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TECHNOLOGY GROUP

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Find the *Northland-Marvel / Marvel Scientific 3CARM002* at our website: ***Click HERE***

Installation Operation and Maintenance Instructions

Refrigerator Models

3CARM
6CARM
6CADM
8CARM

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Important Safety Instructions

Warnings and safety 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 when installing, maintaining, or operating this appliance.

Recognize Safety Symbols, Words, and Labels.

⚠ CAUTION

CAUTION-Hazards or unsafe practices which could result in personal injury or property or product damage.

⚠ WARNING

WARNING-Hazards or unsafe practices which could result in personal injury.

NOTE

NOTE-Important information to make a problem free installation.

AGA MARVEL is committed to building a quality product in an environmentally friendly manner. Our processes are tightly controlled and closely monitored. We have achieved certifications in ISO 9001 for quality assurance, ISO 14001 for environmental management, and OHSAS 18001 for occupational health and safety from Lloyd's Register Quality Assurance.

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UNPACKING YOUR REFRIGERATOR

Remove Packaging
Your refrigerator has been packed for shipment with all parts that could be damaged by movement securely fastened. Cut the banding material at the bottom of the carton, unfold the carton at the bottom and remove the carton from the appliance. Remove the plastic bag, styrofoam corner posts and any tape holding the door closed and internal components in place. The owners manual is shipped inside the refrigerator in a plastic bag along with the warranty registration card.

Important
Keep your carton packaging until your refrigerator has been thoroughly inspected and found to be in good condition. If there is damage, the packaging will be needed as proof of damage in transit. Afterwards please dispose of all items responsibly in particular the plastic bags which can be a suffocation hazard.

Note to Customer
This merchandise was carefully packed and thoroughly inspected before leaving our plant. Responsibility for its safe delivery was assumed by the retailer upon acceptance of the shipment. Claims for loss or damage sustained in transit must be made to the retailer.

DO NOT RETURN DAMAGED MERCHANDISE TO THE MANUFACTURER - FILE THE CLAIM WITH THE RETAILER.

NOTE

If the unit was shipped or has been laying on its back for any period of time allow the refrigerator to sit upright for a period of at least 24 hours before plugging in. This will ensure oil returns to the compressor. Plugging the refrigerator in immediately may cause damage to internal parts.

Warranty Registration

It is important you send in your warranty registration card immediately after taking delivery of your refrigerator or you can register online at www.agamarvel.com.

The following information will be required when registering your unit.
Model Number
Serial Number
Date of Purchase
Dealer's name and address

The model number and serial number can be found on the serial plate which is located inside the cabinet on the left side near the top.

⚠ CAUTION

Help Prevent Tragedies
Child entrapment and suffocation are not problems of the past. Junked or abandoned refrigerators are still dangerous, even if they sit out for "just a few days".

If you are getting rid of your old refrigerator, please follow the instructions below to help prevent accidents.

Before you throw away your old refrigerator or freezer:
- Take off the doors or remove the drawers.
- Leave the shelves in place so children may not easily climb inside.

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INSTALLING YOUR REFRIGERATOR

Select Location
The proper location will ensure peak performance of your appliance. We recommend a location where the unit will be out of direct sunlight and away from heat sources. To ensure your product performs to specifications the recommended installation location temperature range is from 55 to 100°F (13 to 38°C).

Cabinet Clearance
Ventilation is required from the bottom front section of the unit. Keep this area open and clear of any obstructions. Adjacent cabinets and counter top can be installed around the unit as long as the grille and door access remain unobstructed.

Leveling Legs
Adjustable legs at the front and rear corners of the unit should be set so the unit is firmly positioned on the floor and level from side to side and front to back. The overall height of your Marvel refrigerator may be adjusted from 33-3/4" (85.7cm) with the leveling legs turned in, and up to 34-3/4" (88.3cm) with the leveling legs extended. The 80 cabinets (30" wide) have a center leg at the rear of the cabinet that must also be used to stabilize the cabinet. (See Figure 2).

To adjust the leveling legs, place the refrigerator on a solid surface and protect the floor beneath the legs to avoid scratching the floor. With the assistance of another person, lean the refrigerator back enough to access the front leveling legs and remove the weight. Raise or lower the legs to the required dimension by turning the legs. Repeat this process for the rear by tilting the refrigerator forward using caution to prevent the door from opening. On a level surface check the refrigerator for levelness and adjust accordingly.

The front grille (toe kick) screws may be loosened and adjusted to the desired height. When adjustment is complete tighten the two toe kick screws. (See Figure 2).

⚠ CAUTION

Front Grille
Do not obstruct the front grill. The openings within the front grill allow air to flow through the condenser heat exchanger. Restrictions to this air flow will result in increased energy usage and loss of cooling capacity. For this reason it is important this area to not be obstructed and the grill openings kept clean. AGA MARVEL does not recommend the use of custom made grills as air flow may be restricted because of inadequate openings. (See Figure 1).

