

## REFRIGERATED DELI DISPLAY CASES

Thank you for purchasing this Vollrath® product! Save this manual for reference and the packaging in case shipping is necessary.

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### SAFETY PRECAUTIONS

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To help ensure safe use, please read and fully understand this manual and all safety messages before operation!



#### WARNING

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



#### CAUTION

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

**NOTICE: addresses practices not related to physical injury.**

#### **To reduce risk of injury or damage to the unit**

- Equipment must be installed by a qualified person.
- Use only grounded electrical circuits and outlets that match the nameplate-rated voltage. Do not use extension cords or power strips of any kind.
- Never modify the wiring, cord, or plug. This could damage the unit and cause injury and will void the warranty.
- Use in a flat, level position.
- Unplug unit and let it cool completely before cleaning or moving.
- Closely supervise unit when operating in public areas and/or around children and unplug after use.
- Keep unit and power cord away from open flames, electric burners, and excessive heat.
- Only operate properly functioning, undamaged units.
- Always attend the unit when operating.















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### UL GUIDANCE FOR PRODUCTS WITH R290 REFRIGERANT

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This product utilizes R290 Refrigerant. Follow all safety precautions for use of R290.

## UL GUIDANCE FOR PRODUCTS WITH R290 REFRIGERANT CONTINUED

	 <b>WARNING</b> Keep clear of obstruction all ventilation openings in the appliance enclosure or in the structure for building-in.
	 <b>WARNING</b> Do not use mechanical devices or other means to accelerate the defrosting process.
	 <b>WARNING</b> Do not damage the refrigerating circuit.
	 <b>WARNING</b> Do not use electrical appliances inside the food/ice storage compartments.
	 <b>WARNING</b> Component parts shall be replaced with like components so as to minimize the risk of possible ignition due to incorrect parts.
	 <b>WARNING</b> Appliance is to be installed in accordance with the Safety Standard for Refrigeration Systems, ANSI/ASHRAE 15.
	 <b>WARNING</b> <ul style="list-style-type: none"><li>• Do not use means to clean, other than those recommended by Vollrath®.</li><li>• The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater.</li><li>• Do not pierce or burn.</li><li>• Be aware that refrigerants may not contain an odor.</li></ul>



**WARNING**

Prior to beginning work on systems containing **FLAMMABLE REFRIGERANTS**, safety checks are necessary to ensure that the risk of ignition is minimized. For repair to the **REFRIGERATING SYSTEM**, the following steps shall be completed prior to conducting work on the system.

**Work procedure**

- Work shall be undertaken under a controlled procedure so as to minimize the risk of a flammable gas or vapour being present while the work is being performed.

**General work area**

- All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.

**Checking for presence of refrigerant**

- The area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e., non-sparking, adequately sealed, or intrinsically safe.

**Presence of fire extinguisher**

- If any hot work is to be conducted on the refrigerating equipment or any associated parts, appropriate fire extinguishing equipment shall be available on hand. A dry chemical or CO2 fire extinguisher should be adjacent to the charging area.

**No ignition sources**

- No person carrying out work in relation to a **REFRIGERATING SYSTEM** which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment shall be surveyed to make sure that there are no flammable hazards or ignition risks. “No Smoking” signs shall be displayed.

**Ventilated area**

- Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.

**Checks to the refrigerating equipment**

- Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times, Vollrath® maintenance and service guidelines shall be followed. If in doubt, consult the Vollrath® technical department for assistance.

**The following checks shall be applied to installations using **FLAMMABLE REFRIGERANTS**:**

- A. The actual **REFRIGERANT CHARGE** is in accordance with the room size within which the refrigerant containing parts are installed,
- B. The ventilation machinery and outlets are operating adequately and are not obstructed,
- C. If an indirect refrigerating circuit is being used, the secondary circuit shall be checked for the presence of refrigerant,
- D. Marking to the equipment continues to be visible and legible. Markings and signs that are illegible shall be corrected,
- E. Refrigerating pipe or components are installed in a position where they are unlikely to be exposed to any substance which may corrode refrigerant containing components, unless the components are constructed of materials which are inherently resistant to being corroded or are suitably protected against being so corroded.

