

Merchandising Equipment

BEST PRACTICES GUIDE

As a leader in retail merchandising selling environments, Structural Concepts can help bring your vision to life with merchandisers that last longer, save energy, and minimize operating costs, by delivering the most attractive, reliable, temperature-controlled display cases making it easier to better display and sell more fresh food with the knowledge and expertise of interior and environmental design with a passion for visual merchandising.

This guide provides important information on the application for Structural Concepts display merchandisers as well as provides troubleshooting solutions for equipment in the field.



Equipment Placement and Climate

Optimal performance of your merchandising display case is dependent on where it is placed and the surrounding temperatures of the selling environment.

Placement and Location

Consider the 5'-10'-15' Rule where the display case will be positioned relative to walls, ceilings, HVAC vents, windows and other equipment discharging warm air.

Stay 5' away from an exterior window

Direct sunlight increases the heat load on the front of the display resulting in the refrigeration system having to work harder and possible condensation on the case.

Remain 10' away from HVAC ceiling vents

Air blowing on the front of the display interrupts the air curtain and causes product temperatures to increase. With service display cases that have a glass front, air blowing on the front glass causes condensation to develop.

Position the display 15' away from exterior doors

Air drafts from the front exterior doors interrupt the air curtain, allowing warm air to penetrate the inside of the display, which in turn affects product temperature.

Additional Notes

- Minimum 4" clearance to walls & ceilings.
- Some models can be positioned tight to the wall & ceiling.
- Keep exterior doors and windows closed whenever possible. Openings to the outdoors can introduce warm, humid air into the space, making it difficult to maintain the recommended 75°F and 55% relative humidity operating environment for refrigerated display equipment.
- Refer to spec sheets & design guide for further information.

Environmental Temperatures

Consider the temperature and humidity levels of the environment where the display will be operating.

The NSF standard for refrigerated display equipment is an environment maintained at 75°F and 55% relative humidity.

If foodservice environments exceed 75°F and 55% relative humidity during part, or most, of the day, condensation can develop on the exterior of the display and/or water may overflow onto the floor because the evaporator pan cannot keep up with the moisture load.

Be sure to consider the impact that an energy management system (EMS) or smart thermostat may have on environmental conditions over a 24-hour period. Because the display case operates 24/7, temperature and humidity levels must remain consistent at all times. Avoid overnight or weekend HVAC setbacks that allow conditions to exceed recommended levels, as they can lead to condensation, condensate pan overflow, and potential performance issues.



Understanding the Air Flow Design And Refrigeration Cycle of Your Structural Concepts Food Display



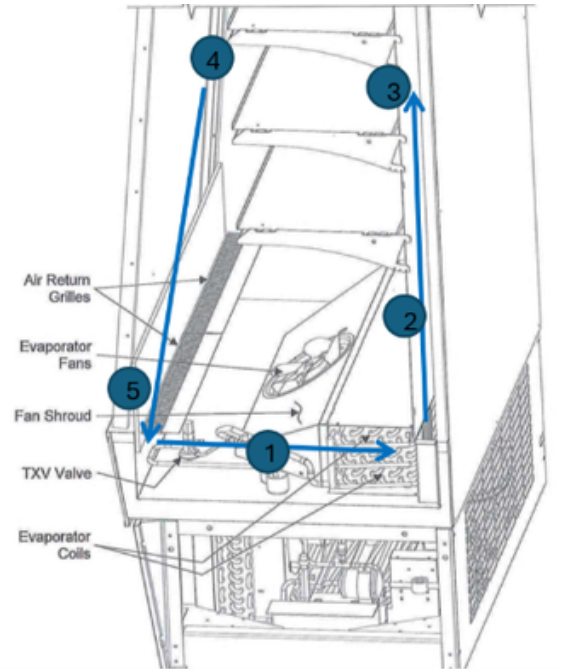
Air travels in a circular fashion inside the grab & go display. **The front air curtain keeps the cold air in and warm air out. It's like an invisible door that can't be broken.**



As the cold air travels up the back of the unit, it is pushed into the display area through the perforated back panel. It travels to the top of the display and then back down into the front air return grill. At this point, the air is at its warmest temperature in the refrigeration cycle.



The set point temperature for the refrigeration system is preset at the factory. The controller is positioned behind the lower front panel and will read a temperature in the low 20°F during normal operation.



When the environment exceeds the conditions, too much water is added to the condensate pan during each defrost cycle and eventually, the pan overflows on the floor.



During the refrigeration cycle, the evaporator coil frosts. The unit will go into defrost every 4 to 6 hours (depending on model) during which the refrigeration system shuts down (except for the fans) and the coil thaws. Water from the coil drains into the heated condensate pan to be dissipated. The size of the condensate pan is designed to hold the amount of water necessary for the unit to operate in the environmental conditions specified for the model selected.