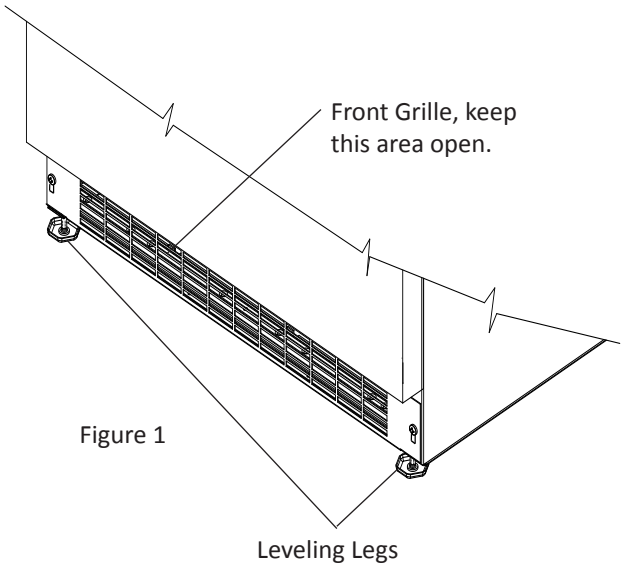


Figure 1

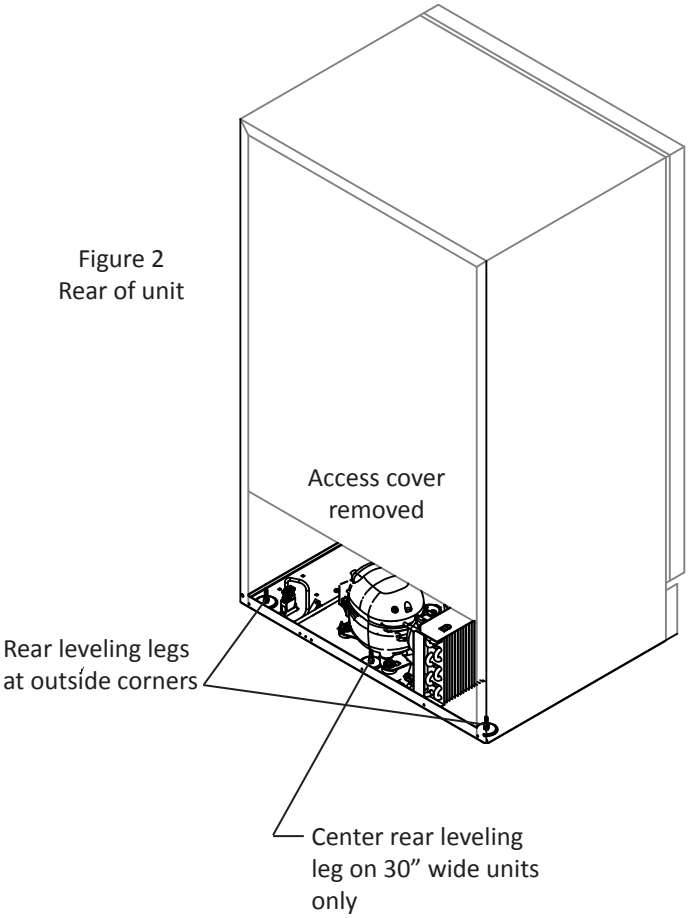


Figure 2
Rear of unit

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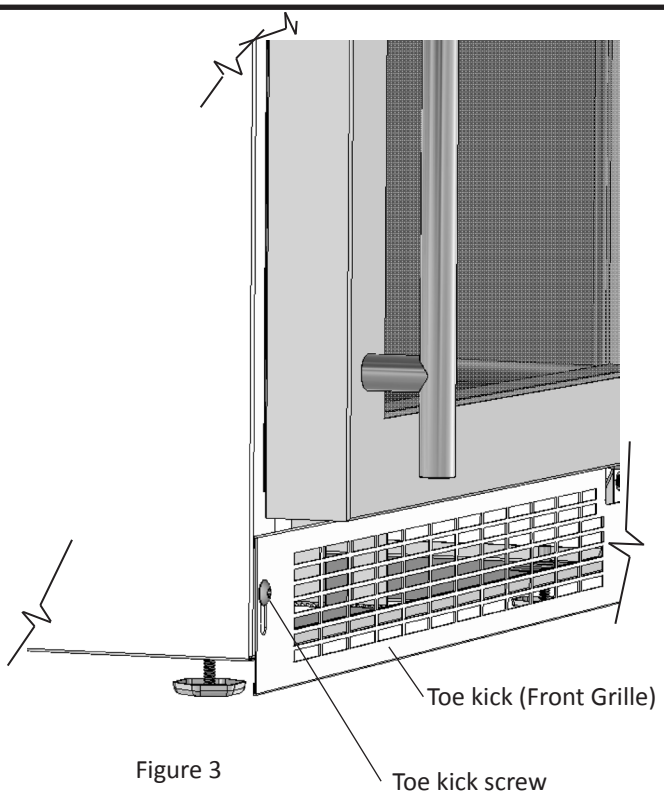


Figure 3

⚠ CAUTION

- **Do not splash or spray water from a hose on the refrigerator! Doing so may cause an electrical shock, which may result in severe injury or death.**
- **This unit should not, under any circumstances, be installed to an un-grounded electrical supply.**

Grounding Method

This product is factory equipped with a power supply cord that has a three-pronged, grounded plug. It must be plugged into a mating grounding type receptacle in accordance with the National Electrical Code and applicable local codes and ordinances (see Figure 4). If the circuit does not have a grounding type receptacle, it is the responsibility and obligation of the customer to provide the proper power supply. The third ground prong should not, under any circumstances, be cut or removed.

Electrical Requirements

Electrical Requirements: A 115 volt, 15 amp dedicated circuit is required. A 3 prong grounded receptacle is required.

The unit must be installed according to your local building codes and ordinances.

⚠ CAUTION **Do not use an extension cord with this appliance.**

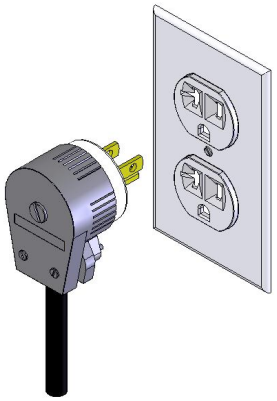


Figure 4

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HANDLE INSTALLATION AND DOOR ALIGNMENT

Handle Installation (Solid Door Models)

1. Remove the handle, (2) screws, and 5/32” allen wrench from the bag shipped inside the cabinet.
2. Locate handle opposite the hinges and secure in place using the (2) screws and the allen wrench. (See Figure 5).

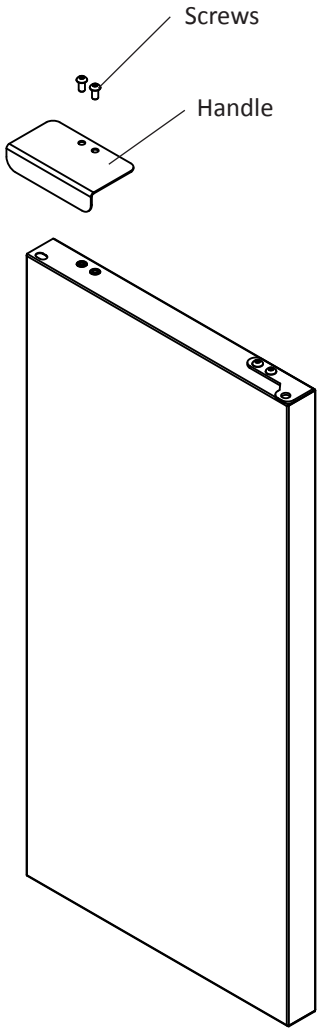


Figure 5

Right hand hinged door shown

Door Alignment Procedure

The door should be parallel to the sides and top of the refrigerator. If alignment is necessary the door may be adjusted by loosening the 2 screws which secure the hinge adapter brackets on the top and bottom of the door and adjusting the door side to side. Use a 5/32” allen wrench for this procedure. (See Figure 6 below). When finished aligning the door, tighten the screws securely.

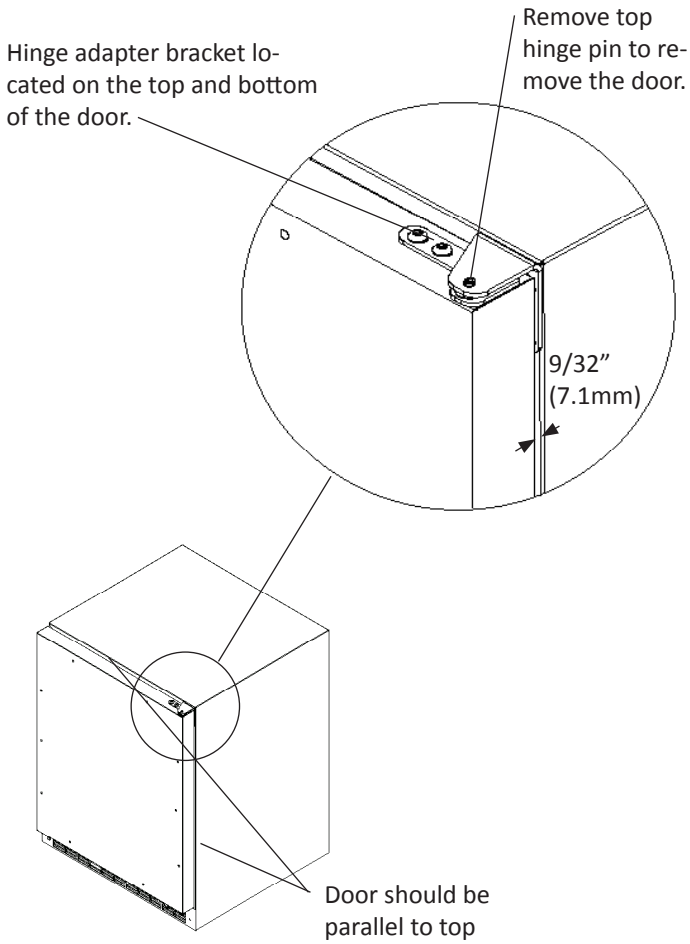


Figure 6

Door Reversal

It is possible to reverse the door (change from right hand swing to left hand swing or vice versa) if you wish. To do so it will be necessary to order one of the service kits below.