**Checks to electrical devices**

Repair and maintenance to electrical components shall include initial safety checks and component inspection procedures. If a fault exists that could compromise safety, then no electrical supply shall be connected to the circuit until it is satisfactorily dealt with. If the fault cannot be corrected immediately but it is necessary to continue operation, an adequate temporary solution shall be used. This shall be reported to the owner of the equipment, so all parties are advised. Initial safety checks shall include:

- A. That capacitors are discharged: this shall be done in a safe manner to avoid possibility of sparking;
- B. That no live electrical components and wiring are exposed while charging, recovering or purging the system;
- C. That there is continuity of earth bonding.



**WARNING**

**Repairs to sealed components**

- During repairs to sealed components, all electrical supplies shall be disconnected from the equipment being worked upon prior to any removal of sealed covers, etc. If it is absolutely necessary to have an electrical supply to equipment during servicing, then a permanently operating form of leak detection shall be located at the most critical point to warn of a potentially hazardous situation.
- Particular attention shall be paid to the following to ensure that by working on electrical components, the casing is not altered in such a way that the level of protection is affected. This shall include damage to cables, excessive number of connections, terminals not made to original specification, damage to seals, incorrect fitting of glands, etc.

**Ensure that the apparatus is mounted securely.**

- Ensure that seals or sealing materials have not degraded to the point that they no longer serve the purpose of preventing the ingress of flammable atmospheres. Replacement parts shall be in accordance with the manufacturer's specifications.

**Cabling**

- Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges, or any other adverse environmental effects. The check shall also **take into account the effects of aging or continual vibration** from sources such as compressors or fans.

**Detection of flammable refrigerants**

Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

The following leak detection methods are deemed acceptable for all refrigerant systems:

- Electronic leak detectors may be used to detect refrigerant leaks but, in the case of **FLAMMABLE REFRIGERANTS**, the sensitivity might not be adequate, or might need **re**-calibration. (Detection equipment shall be calibrated in a refrigerant-free area.) Ensure that the detector is not a potential source of ignition and is suitable for the refrigerant used. Leak detection equipment shall be set at a percentage of the LFL of the refrigerant and shall be calibrated to the refrigerant employed, and the appropriate percentage of gas (25 % maximum) is confirmed.
- Leak detection fluids are also suitable for use with most refrigerants but the use of detergents containing chlorine shall be avoided as the chlorine can react with the refrigerant and corrode the copper pipe-work.
- If a leak is suspected, all naked flames shall be removed/extinguished.
- If a leakage of refrigerant is found which requires brazing, all of the refrigerant shall be recovered from the system, or isolated (by means of shut off valves) in a part of the system remote from the leak.



### WARNING

#### Decommissioning

Before carrying out this procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of recovered refrigerant. It is essential that electrical power is available before the task is commenced.

- A. Become familiar with the equipment and its operation.
- B. Isolate the system electrically.
- C. Before attempting the procedure, ensure that:
  - i. Mechanical handling equipment is available, if required, for handling refrigerant cylinders;
  - ii. All personal protective equipment is available and being used correctly;
  - iii. The recovery process is supervised at all times by a competent person;
  - iv. Recovery equipment and cylinders conform to the appropriate standards.
- D. Pump down refrigerant system, if possible.
- E. If a vacuum is not possible, make a manifold so that refrigerant can be removed from various parts of the system.
- F. Make sure that cylinder is situated on the scales before recovery takes place.
- G. Start the recovery machine and operate in accordance with instructions.
- H. Do not overfill cylinders (no more than 80 % volume liquid charge).
- I. Do not exceed the maximum working pressure of the cylinder, even temporarily.
- J. When the cylinders have been filled correctly and the process completed, make sure that the cylinders and the equipment are removed from site promptly and all isolation valves on the equipment are closed off.
- K. Recovered refrigerant shall not be charged into another REFRIGERATING SYSTEM unless it has been cleaned and checked.
- L. Labelling: Equipment shall be labelled stating that it has been de-commissioned and emptied of refrigerant. The label shall be dated and signed. For appliances containing FLAMMABLE REFRIGERANTS, ensure that there are labels on the equipment stating the equipment contains FLAMMABLE REFRIGERANT.

