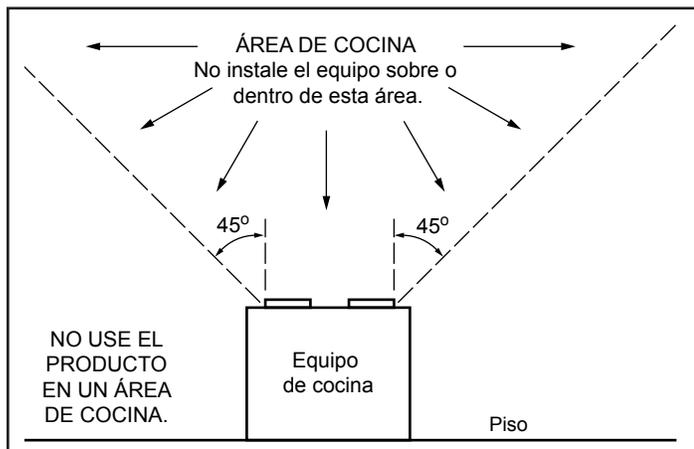
Ventilador / Luz Serie Roomside / Flex™

LEA Y CONSERVE ESTAS INSTRUCCIONES

⚠️ ⚡ ADVERTENCIA

PARA REDUCIR EL RIESGO DE INCENDIOS, DESCARGAS ELÉCTRICAS O LESIONES PERSONALES, SIGA LAS SIGUIENTES PRECAUCIONES:

1. Use la unidad solo de la manera indicada por el fabricante. Si tiene preguntas, comuníquese con el fabricante a la dirección o al número telefónico que se incluye en la garantía.
2. Antes de dar servicio a la unidad o de limpiarla, interrumpa el suministro eléctrico en el panel de servicio y bloquee los medios de desconexión del servicio para evitar que la electricidad se reanude accidentalmente. Cuando no sea posible bloquear los medios de desconexión del servicio, fije firmemente una señal de advertencia (como una etiqueta) en un lugar visible del panel de servicio.
3. El trabajo de instalación y el cableado eléctrico deben estar a cargo de personal capacitado, de acuerdo con todos los códigos y normas correspondientes, que incluyen los códigos y las normas de construcción específicos sobre protección contra incendios.
4. Es necesario que haya suficiente aire para que se lleve a cabo una combustión y una extracción adecuadas de los gases a través del tubo de humos (chimenea) del equipo quemador de combustible, con el fin de evitar el contratiro. Siga las directrices y las normas de seguridad del fabricante del equipo de calefacción, como las publicadas por la Asociación Nacional de Protección contra Incendios (National Fire Protection Association, NFPA), la Sociedad Americana de Ingenieros de Calefacción, Refrigeración y Aire Acondicionado (American Society for Heating, Refrigeration and Air Conditioning Engineers, ASHRAE) y las autoridades de los códigos locales.
5. Al cortar o perforar a través de la pared o del cielo raso, tenga cuidado de no dañar el cableado eléctrico ni otros servicios ocultos.
6. Los ventiladores con conductos siempre deben ventearse hacia el exterior.
7. Esta unidad puede instalarse sobre una tina o ducha siempre que se conecte a un GFCI (interruptor de circuitos para fallas a tierra) en un circuito de derivación protegido (solo en instalación de cielo raso).



⚡ IMPORTANTE - Los conductos desde este ventilador hacia el exterior del edificio tienen un gran efecto sobre el flujo de aire, el ruido y el uso de energía del ventilador. Utilice el tramo de conductos más corto y recto posible para obtener un desempeño óptimo y evite instalar el ventilador con conductos menores que los recomendados. El aislamiento alrededor de los conductos puede reducir la pérdida de energía e inhibir el desarrollo de moho. Los ventiladores instalados en conductos existentes podrían no obtener el flujo de aire nominal.

Si desea consultar la declaración de garantía, repuestos de servicio, apoyo técnico o para registrar su producto, visite nuestro sitio web o llame:
En Estados Unidos: - Broan.com 800-637-1453 o NuTone.com 888-336-6151. En Canadá - Broan.ca o NuTone.ca 877-896-1119

8. Esta unidad debe estar conectada a tierra.

⚠️ PRECAUCIÓN

1. Solo para usarse como medio de ventilación general. No debe usarse para la extracción de materiales y vapores peligrosos o explosivos.
2. Este producto se puede instalar en una pared si se va a montar a 8 pies (2.4 m) o más sobre el suelo.
3. Para evitar daños a los cojinetes del motor y rotores ruidosos o desbalanceados, mantenga la unidad de potencia protegida contra rociados de yeso, polvos de construcción, etc.
4. Lea la etiqueta de especificaciones del producto para ver información y requisitos adicionales.

