



# MAXX COLD

V3\_041517

## SERVICE, INSTALLATION & INSTRUCTION MANUAL



MECR-31D



MECR-32D



This unit complies with  
the 2017 DOE  
electrical energy  
requirements.



ANSI NSF STANDARD 7



ANSI SAFETY  
STANDARD 471



Note: The design and components used for this appliance are subject to change without advance knowledge. If in doubt always refer to the attached name plate for technical data and parameters like the refrigerant and charge size.



American English

R290/40g  
110V/60Hz

Please Read These Instructions Carefully Before Use

Thank you for choosing and purchasing our product. Please carefully read the operation instructions before use and familiarize yourself with your new product. This will help avoid accidents that could damage individuals, the building, product and/or the merchandiser.

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The serial number of all self-contained refrigerators and freezers is located inside the unit on the left hand side near the top on the wall.

Always have the serial number of your unit available when calling for parts or service.

**Serial #:** \_\_\_\_\_ **Date:** \_\_\_\_\_

**Model #:** \_\_\_\_\_ **Sent in Warranty Card Date:** \_\_\_\_\_

This manual covers standard units only. If you have a custom unit, consult the customer service department at the number listed in the back cover. Keep your proof of purchase invoice or bill (dated with model number) to establish your warranty period. The warranty card should be filled out and sent in within 2 weeks after startup to put the warranty coverage in place. Failure to provide this information can void the unit warranty coverage.

Version	Release Date	Comments
A	03/2017	Initial Release



## General

1. The self contained countertop (or floor model) refrigerated merchandiser uses R290 refrigerant (an environmentally friendly agent) as well as state-of-the-art energy efficient condensing units. These elements working together ensure that an even temperature is held throughout the unit.
2. Double layer, hollow transparent glass panes are used for both the door and body. It features an artistic and elegant appearance, excellent viewing and easy access. (single and double access-door options are available)
3. This merchandiser has been shown to be successful and appropriate for a wide range of commercial, retail, institutional, food service and private or residential applications.

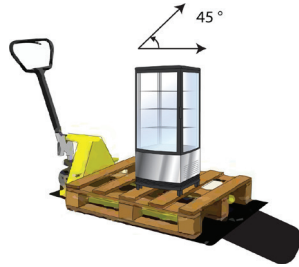
## Structure and Parts



# Handling and Installation

## HANDLE WITH CARE

Use caution when unpacking. Never tilt the appliance past a 45° angle while handling. If tilting occurs, or the appliance is laid on it's side, let the unit stand upright for at least 24 hours before turning the unit on.



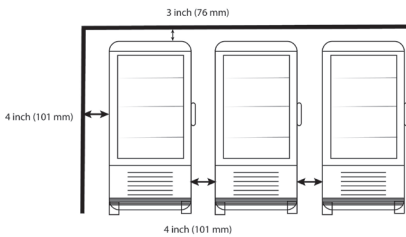
## INDOOR DRY LOCATION

Always locate the refrigerator in a dry location. Higher Humidity will increase condensate on the outside of glass.



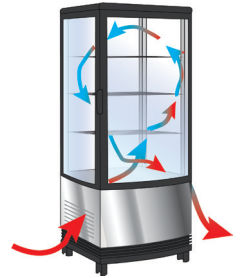
## SUFFICIENT SPACE

The distance from both sides and back of the refrigerator to the wall or other barriers must be no less than 4 inches (100mm).



## FACILITATE VENTILATION

Always pre-chill items before loading them into the refrigerator. Allow it to reach peak cold temperature before using (wait at least 4 hours). Do not overload shelf - air circulation and appearance are important.



## AVOID HEAT AND SUNLIGHT



Never place the refrigerator in direct sunlight. Avoid placing it near heat sources to prevent reducing the refrigeration system cooling capability.



## NOTHING HEAVY

Never place anything heavy on top of the refrigerator.

**Do not stack heavy products on top, or allow the product to be climbed upon. the flat top of the merchandiser can, however, be used to support light weight POP materials or signage.**



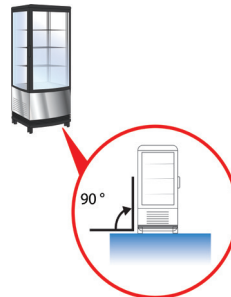
## NO HOLES!

Never make holes on or inside the appliance. Never attempt to install shelving or other elements onto the refrigerator, this will void your warranty and possibly damage the merchandiser.