Hinge Color	Door Color	Right Hand	Left Hand
Chrome	Black	42247595	42247599
Chrome	White	42247639	42247640
Black	Black	42247596	42247600
White	White	42247597	42247601
Stainless Steel	Stainless Steel	42247598	42247602

NOTE

For the door to close properly, it is necessary to maintain a minimum space of 9/32” (7mm) between the door and cabinet flange (See Figure 6). This space can be adjusted by adjusting the top and bottom hinge adapter brackets.

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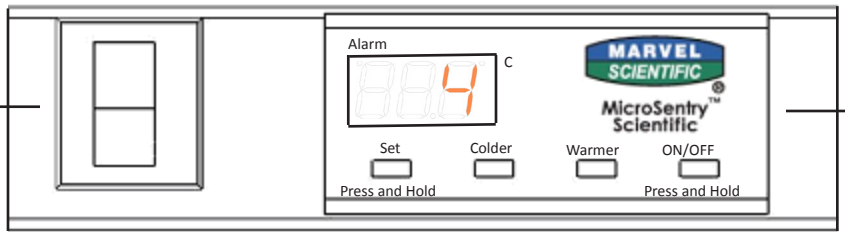


Figure 7

NOTE

During initial startup, or anytime power is interrupted, there will be an approximate 5 minute delay before the refrigerator starts. During this period the controller will be assessing the temperature in the refrigerator and the display will appear erratic, this is normal. The desired set temperature can be programmed during this start up period.

Starting your refrigerator

The refrigerator will begin start up when initially plugged in or when power resumes after a power outage. At this time the refrigerator will take approximately 5 minutes to begin running as noted above. If the refrigerator has been turned off during use, "OFF" will appear on the display. To start the refrigerator from the "OFF" position press and hold the ON/OFF button for three seconds.

Set temperature

To set the set temperature, press and continue to hold "SET" button. After one second, set temperature will be displayed. While holding "SET" button use the "WARMER" or "COLDER" button to desired set temperature.

NOTE

NOTE: Momentarily pressing & releasing "SET" button will access information menu of control. Refer to appendix A for information on this feature.

Refrigerator operation

The available temperature range of the refrigerator is 1° to 7° C. It may take up to 24 hours for your refrigerator to reach desired temperature. This will depend on amount of contents loaded and number of openings and closings of the door.

For best results allow refrigerator to "pull down" to desired set temperature before loading. Once contents are loaded, allow at least 48 hours for temperature to stabilize before making any adjustments to the set temperature.

Alarms

Your MicroSentry™ refrigerator control will monitor refrigerator function and alert you with a series of audible and visual alarms. For all alarm and error codes, the alarm LED located in the top left corner of the display panel will illuminate a steady amber. For all alarm and error codes except condenser cleaning, an audible alarm will sound, beeping in one (1) second intervals.

- **Door Ajar Alarm:** If the door has been left open for over five (5) minutes, the alarm will sound and the display panel will flash "do." The alarm will stop once the door has been closed.
- **High and Low Temperature Alarm:** If your unit reaches an unacceptable temperature, above or below your set temperature for too long, the temperature alarm will sound in one (1) second intervals. The display panel will flash either "hi" or "Lo" depending upon the condition. "hi" indicates a high temperature alarm, and "Lo" indicates a low temperature alarm. How far the temperature must deviate above or below set temperature, and for how long the temperature must remain there before the temperature alarm is triggered is fully customizable. See Appendix A for details on how to configure the alarm.
- **Temperature Sensor Fault:** If the control detects that the temperature sensor is not properly functioning, an audible alarm will sound, and "E1" will flash on the display. Please call AGA MARVEL customer service or your dealer if this error code is displayed.
- **Condenser Needs Cleaning:** When the refrigerator has reached the recommended amount of run time for a condenser cleaning, "cL" will flash on the display as a reminder to clean the condenser. No audible alarm is associated with the condenser clean warning. To clear the alarm:

1) Press and quickly release the SET key 7 times. "cnd" will be displayed on the screen.
2) While "cnd" is displayed, press and hold the SET key. The display will show the number of weeks the condenser has been operating.
3) Continue to hold the SET key, then press and release the ON/OFF key. The number shown on the display will be reset to 00.
4) Release the SET key.
5) The display will return to normal operation after a few seconds with no key presses.

See the detailed owner's reference guide for further details. See the "care and cleaning" section for cleaning instructions.

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Alarm Mute
Press any key to mute the audible portion of an alarm.
NOTE-This action will only mute the alarm. If the condition that caused the alarm continues, the alarm code will continue to flash and will sound for 20 seconds every 60 minutes.

Turning Refrigerator Off
To turn refrigerator off, press and hold "ON/OFF" button for three (3) seconds. "OFF"  will appear on the display.

Additional MicroSentry™ Features
Refer to Appendix A for details on additional features available.

Remote Alarm Interface
The MicroSentry™ control provides the ability to monitor alarm conditions via a set of dry relay contacts. Alarm functions that may be monitored by the dry contacts are: door ajar, high / low temperature, senor fault, and power failure. Note: Intentionally turning the unit off will disable all alarm outputs on the remote interface except power failure. It is recommended that the remote monitoring device(s) have an uninterruptible power source.

NOTE

The alarm interface follows the state of the alarms. Muting the alarm will not change the state of the relay contacts.

Remote Alarm Connections
Maximum Contact Rating: 125-250V 5A

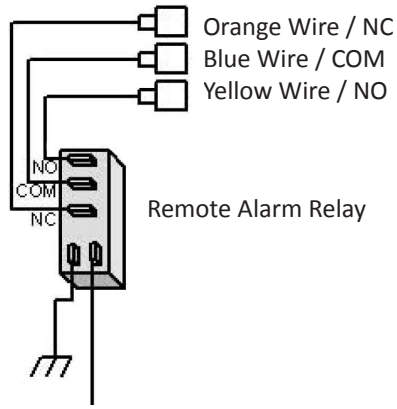
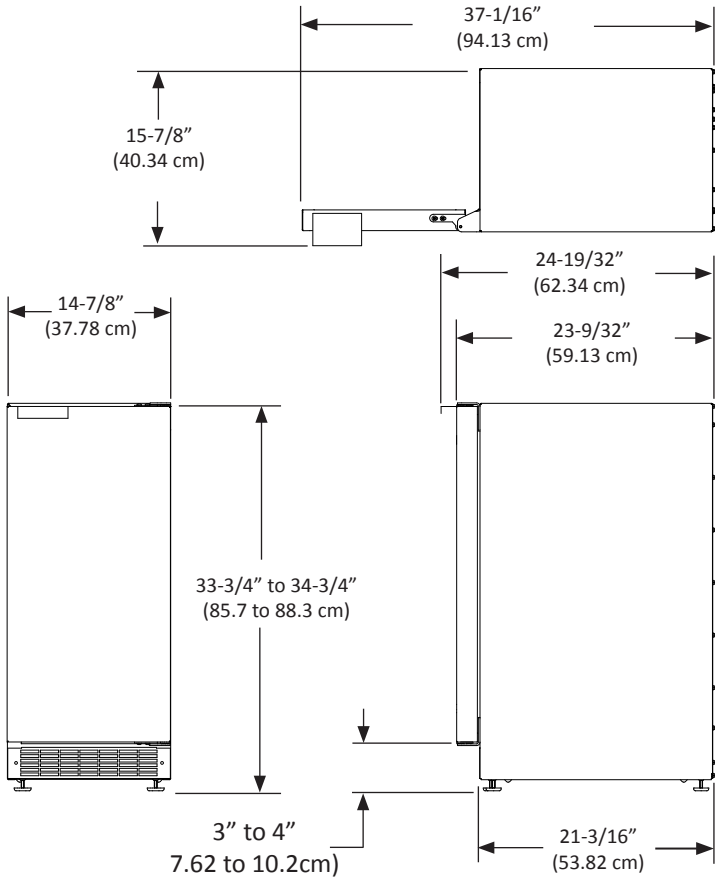