LIMPIEZA Y MANTENIMIENTO

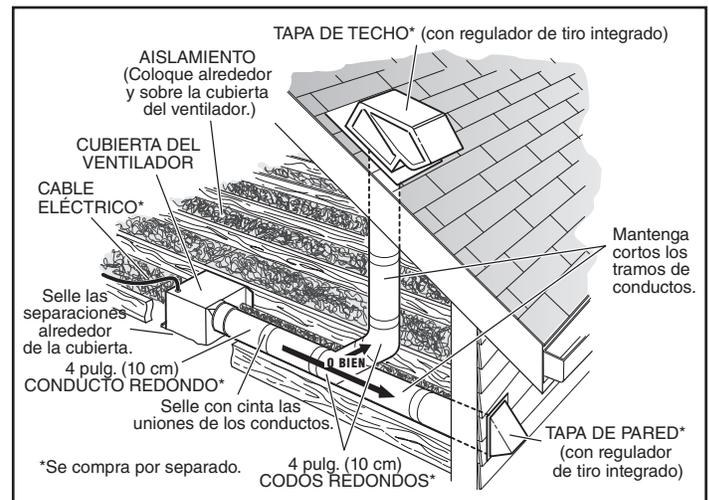
Para lograr un funcionamiento silencioso y eficiente, una larga vida y la apariencia atractiva del producto, baje o retire la rejilla y aspire el interior de la unidad con el accesorio del cepillo para polvo.

El motor está permanentemente lubricado y nunca necesitará ponerle aceite. Si los cojinetes del motor presentan ruido excesivo o inusual, reemplace el conjunto del ventilador (incluye el motor y el rotor).

FUNCIONAMIENTO

El ventilador y la luz pueden funcionar separadamente. Utilice un control de pared de 2 funciones.

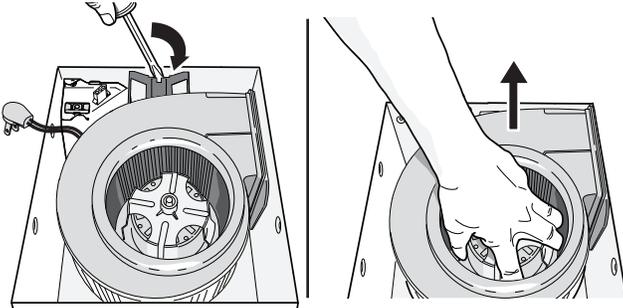
Ventilador / Luz Serie Flex™ SOLAMENTE: No utilice un control de velocidad para hacer funcionar el ventilador.



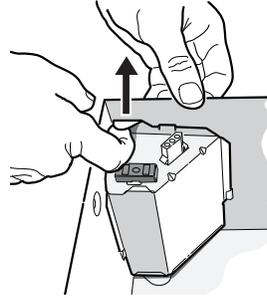
⚡ OPCIÓN - Para montar la cubierta en cualquier lugar de la estructura del cielo raso: utilice el juego de barra de suspensión opcional (se vende por separado en su distribuidor local o en el sitio web). Siga las instrucciones de montaje incluidas en el juego.

TODAS LAS INSTALACIONES

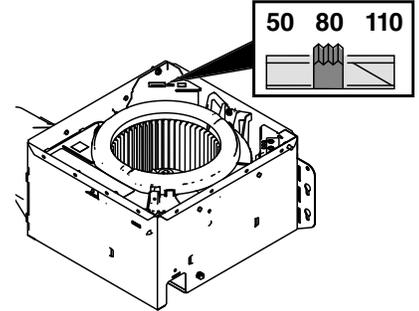
- 1** Retire todo el material de empaque, desconecte y retire el soplador de la cubierta del ventilador.



- 2** Retire el panel de cableado de la cubierta del ventilador.