## STABLE LOCATION

Unpack and install the refrigerator on a flat level surface that is stable, and suitable for installation.



## KEEP IT COLD

To ensure products freshness, avoid over-crowding products/items within the merchandiser.



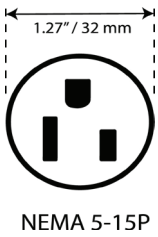
## KEEP IT COLD part 2

If the appliance is not maintaining the temperature required, check the appliance's internal storage temperature at least 2 (two) times daily. It is very likely the set point has been changed, the condensing unit ambient temperature is too high or the air circulation has been blocked.



**EXCLUSIVE POWER SOCKET**

Always use a NEMA 5-15 110-120V, 60Hz single phase power supply with an exclusive single phase three pin receptacle. the outlet must be grounded.



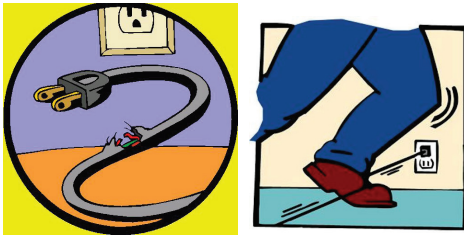
**DO NOT USE OUTLET POWER BARS, ADAPTERS, OR EXTENSION CORDS**



Never share the common socket with other appliances. If a duplex outlet is used, do not install more than 1 other appliance. (amp draw ≤ 7 amps)

**PROTECT CABLES**

DO NOT break or damage power cords. Current leakage and fire may occur as a result.



**NO WATER FLUSHING/POWER WASHING**



Never flush or spray water on or near this appliance. Current leakage may occur as a result, causing potential damage or safety hazards.

**AVOID FLAMMABLES AND EXPLOSIVES**



Never store dangerous products (such as ether, gasoline, or alcohol) near the refrigerator. Never put anything flammable or explosive inside the refrigerator.

**NO SPRAYING**

DO NOT spray flammables such as paint or similar protective coatings near or onto the refrigerator. Fire may occur as a result.



**AFTER POWER BREAK**

After a power outage or unplugging of the appliance, Always wait at least **5 minutes**, and then plug the refrigerator back in to start it again.



**NO MEDICINE/MEDICAL STORAGE**



this appliance is not rated for medicine/scientific/medical sample storage. Do not attempt to store these types of items inside the appliance. this is not covered under warranty.

**NOTES:**



- Always pre-chill items before loading them into the refrigerator.
- It is permissible to add decorative POP or similar promotional material to the opaque portion of the merchandiser, as long as it does not block air circulation.

- If this unit is promoting impulse sales, keep it clean with the products being neatly displayed. Ensure it is restocked several times a day.
- If fresh products/produce is displayed in the unit, develop a rotation system so that the customer does not pull the most fresh items from the front. (This is less important with pre-packaged products)

## Precautions and Use

### 1. Before use:

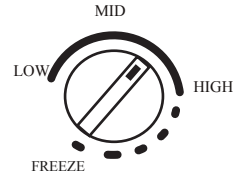
Plug the refrigerator into a (NEMA 5-15) 110-120V exclusive-use socket. After the refrigerator has run for a minimum of 4 hours, ensure it is sufficiently cold and at a desired target temperature before placing pre-chilled food or product inside.

### 2. Mechanical Temperature controller:

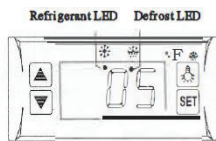
For nominal use, set the controller on the “**MID-HIGH**” setting.

If the controller is set to “**FREEZE**” the evaporator may frost and the refrigeration capability could be decreased.

The range of the controller is divided into settings of “**LOW, MID, HIGH** and **FREEZE**”, as shown. The temperature inside the refrigerator goes down if you turn the knob clockwise, while the temperature goes up if you turn it counter-clockwise.



### Digital Temperature Controller:



Refrigerant LED:  
LED is ON - Refrigeration cycle is on.  
LED is OFF - Cold room temperature is constant  
LED is blinking - Unit is experiencing a delayed start

Defrost LED:  
LED is ON - Defrost cycle is on  
LED is OFF - Defrost cycle finished  
LED is blinking - Unit is experiencing a delayed defrost

### Features and Functions

It is a mini-sized and integrated intelligent controller that regulates the compartment temperature as well as the condensing unit performance.