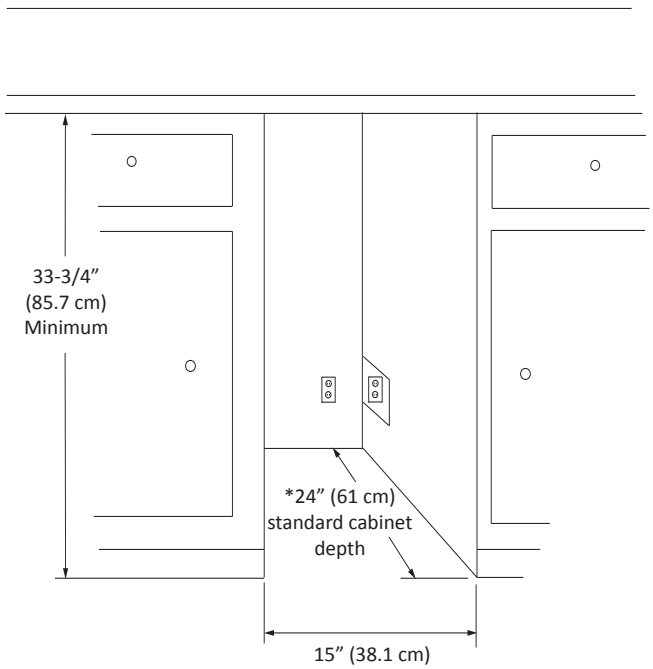
Figure 8

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DIMENSIONS FOR MODEL 3CARM SOLID DOOR



RECOMMENDED ROUGH IN OPENING DIMENSIONS, MODEL 3CARM SOLID DOOR



⚠ CAUTION

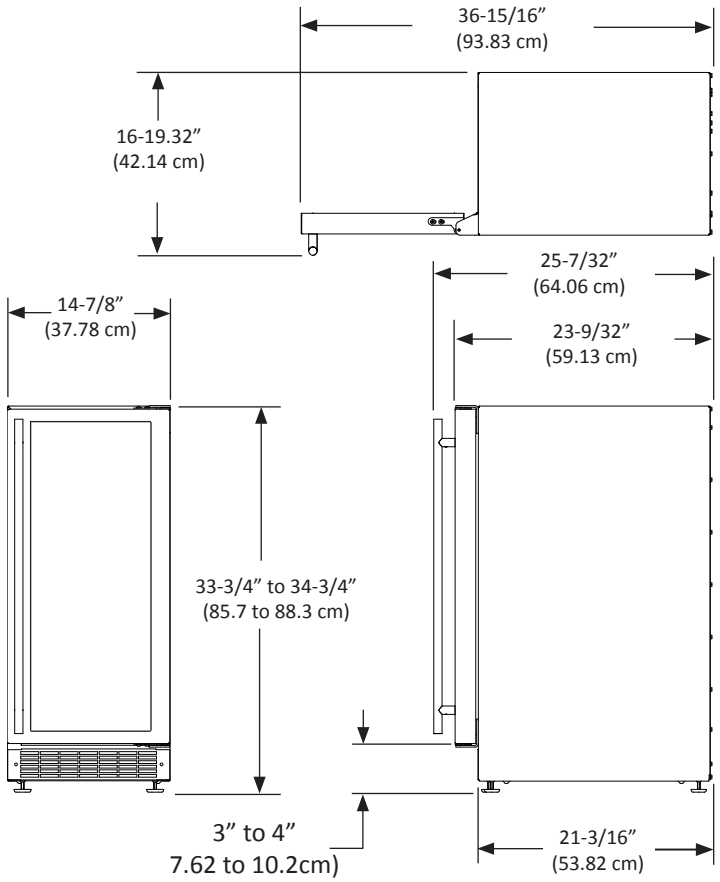
Electrical Requirements: A 115 volt, 15 amp dedicated circuit is required. A 3 prong grounded receptacle is required.

Power outlet can be located in the back wall behind unit. Add 1” to depth for thickness of plug, or recess outlet 1” into the wall. Power outlet can also be installed in adjacent cabinetry with a cutout for routing of power cord. Follow all local building codes when installing electrical and unit.
Product weight = 100 lbs. (45.4 kg.)

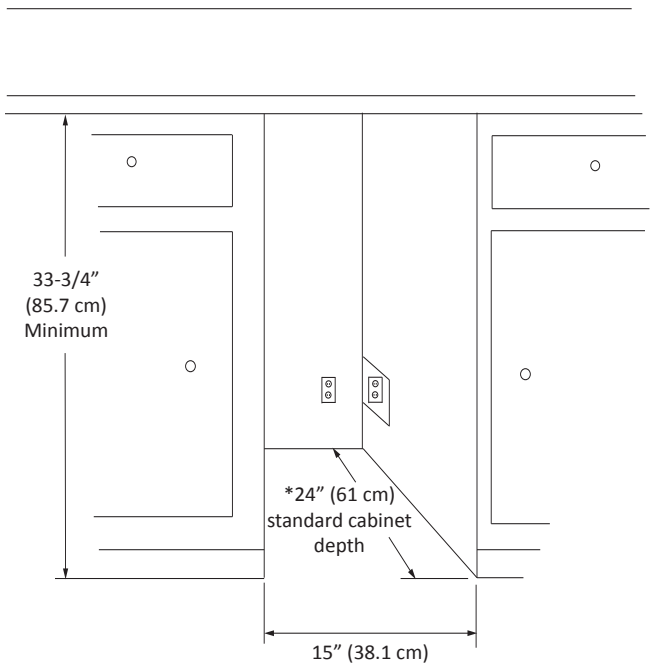
* Depth dimension may vary depending on each individual installation.

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DIMENSIONS FOR MODEL 3CARM WITH GLASS DOOR



RECOMMENDED ROUGH IN OPENING DIMENSIONS, MODEL 3CARM GLASS DOOR



⚠ CAUTION

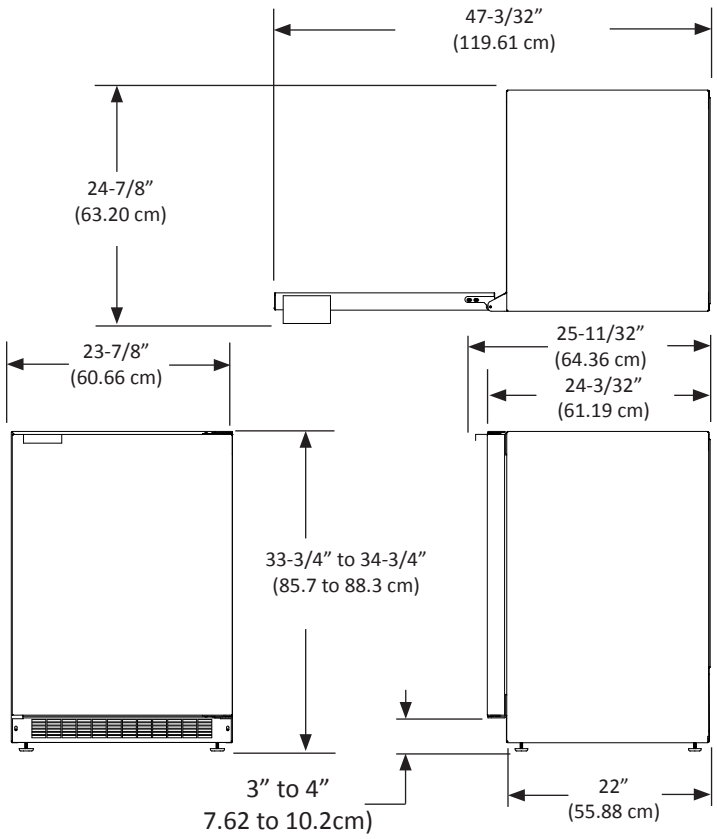
Electrical Requirements: A 115 volt, 15 amp dedicated circuit is required. A 3 prong grounded receptacle is required.