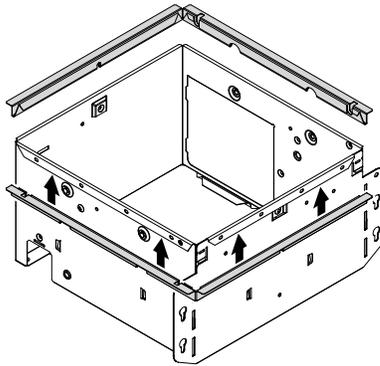


- 3** Solo algunos modelos: Seleccione 50, 80 o 110 CFM con base en el tamaño de la habitación y el flujo de aire deseado.



- 4** Solo algunos modelos: Se pueden fijar un par de bridas a la cubierta si así lo desea o se requiere.

Coloque a presión las dos bridas debajo del borde doblado de la cubierta (en los cuatro lados).



Para instalaciones de conversión: pase a la página 11.

INSTALACIÓN NUEVA

- 5** Acople el conector del regulador de tiro/conducto a la cubierta del ventilador.

Empuje el conector a través de la abertura desde el interior de la cubierta. Enganche las lengüetas y fíjelas con el tornillo incluido en la bolsa de piezas.

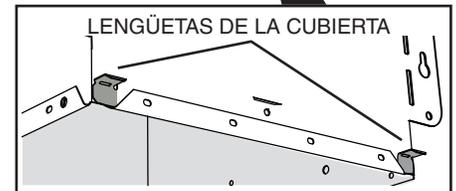
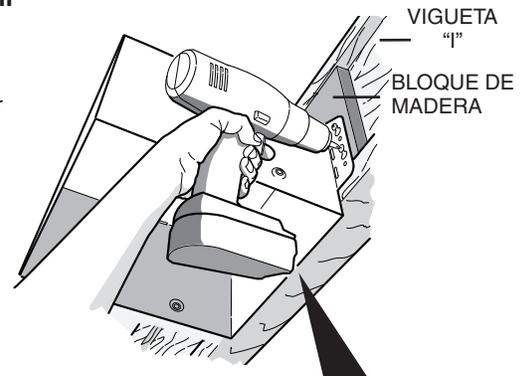


- 6** Monte la cubierta en la estructura del cielo raso.

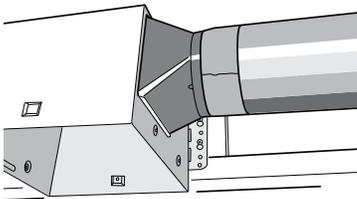
Asegúrese de que la parte inferior de la cubierta quede al ras con el cielo raso terminado.

Para ubicar adecuadamente con material de cielo raso de 1/2 pulg. (13 mm): doble las lengüetas de la cubierta (por el exterior de la cubierta) para que se ajusten contra la parte inferior de la vigueta.

Fije la cubierta por las orejetas de montaje con los sujetadores adecuados. Si va a montar la cubierta a la vigueta "1", utilice un bloque de madera como se muestra.



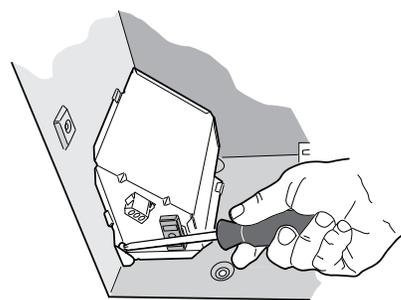
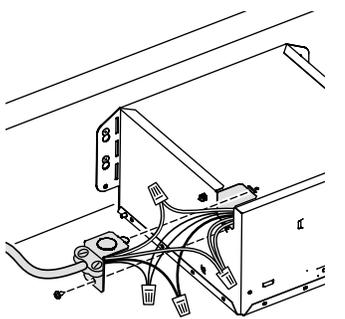
7 Conecte el conducto redondo de 4 pulg. (10 cm).



8 Conecte el cableado.

Conecte el cable eléctrico a la placa de cableado (de la bolsa de piezas) usando un conector aprobado por UL. Conecte el cableado de la casa al cableado del ventilador.

Consulte los detalles de la conexión en el diagrama de cableado. Use un tornillo (de la bolsa de piezas) para asegurar la placa de cableado a la cubierta del ventilador. Vuelva a instalar el panel de cableado y fíjelo con el tornillo de la bolsa de piezas.