The main functions are:

- Temperature Display
- Temperature Control
- Value Storing
- Illumination Control
- Self Testing
- Parameter Locking
- Manual defrost cycling
- Programmed automatic defrost for reliable operation without manned intervention

### Front Panel Operation

#### 1. Set temperature:

Press **SET** button, the set temperature is displayed.

Press **▲** or **▼** button to modify and store the displayed value,

Press **SET** button to exit the adjustment and display the cold-compartment temperature.

**Note:** If a button is not pressed within 10 seconds, the cold-compartment temperature will be displayed.

#### 2. Illumination:

Press **Light** button, it lights.

Press **Light** again, it turns off.

#### 3. Manual start/stop defrosting of the merchandiser.

Press **Light** button and hold for 6 seconds to start or stop a defrost cycle.

### Cautions:

- Maintain a cold temperature inside the refrigerator and conserve energy by reducing the frequency you open the unit, and shortening the time the door is open during each occurrence.
- Never block the air suction or outlet. Maintain air circulation and the unit's refrigeration capability.
- Do not overload the storage compartment or have product touching, inside the refrigerator, as it will negatively influence the cooling effect. Adjust the rack height for proper food storage (with adequate air flow around each item including above and below all stored product).

## Precaution and Use (continued)

### Cautions (continued):

- Improper loading of the unit will void its warranty, as well as the quality, flavor and shelf-life of the products stored.
- Cool hot food down to room temperature before you put it into the merchandiser.
- Keep the refrigerator cold when the power is cut off. Try to reduce the frequency and duration when the door is opened to access product in this merchandiser.
- Only skilled service technicians should repair damaged power cables or service this refrigerator.
- DO NOT touch the compressor, it may cause burns as this component gets hot when it is running and takes over an hour to cool down to below 150°F.
- This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning the use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.
- Refer to this operations manual for all safety, operational, loading or installation information.

## Controller Programming

Mode	function	set range °C	Factory setting	set range °F	Factory Setting
E1	Lower set point limit	-20°C	2°C	-4°F	36°F
E2	Upper set point limit	45°C	7°C	113°F	45°F
E3	Temperature Differential	1 to 10°C	2°C	1 to 18°F	3°F
E4	Comp. start delay	0 to 10 minutes	1 minute	0 to 10 minutes	1 minute
E5	offset- room temp	-5 to 5°C	-2°C	23 to 41°F	28°F
E6	offset - evaporator temp	-5 to 5°C	0°C	23 to 41°F	32°F
F1	Max defrost duration	1 to 60 minutes	8 minutes	1 to 60 minutes	8 minutes
F2	Defrost frequency	0 to 24 hours	6 hours	0 to 24 hours	6 hours
F3	Defrost termination temp	0 to 20°C	5°C	32 to 68°F	41°F
F4	display during defrost	0 - Normal 1 - last value before defrost	0	0 - cabinet temp	0
C1	Temperature Units	0 for C 1 for F	1	0 for C 1 for F	1

NOTES:

\*These settings have been selected to make the unit operate as a “plug and play” appliance for most applications. Your specific needs and storage conditions may require several settings to be changed/modified. If that is the case, be sure to mark down the desired settings and impact on the appliance performance for future reference.

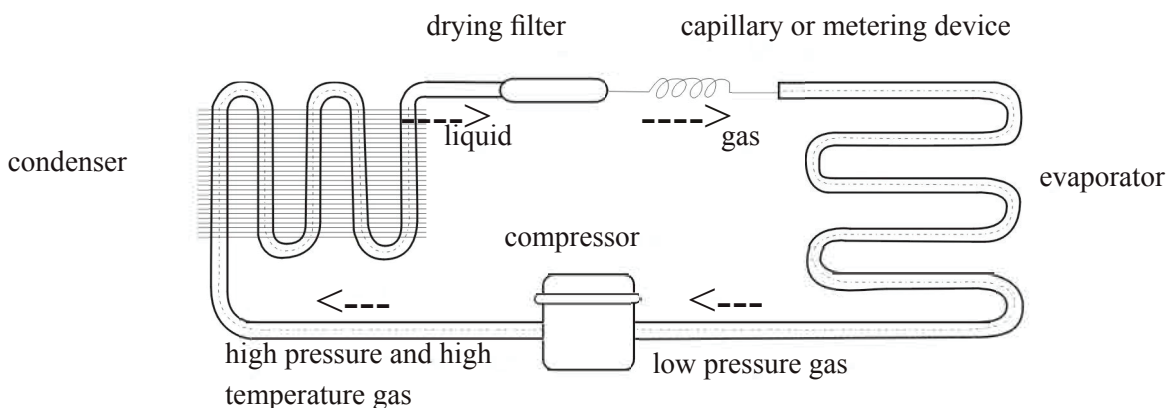
## Note !