Power outlet can be located in the back wall behind unit. Add 1” to depth for thickness of plug, or recess outlet 1” into the wall. Power outlet can also be installed in adjacent cabinetry with a cutout for routing of power cord. Follow all local building codes when installing electrical and unit.
Product weight = 100 lbs. (45.4 kg.)

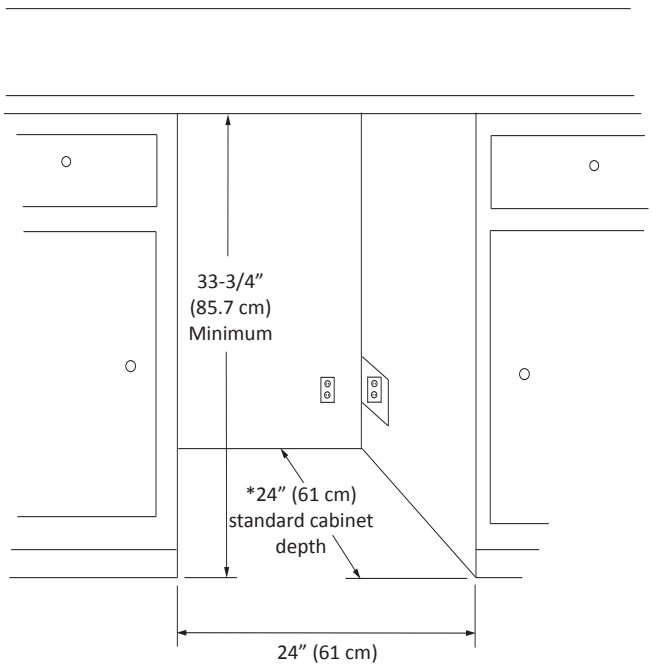
* Depth dimension may vary depending on each individual installation.

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DIMENSIONS FOR MODEL 6CARM SOLID DOOR



RECOMMENDED ROUGH IN OPENING DIMENSIONS, MODEL 6CARM SOLID DOOR



⚠ CAUTION

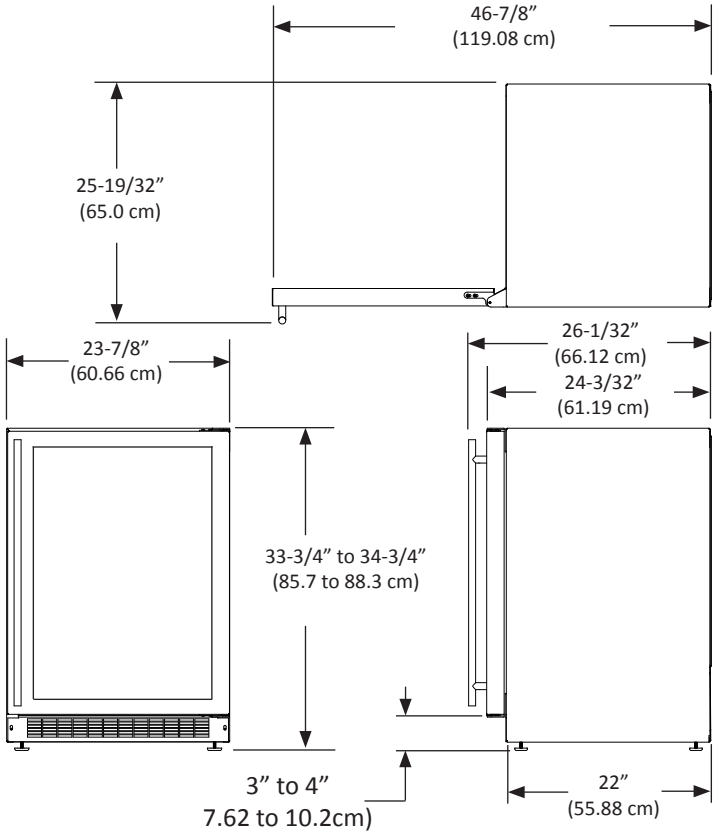
Electrical Requirements: A 115 volt, 15 amp dedicated circuit is required. A 3 prong grounded receptacle is required.

Power outlet can be located in the back wall behind unit. Add 1” to depth for thickness of plug, or recess outlet 1” into the wall. Power outlet can also be installed in adjacent cabinetry with a cutout for routing of power cord. Follow all local building codes when installing electrical and unit.
Product weight = 130 lbs. (59.1 kg.)

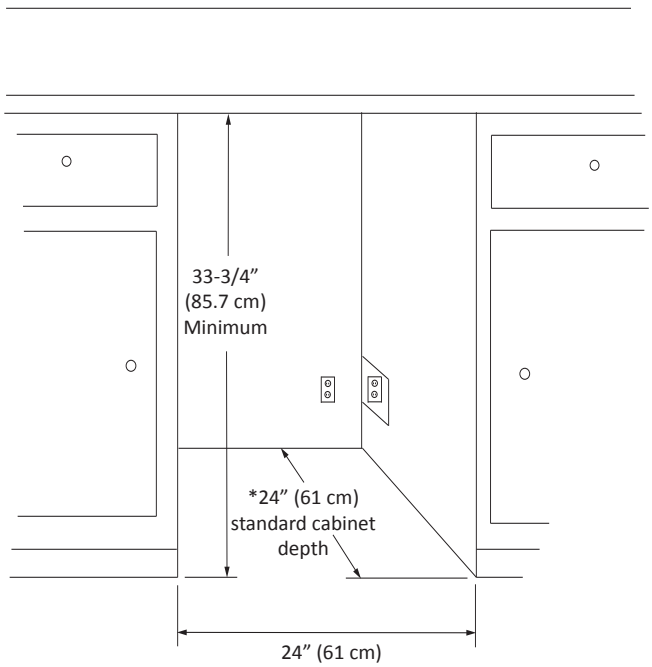
* Depth dimension may vary depending on each individual installation.

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DIMENSIONS FOR MODEL 6CARM GLASS DOOR