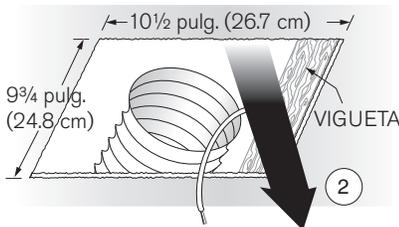
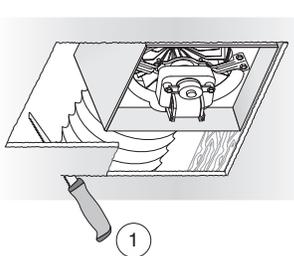


9 Termine el cielo raso. Después continúe con el paso 10.

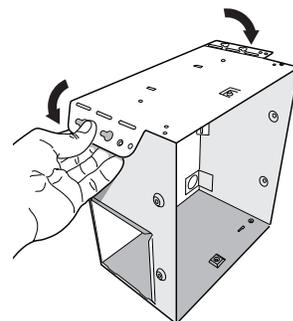
INSTALACIÓN DE CONVERSIÓN

5 Quite el ventilador viejo y prepare el cielo raso.

De ser necesario, agrande la abertura del cielo raso a 9 3/4 pulg. (24.8 cm) (paralela a la vigueta) por 10 1/2 pulg. (26.7 cm) (perpendicular a la vigueta). (Algunos modelos tienen una plantilla recortada en el lateral del cartón).



6 Doble las orejetas de montaje planas contra la cubierta.



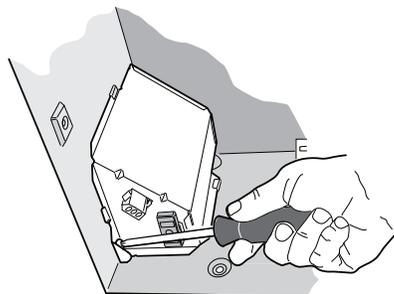
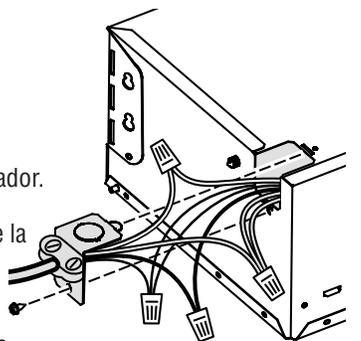
Generalmente, las carcasas de los ventiladores existentes están unidas a la estructura:

- con tornillos, clavos o grapas, que se deben quitar.
 - con ganchos o rieles que están sujetos a las viguetas y que deben quitarse junto con la carcasa.
- Puede ser necesario utilizar una barra de palanca para quitar la carcasa vieja.

Deje los conductos existentes y el cableado en su lugar.

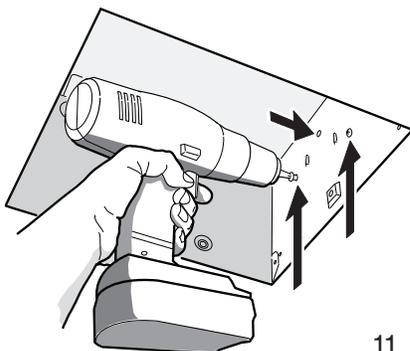
7 Conecte el cableado.

Conecte el cable eléctrico a la placa de cableado (de la bolsa de piezas) usando un conector aprobado por UL. Conecte el cableado de la casa al cableado del ventilador. Consulte los detalles de la conexión en el diagrama de cableado. Use un tornillo (de la bolsa de piezas) para asegurar la placa de cableado a la cubierta del ventilador. Vuelva a instalar el panel de cableado y fíjelo con el tornillo de la bolsa de piezas.



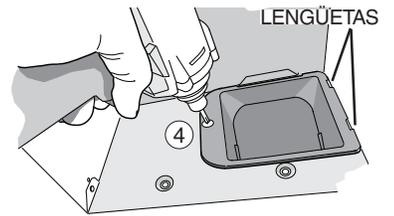
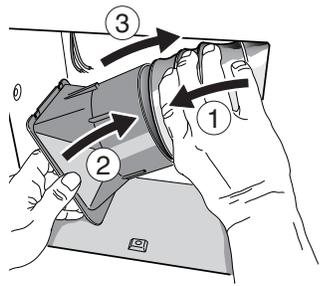
8 Monte el ventilador en la estructura del cielo raso.