Operational Requirements

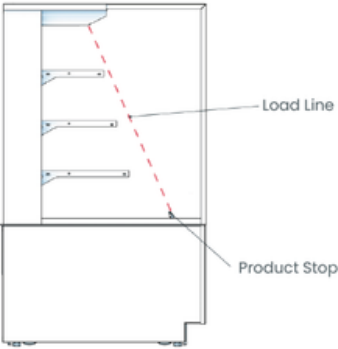
Proper operation of refrigerated merchandising equipment depends on environmental conditions, product loading practices, and maintaining unrestricted airflow. Failure to follow these requirements may result in elevated product temperatures, excessive condensation, condensate pan overflow, increased energy consumption, and reduced equipment performance.

B(L)7R Allowable Weight Per Shelf

Model	Max Shelf Load (lbs)	Max Deck Pan Load (lbs)
B33R	N/A	66
B34R	N/A	92
B53R	N/A	106
B63R	N/A	132
B35R	110	66
B45R	154	92.4
B55R	198	105.6
B65R	231	132
BN37R	66	33
BN47R	92.4	46.2
BN57R	118.8	52.8
B37R	110	66
B47R	154	92.4
B57R	198	105.6
B67R	231	132
B37D	110	66
B47D	154	92.4

Product Loading

- Always load the display with pre-chilled product only. Merchandisers are designed to maintain product temperatures, not cool warm product to the desired temperature.
- Most Structural Concepts units are designed to maintain average product temperatures of 40°F or below over a 24-hour period when properly loaded with pre-chilled product and operated within specified environmental conditions.
- Keep all product below the designated fill lines and manage weight per shelf (refer to allowable weight per shelf chart).
- Leave a minimum of 1" clearance above displayed products and 1" clearance from rear air discharge vents to allow proper air circulation.
- Do not block the front air return grille opening. Unrestricted airflow is required for proper refrigeration performance.
- Running the display with little or no product can negatively impact performance and may increase moisture accumulation.
- Do not overload shelves, as restricted airflow can lead to elevated product temperatures, excess condensation, and reduced case performance.



Operating Environment

- Maintain environmental conditions within NSF requirements.
- Type I refrigerated equipment is designed to operate at or below 75°F and 55% relative humidity.
- Type II refrigerated equipment is designed to operate at or below 80°F and 55% relative humidity.
- Environmental conditions must remain consistent over a 24-hour period.
- Make note of which environment equipment is tested to work within. Some models are Type I and others are Type II.

Installation Requirements

- Follow the Structural Concepts 5'-10'-15' placement guidelines.
- Verify the display is level for proper condensate drainage.
- Maintain required clearances identified in published specification sheets.
- Consider the impact of HVAC vents, exterior doors, windows, EMS systems, and smart thermostats on equipment performance.

Important: Environmental conditions that exceed NSF design standards, improper product loading, restricted airflow, or installation near sources of heat and humidity may result in elevated product temperatures, excessive condensation, and condensate pan overflow.

Equipment Maintenance

Daily Maintenance

Each day, wipe down all exterior panels, decks, and acrylic surfaces.

- Use mild soap, warm water, and a soft cloth.
- Never use ammonia-based glass cleaner on acrylic

Weekly Maintenance

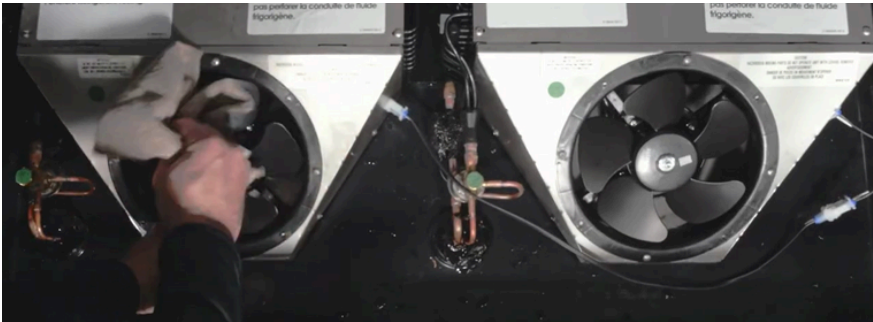
Each week, clean the magnetic filter and condenser coil to maintain proper airflow and refrigeration performance.

- Remove the filter from the lower exterior panel.
- Clean off dust, wash with warm soapy water, dry thoroughly, and reinstall.
- Remove lower panel and carefully vacuum dust and debris from the condenser coil without bending the fins.
- Move the vacuum up and down the coil, never side-to-side, as this can damage the fins.
- If your case is equipped with CleanSweep®, the condenser coil only needs to be cleaned every six months.

Quarterly Maintenance

Every three months, clean the evaporator coil and tub, condenser package, and under the case.

- Power off and unplug the unit.
- Wipe the fan blades, clean the drain and tub, and inspect the drain plug.
- Pull the condenser package out and clean and drain the condensate pan. If using a descaler, follow the manufacturer's instructions and remove any remaining residue.
- If your unit has multiple condenser packages, ensure the connecting hose is clean and free of obstructions.
- Vacuum beneath the case to keep airflow clear.
- When finished, reassemble, level the unit, and restore power.