RECOMMENDED ROUGH IN OPENING DIMENSIONS, MODEL 6CARM GLASS DOOR



⚠ CAUTION

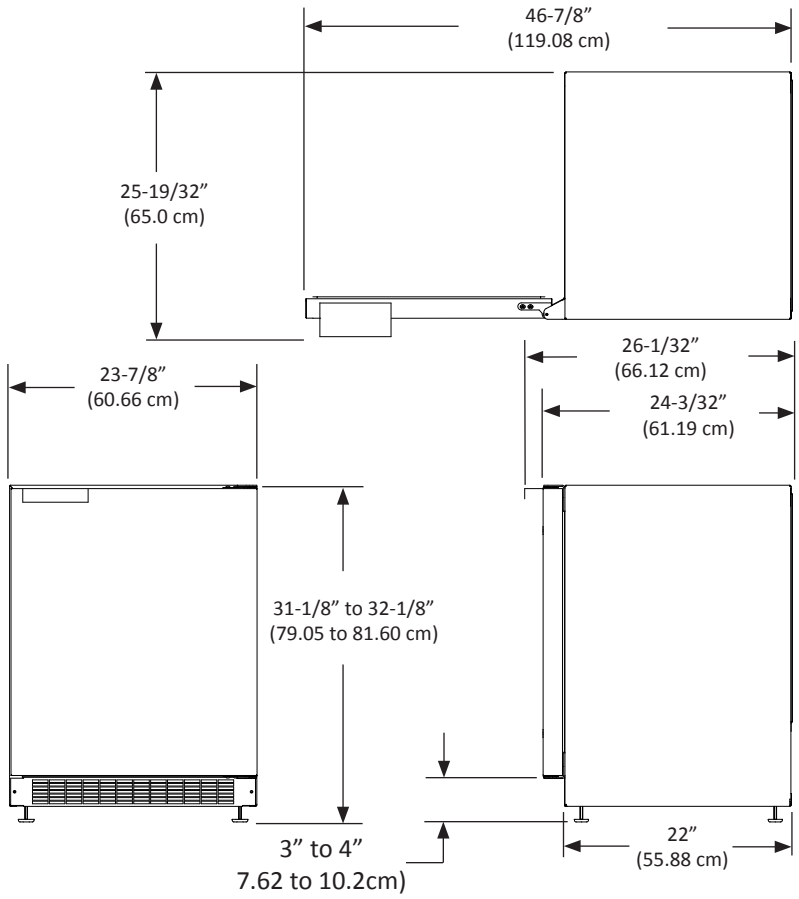
Electrical Requirements: A 115 volt, 15 amp dedicated circuit is required. A 3 prong grounded receptacle is required.

Power outlet can be located in the back wall behind unit. Add 1” to depth for thickness of plug, or recess outlet 1” into the wall. Power outlet can also be installed in adjacent cabinetry with a cutout for routing of power cord. Follow all local building codes when installing electrical and unit.
Product weight = 130 lbs. (59.1 kg.)

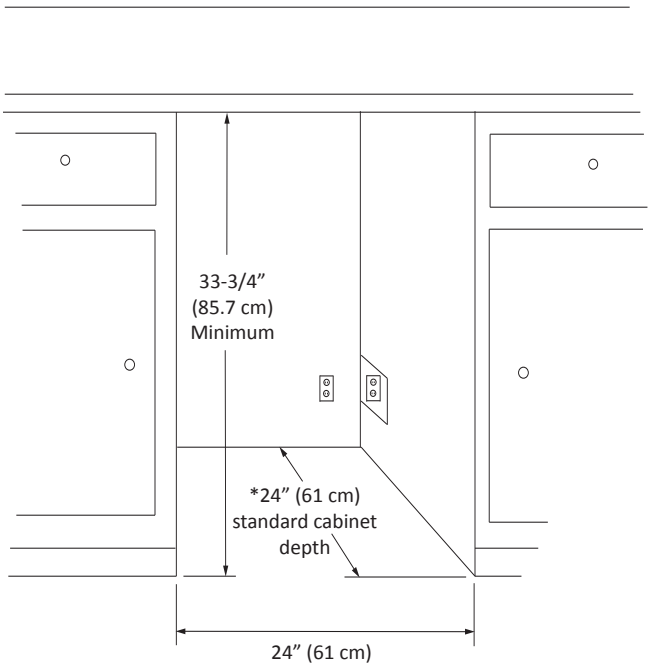
* Depth dimension may vary depending on each individual installation.

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DIMENSIONS FOR MODEL 6CADM



RECOMMENDED ROUGH IN OPENING DIMENSIONS, MODEL 6CADM



⚠ CAUTION

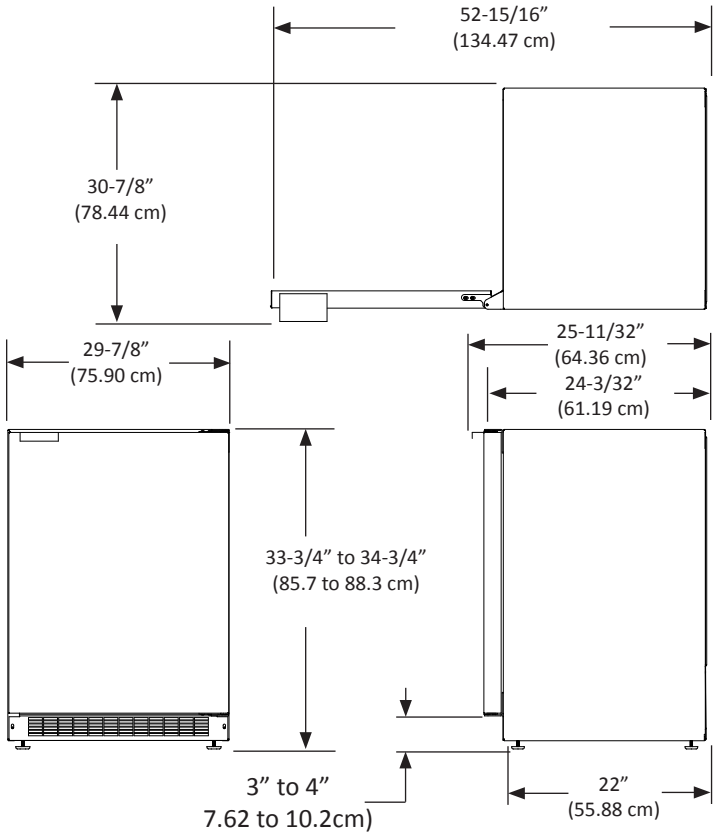
Electrical Requirements: A 115 volt, 15 amp dedicated circuit is required. A 3 prong grounded receptacle is required.

Power outlet can be located in the back wall behind unit. Add 1” to depth for thickness of plug, or recess outlet 1” into the wall. Power outlet can also be installed in adjacent cabinetry with a cutout for routing of power cord. Follow all local building codes when installing electrical and unit.
Product weight = 130 lbs. (59.1 kg.)

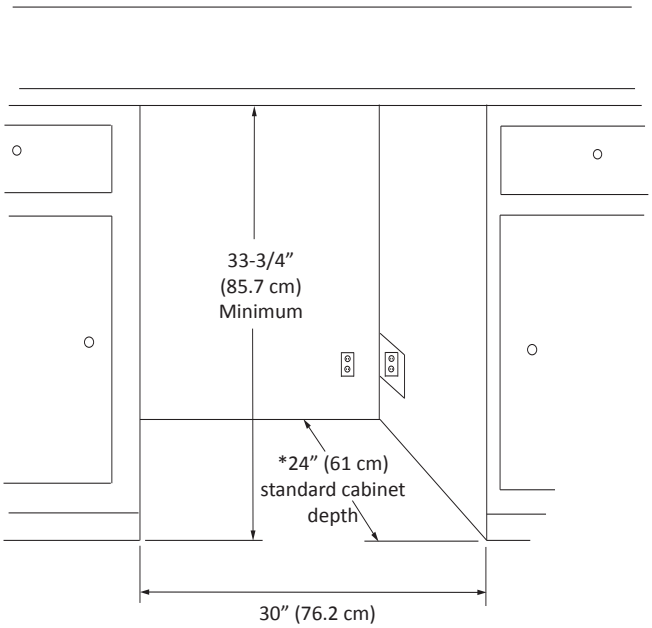
* Depth dimension may vary depending on each individual installation.

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DIMENSIONS FOR MODEL 8CARM



RECOMMENDED ROUGH IN OPENING DIMENSIONS, MODEL 8CARM



⚠ CAUTION

Electrical Requirements: A 115 volt, 15 amp dedicated circuit is required. A 3 prong grounded receptacle is required.