Monte la cubierta en la estructura del cielo raso con los sujetadores adecuados en los lugares mostrados.



9**Conecte el conducto redondo de 4 pulg. (10 cm).**

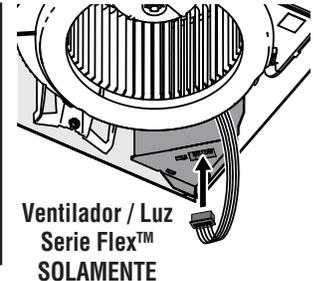
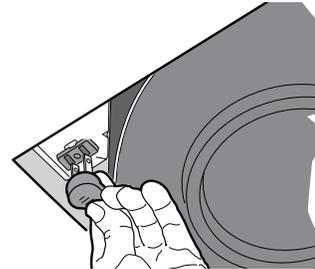
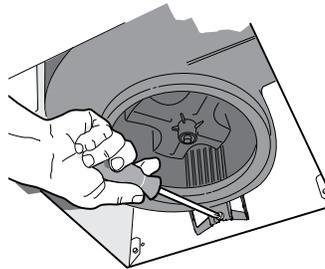
① Tire del conducto existente a través de la abertura de descarga de la cubierta y ② péguelo con cinta al conector del conducto. ③ Pase el conector/conducto de vuelta a través de la abertura. Enganche las lengüetas y ④ fíjelas con el tornillo incluido en la bolsa de piezas.

**Continúe con el paso 10.****TODAS LAS INSTALACIONES****10****Instale el soplador.**

Instale de nuevo el soplador que quitó en el Paso 1. Asegure el soplador con 2 tornillos de la bolsa de piezas. Conecte el soplador en el receptáculo negro.

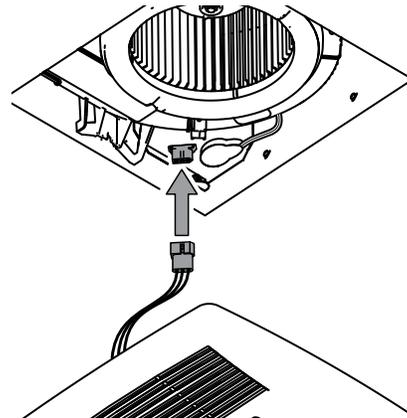
Ventilador / Luz Serie Flex™

SOLAMENTE: Conecte el enchufe de 5 cables en el módulo del controlador. LED Fan ONLY

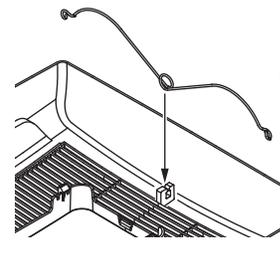
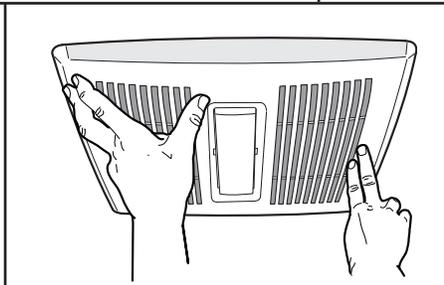
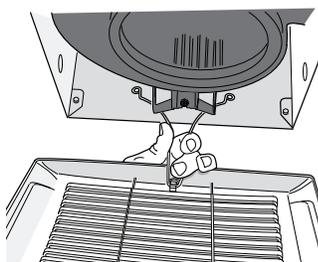
**Ventilador / Luz Serie Flex™ SOLAMENTE****11****Instale la rejilla.****Ventilador / Luz DEL SOLAMENTE:**

Coloque a presión el módulo de la luz en el interior de la rejilla. Nota: En algunos modelos, es posible que el módulo LED ya esté instalado.

Conecte el módulo de la luz. Comprima los resortes de la rejilla e introdúzcalos en las ranuras del soplador. Empuje la rejilla contra el cielo raso.

**Ventilador / Luz DEL SOLAMENTE**

Dependiendo del modelo, su rejilla puede ser diferente.



Si el resorte de la rejilla se desprende de la misma, vuelva a colocarlo en su lugar tal y como se muestra.

DIAGRAMA DE CABLEADO