## FUNCTION AND PURPOSE

Vollrath® Refrigerated Deli Display Cases keep chilled, prepared foods—deli (TCS-Time/Temperature Control for Safety) products—at proper serving temperatures 32–41 °F (0–5 °C) and have a temperature range of 32–46 °F (0–7.8 °C). They may also be used at ambient temperatures for displaying food that does not need to remain cold. Self-Serve models are available with customer-side sliding doors for product unloading and operator-side doors for product loading. Refrigerated cases are **not intended or designed to cool or chill food, or for overnight storage of perishable food**—nor are they intended for household, industrial or laboratory use.

## UNPACKING THE UNIT

If the unit has been transported in a non-vertical position, allow at least one hour before operating.

1. Remove all packing material and tape, as well as any protective plastic; dispose of in an environmentally-responsible way when no longer needed.
2. Remove bolts that secure the unit to the pallet.
3. Clean any glue residue left over from the plastic or tape.
4. If adjusting shelf positions, remove the screws above the shelves and cover open slots with silicone plugs.

## INSTALLATION

### Clearance and Environmental Requirements

- Units are for indoor use only.
- Place unit away from direct sunlight.
- Countertop cases allow for zero clearance.
- Carefully handle, move, and use the unit to avoid damaging the refrigerant tubing and/or increasing the risk of a leak.
- Operator side and top must remain open and accessible for proper operation and service. Blocking intake or exhaust vents can cause reduced performance or damage; maintain at least 12" (30.5 cm) clearance between operator side vent and wall.
- Leave at least 2" of airspace between product on the top shelf and the top glass.
- Sufficient air circulation is required for proper operation. Interior bottom platform vents must remain open, product cannot overhang shelves, and the middle shelf must have openings between products to allow airflow to the top shelf.
- Relative humidity should be a maximum of 60%.
- Maximum ambient temperature is 86 °F (30 °C) in < 61% humidity. Higher humidity reduces maximum ambient temp.

**NOTICE: Using voltage other than the nameplate-rated voltage or modifying the power cord or electrical components will damage unit and void the warranty.**

### COUNTERTOP MODELS

1. Place unit on a flat, stable surface.
2. Ensure back vent and control panel are accessible for ventilation. Proceed to step 3.



Curved Drop-In



Curved Countertop



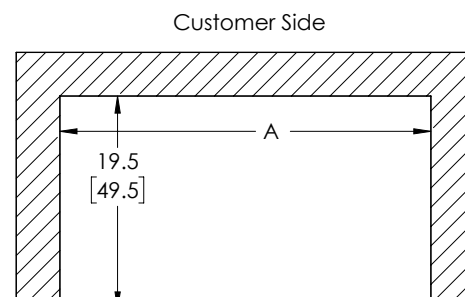
Cubed Countertop



Cubed Countertop, Self-Serve

Item	Model	Description
RDCCV-36DI	RDC9136	Curved Drop-In—36"
RDCCV-48DI	RDC9148	Curved Drop-In—48"
RDCCV-60DI	RDC9160	Curved Drop-In—60"
RDCCV-36	RDC9236	Curved Countertop—36"
RDCCV-48	RDC9248	Curved Countertop—48"
RDCCV-60	RDC9260	Curved Countertop—60"
RDCCB-36	RDC9336	Cubed Countertop—36"
RDCCB-48	RDC9348	Cubed Countertop—48"
RDCCB-60	RDC9360	Cubed Countertop—60"
RDCCB-36SS	RDC9436	Cubed Countertop, Self-Serve—36"
RDCCB-48SS	RDC9448	Cubed Countertop, Self-Serve—48"
RDCCB-60SS	RDC9460	Cubed Countertop, Self-Serve—60"

### DROP-IN MODELS



1. Choose a flat, level countertop for the mounting surface.
2. Measure cutout area; see drawing above. Leave operator side open for ventilation and access to control panel.