Power outlet can be located in the back wall behind unit. Add 1” to depth for thickness of plug, or recess outlet 1” into the wall. Power outlet can also be installed in adjacent cabinetry with a cutout for routing of power cord. Follow all local building codes when installing electrical and unit.
Product weight = 130 lbs. (59.1 kg.)

* Depth dimension may vary depending on each individual installation.

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FEATURES

3CARM Features
There are three full depth adjustable shelves for flexibility of content storage. The shelves can move up or down to accommodate various content sizes. To adjust the shelves, simply lift up and pull forward.

6CARM and 8CARM Features
There are two adjustable shelves for flexibility of content storage. The shelves can move up or down to accommodate various content sizes. The lower shelf pulls straight out. The top shelf is fixed in place with plastic clips in the rear.

Door Shelves 6CARM and 8CARM
To maximize storage efficiency, three door shelves are included to store a variety of contents.

Bottom Shelf Bar 6CARM and 8CARM
A bottom shelf bar is included to prevent contents from falling forward.

6CADM Features
Flat door liner.
Two pull out shelves with safety stops.
One stationary shelf that can accommodate tall contents.

Probe Port (optional)
The optional probe port is a hole from the inside to the outside of the unit, which could be located on the top, side, or back of the unit. After inserting your wires or probe, seal the hole tightly with caulk, putty, foam, etc. for proper operation.

Glass Door (optional)
The optional glass door gives you the ability to see your contents without opening the door.

Lock and Key (optional)
The optional lock and key allow you to lock and store contents to prevent others from tampering with it.

Product Temperature versus Air Temperature
Air temperature moves up and down with door openings and compressor run and off cycles. Air has little thermal mass and therefore changes temperature relatively quickly as the unit cycles on and off. Stored products have much higher thermal mass so their temperatures change much slower. While air temperature may change 5 to 10 degrees C between run and off cycles, stored product temperature typically changes less than 2 degrees C due to their thermal mass. Always measure product temperature, not air temperature, to determine if the products being stored are at the proper temperature.

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ENERGY SAVING TIPS AND CARE AND CLEANING

The following suggestions will minimize the cost of operating your refrigeration appliance.

1. Do not install your appliance next to a hot appliance, (ovens, glassware washers, etc.). heating air duct, or other heat sources.
2. Install product out of direct sunlight.
3. Ensure the toe grille vents at front of unit beneath door are not obstructed and kept clean to allow ventilation for the refrigeration system to expel heat.
4. Plug your appliance into a dedicated power circuit. (Not shared with other appliances).
5. When initially loading your new product, or whenever large quantities of warm contents are placed within refrigerated storage compartment, minimize door openings for the next 12 hours to allow contents to pull down to compartment set temperature.
6. Maintaining a relatively full storage compartment will require less appliance run time than an empty compartment.
7. Ensure door closing is not obstructed by contents stored in your appliance.
8. Allow hot items to reach room temperature before placing in product.
9. Minimize door openings and duration of door openings.
10. Use the warmest temperature control set-temperature that provides the proper storage for your stored contents.
11. Set the control to the “off” position if cleaning the unit requires the door to be open for an extended period of time.
12. Annually clean condenser heat exchange coil located in machine compartment underneath unit, (see “Care and cleaning” page 16).

Condenser
The condenser underneath the cabinet does not require frequent cleaning; however, satisfactory cooling depends on adequate ventilation over this heat exchanger. It is recommended to annually clean the condenser by vacuuming and brushing. To access the condenser, the unit must be pulled out from the installation, and the lower machine compartment access cover removed.

⚠ CAUTION

Disconnect the power cord before cleaning the condenser.

Be sure that nothing obstructs the required air flow openings in front of the cabinet. At least once or twice a year, brush or vacuum lint and dirt from the front grille area (see page 4).

Cabinet
The painted cabinet can be washed with mild soap and water and thoroughly rinsed with clear water. NEVER use abrasive scouring cleaners.

Interior
Wash interior compartment with mild soap and water. DO NOT use an abrasive cleaner, solvent, polish cleaner or undiluted detergent.

Glass Door (optional)
Use a glass cleaner or mild soap and water and soft cloth to clean the glass door model. DO NOT use any abrasive cleaners.

Door Gasket
The vinyl gasket may be cleaned with mild soap and water, a baking soda solution or a mild scouring powder.

In the Event of a Power Failure
Minimize the number of door openings to prevent a gradual rise in temperature while the power is off.

NOTE: If a power interruption occurs, the unit may take five (5) to ten (10) minutes to restart.

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TROUBLESHOOTING YOUR REFRIGERATOR

Before You Call for Service
If the unit appears to be malfunctioning, read through this manual first. If the problem persists, check the troubleshooting guide below. Locate the problem in the guide and refer to the cause and its remedy before calling for service. The problem may be something very simple that can be solved without a service call. However, it may be required to contact your dealer or a qualified service technician.

If Service is Required:
- If the product is within the first year warranty period please contact your dealer or call AGA MARVEL Customer Service at 800.223.3900 for directions on how to obtain warranty coverage in your area.
- If the product is outside the first year warranty period, AGA MARVEL Customer Service can provide recommendations of service centers in your area. A listing of authorized service centers is also available at www.agamarvel.com under the service and support section.

⚠ WARNING

Electrocution Hazard - Never attempt to repair or perform maintenance on the unit until the main electrical power has been disconnected. Turning the unit control "OFF" does not remove electrical power from the units wiring.

- In all correspondence regarding service, be sure to give the model number, serial number, and proof of purchase.
- Try to have information or description of nature of the problem, how long the unit has been running, the room temperature, and any additional information that may be helpful in quickly solving the problem.
- Table A is provided for recording pertinent information regarding your product for future reference.

For Your Records	
Date of Purchase	
Dealer's name	
Dealer's Address	
Dealer's City	
Dealer's State	
Dealer's Zip Code	
Appliance Serial Number	
Appliance Model Number	
Date Warranty Card Sent (Must be within 10 days of purchase).	

Table A

Problem	Possible Cause	Remedy
Unit not cold enough.	• Control set too warm. • Airflow to front grille blocked. • Excessive usage or prolonged door openings. • Door gasket not sealing properly.	• Adjust temperature colder. (See "Set temperature" on page 7). Allow 24 hours for temperature to stabilize. • Airflow must not be obstructed to front grille. See "clearances" on page 4. • Allow temperature to stabilize for at least 24 hours. • Check door alignment and/or adjust or replace door gasket.
Unit too cold.	• Control set too cold.	• Adjust temperature warmer. (See page 7, "set temperature"). Allow 24 hours for temperature to stabilize.
Noise or Vibration.	• Unit not level.	• Level unit, see "Leveling Legs" on page 4.
Unit will not run.	• Unit turned off. • Power cord not plugged in. • No power at outlet.	• Turn unit on. See "Starting your refrigerator" on page 7. • Plug in power cord. • Check house circuit.

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COMMERCIAL PRODUCT WARRANTY

Entire Product - One Year Parts and Labor Warranty
AGA MARVEL warrants to the original purchaser that it will supply all necessary parts and labor to repair or replace in the end user's establishment, any component which is found by an authorized representative of AGA MARVEL to be defective in materials or workmanship, subject to the conditions and exclusions stated below, for a period of one year from the date of purchase by the end user.

Refrigeration System - Additional Second Through Fifth Year Parts Only Warranty
During the four years following expiration of the one year limited warranty, AGA MARVEL warrants to the original purchaser that it will supply replacement parts for the hermetically sealed refrigeration system which consists of the compressor, evaporator, condenser, drier, and connecting tubing that are found to be defective in workmanship or materials. Other parts, labor costs, and freight charges are the responsibility of the end user.