The following phenomena are not malfunctions and should not be a source of concern:

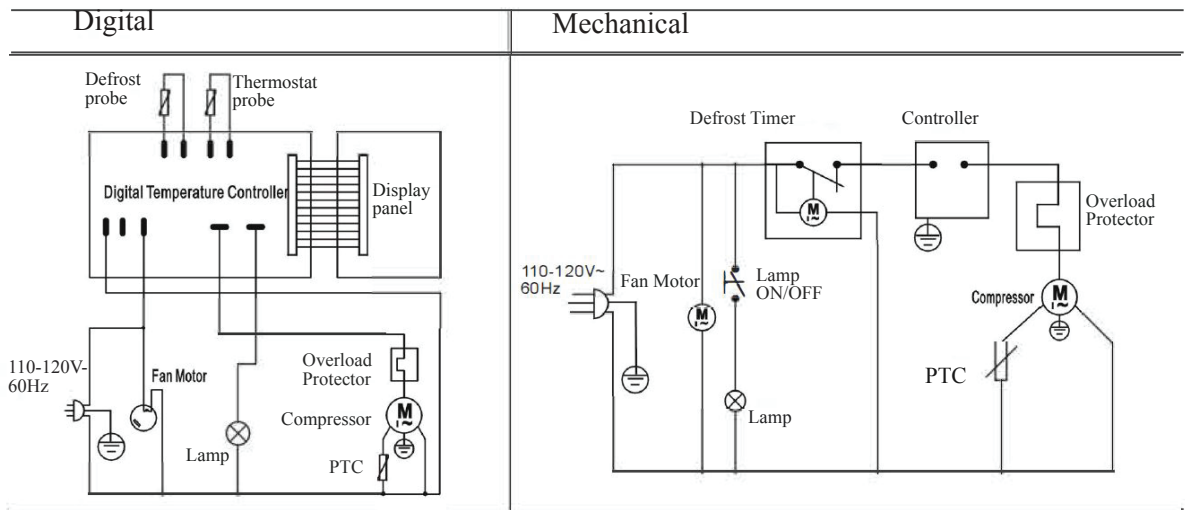
- The murmur of water is heard when the refrigerator is working/running. This is a normal event, as the coolant (in either a gas or liquid form) is circulating through the system.
- If the ambient temperature has a high relative humidity levels, condensation might be found on the outside of the refrigerator. This is a normal occurrence, which is caused by the high humidity. Simply use a soft dry cloth to wipe it. An ambient room relative humidity of  $\leq 50\%$  is desirable for this merchandiser to prevent surface sweating.

## Principles of Refrigeration Systems

The principle of compression refrigeration consists of “compression”, “condensation”, “throttling (metering)” and “vaporization”. The compression stage is regulated by the compressor, the condensation is handled by the condenser, the throttling/metering is executed by the unit’s capillary tube and the vaporization stage occurs in the evaporator. When the coolant is circulating through this closed refrigeration system, coolant enters the metering device capillary device and absorbs heat as it travels through the evaporator, as it transforms into a low pressure and low temperature gas. In the condenser, the refrigerant dissipates heat into the air, while the coolant is re-liquefied and throttled (monitored) by the capillary tube when it then enters the evaporator, where it then cools to a desired low pressure. The liquefied coolant quickly boils and vaporizes into gas with a rapid drop in temperature/pressure. Meanwhile, as the evaporator absorbs heat inside the refrigerator, which lowers the storage compartment temperature. This heat load is transferred to the refrigerant. Finally, the low pressure and low temperature gaseous coolant enters the compressor. This device turns the refrigerant into a hot, high pressure regulated state that is sent to the condenser to give off its heat to the room and convert the refrigerant back into a liquid state. It passes through a filter and drier to remove moisture and impurities from the refrigerant as it flows through this appliances gas. This process repeats itself continually within the unit to maintain the desired internal temperature, with the thermal control circuit regulating the entire process within the established temperature range for the unit. (36 to 48 °F is recommended)