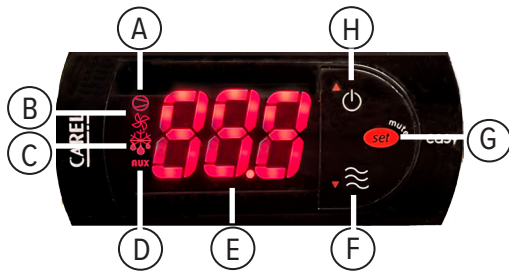
<b>Cabinet Width</b>	<b>36"</b>	<b>48"</b>	<b>60"</b>
<b>Cutout Width (A)</b>	34" (86.4 cm)	46" (116.8 cm)	58" (147.3 cm)

## ALL MODELS

**NOTICE:** Equipment is required to either use the provided 4" legs or be sealed to the countertop to establish proper sanitary operation. To seal the equipment to the countertop, a flat and nonporous countertop is required. Silicone sealant certified by NSF to NSF/ANSI Standard #51 is recommended. Apply the sealant around the perimeter of the equipment to form a water-tight seal to the countertop. Following this procedure will prevent liquid spillage on adjacent surfaces from passing under the equipment.

1. Seal base to countertop with food-grade silicone. Optional 4" adjustable legs are available through Vollrath®.
2. Plug the equipment into a properly grounded electrical supply matching the nameplate rating.
3. After installation, the thin breather wires at the upper corner of the glass may be trimmed and crimped closed.

## FEATURES AND CONTROLS




- A. Compressor Cycle Light—(⚡) illuminates steadily when the compressor is running and flashes when in Delay Cycle (flashing could last about two minutes and is normal).
- B. Fan Indicator (🌀)—Blinks when unit is turned on and is in Delay Mode. Illuminates steadily when the fan is on and stays lighted during Cooling Mode, Defrost Cycle, and when the compressor is on or off. Indicator is off in Ambient Mode.
- C. Defrost Indicator—(❄️) illuminates steadily when unit is defrosting and flashes when in delay cycle (flashing lasts about two minutes and is normal). Display case enters auto-defrost mode approximately every 3 hours for 10 minutes.
- D. Glass Heater Indicator—(AUX) illuminates when defogging.
- E. Number Display—shows the current temperature or the temperature being programmed.
- F. Down Triangle/Heat—(▼ ≈) decreases temperature or activates glass heater defog, dependent upon mode.
- G. Set—(set) turns temperature setting mode ON or OFF.
- H. Up Triangle/Controller Power—(▲ ⏻) turns controller ON or OFF or increases the temperature, dependent upon mode.

## OPERATION

**NOTICE:** Before operation, clean the unit as directed.

**NOTICE:** The United States Public Health Service recommends cold food be held at a maximum of 41 °F (5 °C) to help prevent bacteria growth; monitor temperature closely.

	<b>⚠️ WARNING</b>
	<b>Electrical Shock Hazard.</b> Keep liquids from getting inside the unit. Do not immerse or spray cord, plug, or unit with liquid—this could cause an electrical shock. Do not use if the power cord is damaged or modified.

## SHELF & BOTTOM PLATFORM WEIGHT CAPACITY

**NOTICE:** Distribute weight evenly.

36"	48"	60"
40 lb (18.1 kg)	48 lb (21.7 kg)	55 lb (24.9 kg)

## PREPARED, COLD FOOD DISPLAY USE

1. Press Up Triangle/Controller Power (▲ ⏻) until unit turns on and temperature displays (about 3 seconds).
2. Press (set) until the temperature flashes.
3. Adjust the temperature by pressing the Up Triangle (▲) to increase or the Down Triangle (▼) to decrease.
4. Press (set); cooling will resume at selected temperature.
5. Let unit cool for about 30 minutes, then **place prepared food chilled to the proper serving temperature.**

### Lights

1. Press Up Triangle/Controller Power (▲ ⏻) and Down Triangle/Heat (▼ ≈) together to turn LED lights on or off; **Lt** should display or flash.