Troubleshooting Structural Concepts Equipment

Consider the following troubleshooting solutions if a problem or difficulty does arise with your merchandiser display case.

	Evidence	Potential Cause	Remedy	Resources
Not holding temperature	- Temperature inside the display area feels warm - Actual product temperature is above 40°F - Temperature on the controller is reading higher than upper teens to low 20s °F	- Exterior filter needs to be cleaned - HVAC vent is blowing into the air curtain - Store's temperature and/or humidity are above equipment specifications - Display is too close to store's entrance; a draft is breaking the air curtain	- Remove magnetic filter(s) and clean in dish sink. Turn unit on/off to reset - Add diverter to HVAC vent to redirect away from unit - Adjust temperature and/or humidity in the store and maintain over 24 hours - Move display to another location in the store at least 15' from front entrance	Case Maintenance Video - Diverters: www.1800ceiling.com - SCC 5/10/15 rule
Water on the floor	Water leaking from under the unit	- HVAC vent is blowing into the air curtain - Store's temperature and/or humidity are above equipment specifications - Display is too close to store's entrance; a draft is breaking the air curtain - Equipment isn't level	- Add diverter to HVAC vent to redirect away from unit - Adjust temperature and/or humidity in the store to maintain over 24 hours - Move display to another location in the store at least 15' from front entrance - Adjust the leveling feet to level the unit	- Diverters: www.1800ceiling.com - SCC 5/10/15 rule
Controller shows LP error	Controller behind lower panel will show LP code	Exterior filter needs to be cleaned	- Remove magnetic filter(s) and clean in dish sink. Turn unit on/off to reset. - Replace panels with a filter-less design and consider adding Clean Sweep automatic condenser coil cleaner. Contact techsupport@structuralconcepts.com for replacement details.	Case Maintenance Video Troubleshooting LP Errors Guide
Evaporator coil is freezing	Evaporator coil under the interior deck pan is visibly covered with frost/ice	- HVAC vent is blowing into the air curtain - Store's temperature and/or humidity are above equipment specifications - Display is too close to store's entrance; a draft is breaking the air curtain	- Add diverter to HVAC vent to redirect away from unit - Adjust temperature and/or humidity in the store to maintain over 24 hours - Move display to another location in the store at least 15' from front entrance	- Diverters: www.1800ceiling.com - SCC 5/10/15 rule
Unit not getting power	Entire display without power	- Limited power provided to the unit - Switch malfunction	- Check electrical connection & power supply - Contact factory for new switch	

For additional technical support, please email techsupport@structuralconcepts.com

How to Create an Eye-Catching Display

Product placement is a visual merchandising technique in which products are placed thoughtfully throughout a store in an effort to draw attention to them so that, ultimately, customers will be more likely to purchase them.

Behind building the most innovative, energy-saving merchandisers with the shortest lead times in the industry, our goal has been to continually help our customers capture the attention of their shoppers, connect with them through the presentation of the fresh food displayed inside, and convince them to purchase.

By creating a showplace where your products will be seen, heard, and valued by your shoppers, our displays and visual merchandising expertise entice, excite, and enhance the buying experience resulting in driving more unplanned and incremental purchases and increased basket sizes.

Implement Best Practices For Strategic Product Placement

Cross merchandising with complementary items by putting commonly bought goods in the same area increases the likelihood that shoppers will purchase multiple products.



Encourage more high-end purchases by having more expensive items on levels where the shoppers are most likely to see them and less expensive options below or above their line of sight.

Display impulse-buy products around your cash wrap as customers are likely to grab without much thought. This will keep people shopping and promote more units per transaction.

Optimize Sales And Customer Engagement

Highlight best sellers to draw customers in and then place slower sellers in their vicinity to boost visibility.



Avoiding unused space will also help keep your customers visually interested. The more you can maximize your customer's exposure to your products, the more likely they are to find something they want, and ultimately, make a purchase.

Entice customers to enter your store by placing key products near your entrance, and then force them to move through your entire space and see all that you have to offer by putting additional best-selling items toward the rear.

Fundamental Guidelines

Sell more fresh food and chilled beverage products using these merchandising strategies.



Consider the Major Factors of Store Layout

Quantity and Types of Refrigeration Units

Proximity, Traffic Flow, and Space Adjacencies

Local Market Demographics



Establish Merchandising Goals

Optimize Profitability

Minimize Fresh Item Losses

Limit Liability and Risk

Design Cross-Sell Opportunities



Drive Value with Shoppers

Create Custom Meal Solutions

Enhance the Shopability Increase

Efficiencies

Provide Unique Brand Offerings



Avoid the Following

Cluttered Case Tops

Varied Orientation Weak

Eye Level Items

Unmanicured Sets Out of

Stocks

Large Gaps

Over Merchandising

Peaks and Valleys in Product Positioning

Ineffective Props and Accoutrements

Dirty Grates

Source: Merchandise Foods LLC



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