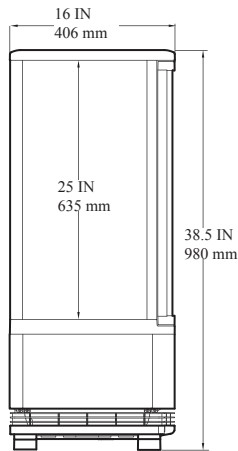
## Circuit Diagram



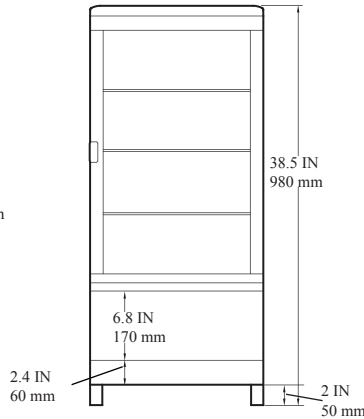
## Major Parameters

Parameter \ Model	MECR-31D	MECR-32D
Coolant and injection quantity(g)	R290 & 40 g / 1.4 oz	R290 & 40 g / 1.4 oz
General Rated input power(W)	200	200
Max ambient temperature (°F/°C)	80 °F (26°C)	80 °F (26°C)
Regulated temperature range (°F/°C)	34-39 °F (1-4°C)	34-39 °F (1-4°C)
Use grounded circuit	yes	yes
Rated Current (A):	2	2
Lamp power (W):	11(T4),1.44/PC(LED)	11(T4),1.44/PC(LED)
Total effective volume (l)	82 l (2.9 cu ft)	85 l (3.0 cu ft)
Net weight	36kg / 81.5 lbs	36.5kg / 82.5 lbs
Rated voltage (V)	110-120V uses NEMA 5-15	110-120V uses NEMA 5-15
Rated Frequency (Hz)	60	60
Overall dimension of closed unit (LxWxH)	(mm) 425x404x980 (in ) 16.7 x 15.9 x 38.5	(mm) 425x428x980 (in ) 16.7 x 16.8 x 38.5
Nominal temperature set point	37 °F (3 °C)	37 °F (3 °C)
Leg height countertop/floor	2 INCH	2 INCH

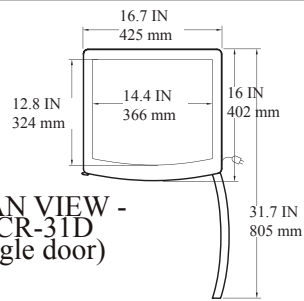
# Product Dimensions



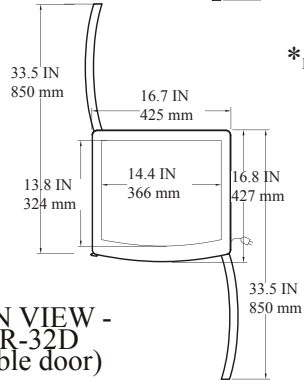
SIDE VIEW



FRONT VIEW



PLAN VIEW -  
MECR-31D  
(Single door)



PLAN VIEW -  
MECR-32D  
(Double door)

\*Doors depicted open

# Product Specifications

Model	MECR-31D	MECR-32D
<b>Electrical Data</b>		
Plug Type	NEMA 5-15P ⓘ	NEMA 5-15P ⓘ
Voltage	115/60/1	115/60/1
Full Load Amperes	2.6	2.6
Compressor HP	2/9	2/9
Power Rating	225 Watts	240 Watts
Cord Length (ft)	6.5	6.5
<b>Dimensional Data</b>		
Net Capacity (cu. ft)	3	3
Ext. Length Overall	16.7in (425mm)	16.7in (425mm)
Ext. Depth Overall	16in (406mm)	16.8in (427mm)
Ext. Height Overall	38.5in (978mm)	38.5in (978mm)
Int. Length Overall	14.4in (366mm)	14.4in (366mm)
Int. Depth Overall	12.75in (324mm)	13.2in (335mm)
Int. Height Overall	25in (635mm)	25in (635mm)
Net Weight (lbs.)	81.5	82.5
Gross Weight (lbs.)	89	90
Shelf Size (in.)	14.4 x 12.75	14.4 x 12.75
# of shelves	3	3
**Design and specifications subject to change without notice.		