### Glass Heater Defog

1. Press Down Triangle/Heat (▼ ≈) until **AUX** illuminates (about 3 seconds) to turn defog on; **HE** should display or flash.
2. When glass is clear, push the Down Triangle/Heat (▼ ≈) again to turn off the glass heater. **HE** should display or flash.

### Manual Defrost

1. Press Down Triangle/Heat (▼ ≈) and (set) together until Defrost Light illuminates (about 3 seconds); **dF** should display or flash. Cycle stops automatically when unit is defrosted (approximately 10 minutes).
2. To manually stop defrosting, press Down Triangle/Heat (▼ ≈) and (set) again until Defrost Light turns off—about 3 seconds; **dF** should display or flash.


### NOTICE:

- **The Refrigerated Deli Display Case is intended to display cold food for a limited amount of time. It is not designed nor intended to be used as a storage refrigerator.**
- **Unit must be completely emptied and shut down daily to allow it to defrost.**

## AMBIENT TEMPERATURE, NON-CHILLED DISPLAY USE

1. Turn on lights by pressing Defrost and Controller Power ( ⏻ ) together. Display will flash "En" in Ambient Temperature mode.  
**NOTICE: Do not manually defrost or use unit in Ambient Temperature mode when displaying foods that need to be chilled to remain at safe serving temperatures. Unit enters Ambient mode as soon as the unit is plugged in.**

## CLEANING AND MAINTENANCE

	<b>WARNING</b>
	<b>Electrical Shock Hazard.</b> Keep liquids from getting inside the unit. Do not immerse or spray cord, plug, or unit with liquid—this could cause an electrical shock. Do not use if the power cord is damaged or modified.

1. Empty and unplug unit; allow it to cool completely. **Unit must be emptied and shut down daily to allow it to defrost.**
2. Dip a cloth in soapy water and wipe the unit; rinse and dry thoroughly; a non-toxic glass cleaner can be used for the glass.
3. As needed, remove the back panel to clean the condenser filter and carefully remove debris from coil fins with a stiff brush.
4. Inspect door rollers and gasket monthly; clean and replace as needed.
5. Have a qualified person inspect and clean the condenser coil, evaporator, compressor compartment, fans, and condensate drain and pan twice a year or as necessary.
6. Check function and performance at least monthly, clean and replace condenser filter as needed.

## TROUBLESHOOTING

Problem	Potential Cause	Course of Action
Unit does not have power.	Unit is not plugged in or switched on.	Plug the unit in and turn it on.
	Outlet is faulty.	Have a qualified person replace the outlet.
	Circuit breaker tripped.	Reset the circuit breaker
Compressor does not run.	Controller, compressor, or capacitor are faulty.	Contact Vollrath® Technical Services.
Compressor runs; cabinet is too warm.	Ambient temperature is too high.	Decrease ambient temperature.
	Evaporator has excessive ice/frost.	Defrost the unit (see above).
	Condenser or evaporator fan is dirty or faulty.	Contact Vollrath Technical Services.
There is a buildup of frost.	Unit has not been defrosted.	Empty unit and defrost overnight.

## SERVICE AND REPAIR

Serviceable parts are available on [vollrathfoodservice.com](http://vollrathfoodservice.com).

To avoid serious injury or damage, never attempt to repair the unit or replace a damaged power cord yourself. Do not send units directly to The Vollrath Company LLC. Please contact Vollrath Technical Services for instructions. **Component parts shall be replaced with like components and servicing shall be done by factory-authorized service personnel, so as to minimize the risk of possible ignition due to incorrect parts or improper service.**

When contacting Vollrath Technical Services, please be ready with the item number, model number (if applicable), serial number, and proof of purchase showing the date the unit was purchased.

## WARRANTY STATEMENT FOR THE VOLLRATH CO. L.L.C.

The Vollrath Company LLC warrants to the original commercial end user that each of Vollrath's foodservice products will be free from defects in materials and workmanship.

For warranty period, exclusions, and details, visit [vollrathfoodservice.com/vollrath-resources/warranty-info/warranty-policy](http://vollrathfoodservice.com/vollrath-resources/warranty-info/warranty-policy).

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