If AGA MARVEL is unable to repair or replace the defective product or component, AGA MARVEL shall issue a credit to the buyer for all or part of the purchase price, as AGA MARVEL shall determine. The repair, replacement, or payment in the manner described above shall be the sole and exclusive remedy of buyer for a breach of this warranty.

Buyer must give written notice of any alleged defect in the product to AGA MARVEL within 30 days after discovery of the defect by buyer. If notice is not given within such period, any claim for breach of warranty shall be conclusively deemed to have been waived, and AGA MARVEL shall not be liable under these warranties. AGA MARVEL or its agents shall be entitled to examine the product. AGA MARVEL shall have the option of requiring the return of the defective component, transportation prepaid, to establish the claim. The acceptance by AGA MARVEL of any component returned shall not be deemed an admission that the product is defective or in breach of any warranty and, if AGA MARVEL determines that the product is not defective, the component shall be reshipped to the buyer at the buyer's expense. No component will be returned to AGA MARVEL without its prior consent.

The above warranties do not cover:

- Shipping costs of replacement parts or returned defective parts.
- Customer education or instructions on how to use the refrigerator/freezer.
- Any content loss, or incidental or consequential damage or loss due to product failure.
- Removal or installation.

Nor do the above warranties cover failure of this product or its components due to:

- Transportation, damage sustained in transit, or subsequent damages.
- Use in hostile environments or use for storage of contents hostile to the product.
- Improper installation, misuse, abuse, accident, or alteration, use on wiring not conforming to electrical codes, low voltages, failure to provide necessary maintenance, or other unreasonable use.
- Parts or service not supplied or designated by AGA MARVEL.

The above warranties also do not apply if:

- The original bill of sale, deliver date, or serial number cannot be verified.
- The refrigeration equipment is not in the possession of the original end use purchaser.

The warranties set forth herein are the only warranties extended by AGA MARVEL and are in lieu of all warranties, express, implied, statutory, or otherwise. In particular, AGA MARVEL makes no warranty of merchantability or fitness for a particular purpose.

AGA MARVEL's liability for any defect in the product shall not exceed the purchase price of the product. **AGA MARVEL shall have no liability for consequential damages of any kind whatsoever, including, but not limited to, personal injury, property damage, lost profits, or other economic injury due to any defect in the product.**

No person, firm, or corporation is authorized to modify, expand, or extend these warranties, to waive any of the limitations or exclusions, or to make any other warranty or assume any other obligation for AGA MARVEL. These warranties apply only to products used in any of the fifty states of the United States and the District of Columbia.

To obtain performance of this warranty, report any defects to:

AGA MARVEL
1260 E. VanDeinse St.
Greenville MI 48838-0400
Phone: 616.754.5601
Toll-Free: 800.223.3900

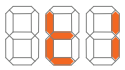
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APPENDIX A, ADDITIONAL MICROSENTRY™ FEATURES

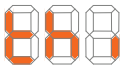
Information Menu / Lockout Key
To access the information menu, press the SET key, and immediately release it.

In the information menu, a 2 or 3 digit code will be displayed representing each entry in the information menu. The first code displayed will be t1. With each sequential press and release of the SET key, the following codes will appear in this order: t1, thi, tLo, Ahi, ALo, AdL, cnd, and Loc.

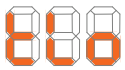
To view the value of each code, press and hold the SET key after the desired code is displayed. Additionally, the WARMER and COLDER keys may be used to scroll through the menu. To exit the information menu, press the ON/OFF key, or wait for several seconds with no key presses.



1) Current Interior Temperature (tI): While tI is shown on the screen press and hold the "SET" key to display the current interior temperature.



2) Maximum Stored Temperature (thi): While thi is shown on the screen, press and hold the "SET" key to display the maximum recorded temperature. The temperature is updated every 5 minutes. To reset the maximum temperature; continue to hold the SET key, then press and release the ON/OFF key to reset the maximum temperature. The maximum temperature will be reset to the current compartment temperature.
It is recommended that thi be reset after the initial pull-down (24 hours after power on) to clear any residual values.



3) Minimum Stored Temperature (tLO): While tLo is shown on the screen, press and hold the "SET" key to display the minimum recorded temperature. The temperature is updated every 5 minutes. Continue to hold the SET key then, press and release the ON/OFF key to reset the minimum temperature. The minimum temperature will be reset to the current compartment temperature. It is recommended that tLo be reset after the initial pull down (24 hours after power on) to clear any residual values.



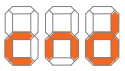
4) Relative High Temperature Alarm (Ahi): The number of degrees C warmer relative to the set temperature that will initiate a high temperature alarm. Once the compartment temperature exceeds the high temperature alarm value, the control will delay AdL minutes before initiating the alarm. See Alarm Delay section below for instructions to set alarm delay. While Ahi is displayed on the screen, press and hold SET key to view the value of Ahi. To adjust the value, continue to hold SET then use the WARMER and COLDER keys until the desired value is shown on the screen. Release the SET key to confirm the new setting. Factory default value for Ahi is 2.0°C.
Note: Setting Ahi = 0 will disable the high temperature alarm. The control's 2°C Hysteresis value is automatically added to Ahi. For example, let set temperature = 4°C, and Ahi = 3. The high temperature alarm will activate at 9°C = (4 [set temperature] + 3 [Ahi] + 2 [hysteresis])



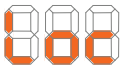
5) Relative Low Temperature Alarm (ALO): The number of degrees C colder relative to set tem perature that will initiate a low temperature alarm. Once the compartment temperature exceeds the low temperature alarm value, the control will delay AdL minutes before initiating the alarm. See Alarm Delay section below for instructions to set alarm delay. While ALo is displayed on the screen, press and hold SET key to view the value of ALo. To adjust the value, continue to hold SET then use the WARMER and COLDER keys until the desired value is shown on the screen. Release the SET key to confirm the new setting. Factory default value for ALo is -2.0°C.
Note: Setting ALo = 0 will disable the low temperature alarm. No hysteresis value is added to ALo. For example, let set temperature = 4°C, and ALo = -3. The low temperature alarm will activates at 1°C = (4 [set temperature] + -3 [ALo])

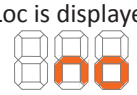


6) Alarm Delay (AdL): The number of minutes the compartment temperature must be outside the range specified by Ahi and ALo before a temperature alarm activates. While AdL is shown on the screen, press and hold SET key to view the value of AdL. To adjust the value, continue to hold SET then use the WARMER and COLDER keys until the desired value is shown on the screen. Release SET key to confirm the new setting. Factory default value for AdL is 60 minutes.



7) Total Operating Time of the Condenser Since the Last Cleaning (cnd): The operating time of the condenser since the last cleaning. The control monitors the operating time of the condenser fan to determine when the condenser is in need of being cleaned. While cnd is displayed on the screen, press and hold SET key to view the value of cnd. The value shown is the number of weeks the condenser has been operating. To reset cnd, continue to hold the SET key then press and release the ON/OFF key.
When the control recommends the condenser be cleaned, a reminder will be displayed on the screen (see Alarm Codes.) To clear the alarm code, reset the value in cnd following the instructions printed above.



8) Keypad Lockout Feature (Loc): This feature is used to prevent incidental changes to the set temperature, or accidentally turning the unit off. While Loc is displayed on the screen, press and hold the SET key. If "No"  is displayed, Lockout feature is off, and all keys are enabled. If "Yes"  is displayed, Lockout feature is ON. The ability to turn the unit on and off, as well as the ability to adjust set temperature will be disabled. To change the keypad lockout setting, continue to hold the SET key, then use the WARMER and COLDER keys to set the desired value.

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