## **Maintenance**

### **Notice:**

- Keep the refrigerator tidy, clean the inside /outside often and perform periodical maintenance as necessary. Never spray wash or flush the refrigerator with water.
- Never use an alkali detergent, soap, gasoline, acetone or brush on the surfaces for cleaning.
- Always unplug the appliance before executing any maintenance or cleansing operations.
- To prevent from electrical shock or a short circuit, NEVER use a damaged plug, frayed electrical cord, ungrounded circuit or loose socket.

### **1. Plan to Shut down refrigerator for an extended period of time:**

- Take all food out and unplug the wall socket.
- Clean both inside and outside of the refrigerator thoroughly and leave the door open until it is sufficiently dry as instructed below.

#### **A. Clean outside:**

- Dip a soft cloth into a neutral based detergent (tableware detergent) to clean the outside of the refrigerator and then wipe it with a dry soft cloth.

#### **B. Clean inside:**

- Take rack out for cleaning with water after applying a mild chlorine or quat sanitizing solution.
- Clean the condensate tray and wipe it dry.
- Insert an open box of baking soda to absorb any odors that may develop.

**\*Note:** The glass breaks easily. Keep children away from the glass.

## **Tips for Longterm Storage:**

If the unit is to be taken out of service **TEMPORARILY**;

1. Sanitize, clean and dry the unit thoroughly.
2. Place a box of baking soda and at least 2 ounces of silica gel dessicant in the sotrage compartment.
3. Close and secure the doors until unit is returned to service.

If the unit is to be taken out of service **PERMANENTLY**;

1. Employ a refrigeration technician to reclaim the refrigerant.
2. Remove the doors.
3. Discard all shelving and products inside the unit per the prevailing local codes and requirements.

Tips for loading the unit for display:

1. Do not crowd the items placed on any shelf.
2. Ensure the product storage is neat and organized in appearance through each of the 4 glass sides.
3. Ensure that the product identity is discernable (impulse purchases involve knowing and wanting a specific product).
4. Periodically check the display during the day to keep it stocked, organized and attractive.

**Troubleshooting Tips** (use these tips to help resolve the problem before calling for technical support for assistance)

Trouble	Possible Cause / Remedy
No refrigeration	Is the plug snugly plugged into the wall outlet? Is the fuse blown/circuit breaker tripped? Is there power to the circuit?
Unsatisfactory refrigeration	Is it in direct sunlight? Is there a heat source nearby? Is the surrounding ventilation bad? Does the door close well? Has the door been open for a long time? Is the door seal strip deformed or damaged? Is food congested or too excessive? Is the utility compartment temperature below 80°F Does food block the air suction or outlet? Is the temperature controller set and operating properly?
Too much noise	The refrigerator is not level. The refrigerator is in contact with a wall or other obstacle. There is a loose part in the refrigerator.
Still having problems? Contact our technical support team! Phone: <b>(877)368-2797</b>	

## Notes

- The electric circuit diagram and parameters as they appear on the product name plate reflect the as-built electrical design.
- The design and/or manual may be improved/revised without notice. Keep this user manual for future reference. Visit [www.maximumfoodservice.com](http://www.maximumfoodservice.com) for the most up to date version of this manual.
- Read this entire manual to ensure proper usage.
- Follow all safety precautions as described.
- Disconnect the power cord before attempting to work on or clean equipment. Disconnect power if the appliance will be idle for a long period of time.
- Do not attempt to remove any covers or parts yourself, as this can expose dangerous, high voltage wiring. Service should only be performed by an authorized or qualified technician.
- Always route power cords away from areas where they can be walked on or damaged.
- Never use extension cords, or plug more than one than one appliance into the same circuit. This can overload the power supply, which can result in electrical shock or fire.
- Your appliance is equipped with a polarized, grounded power plug. Never attempt to remove the ground post or use a non-polarized adapter, without properly grounding the equipment.
- If a replacement part is required at any point during the lifetime of this appliance, always insist on factory authorized components.
- If the supply cord is damaged, it must be replaced by the manufacturer, the distributors' service agent, or similarly qualified persons in order to avoid a fire hazard.
- Keep this manual handy for reference when training a new employee on its use or for the technician to help describe how this unit is intended to operate.
- Maintain a proof of purchase date for your appliance and return the warranty card immediately after purchase. This establishes when your warranty coverage began. If this hasn't been completed prior to a service request, the assistance may be excluded from your warranty coverage.

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This unit complies with the 2017 DOE  
electrical energy requirements.