



Structural Concepts®

DELIVERING FRESH. ALWAYS.™



Specifying Food Display Cases

Quick Reference Guide

Key Considerations for Specifying Food Display Cases

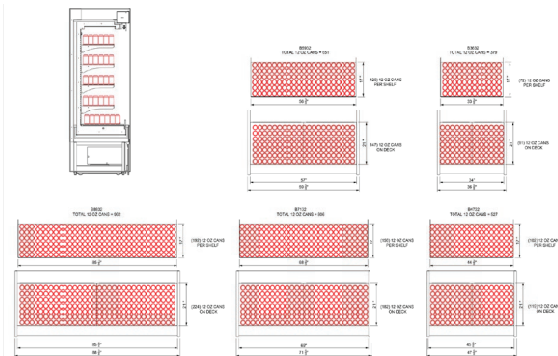
These are all critical questions to ask before selecting a food display case style and manufacturer. This quick reference guide provides helpful tips for addressing those items.



Where will the case be positioned?



How to create an eye-catching display?



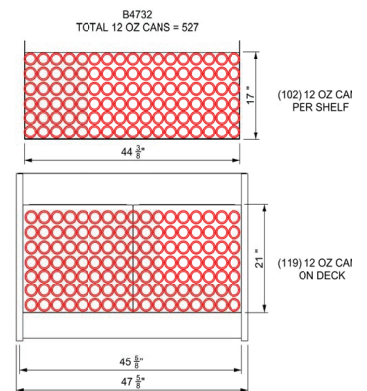
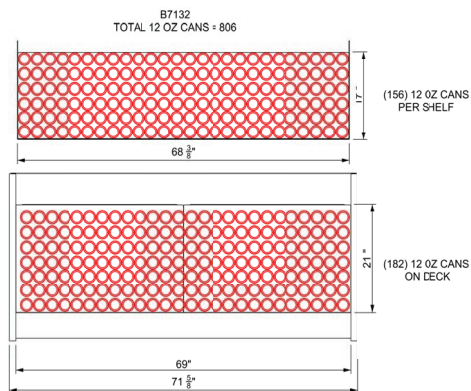
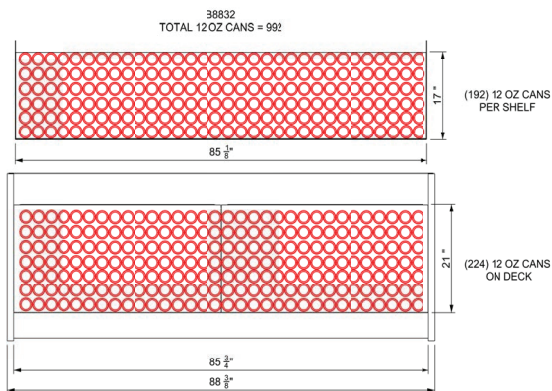
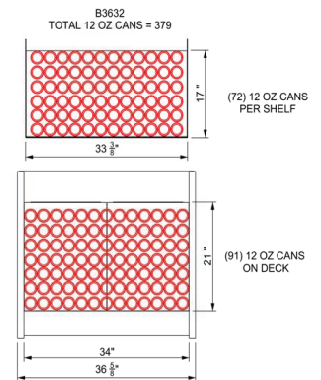
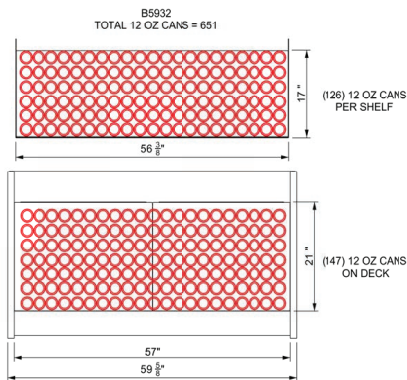
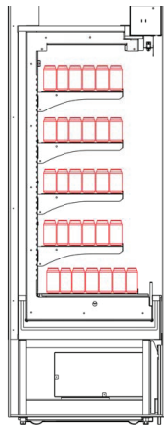
What will be displayed in the case?

What Will Be Displayed?

The following drawings provide a general reference to how many items can be displayed on a X"D x X"L shelf. These illustrations can be used to calculate a display's total capacity based on shelf and deck size, as well as the number of display levels relative to the food that needs to be displayed.

The dimensions and related merchandising capacity can be referenced relative to the size of the shelves in other SCC models to determine approximate capacity for additional models.

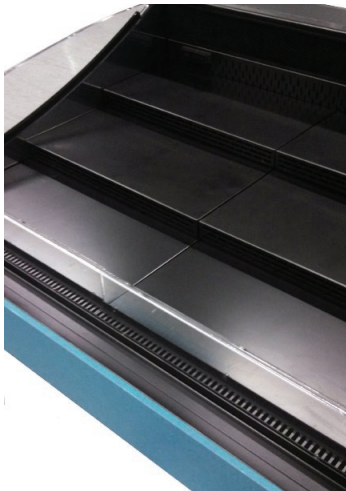
B3632, B4732, B5932, B7132 & B8832 are Structural Concepts refrigerated grab & go display cases.



What Will Be Displayed?

Shelving

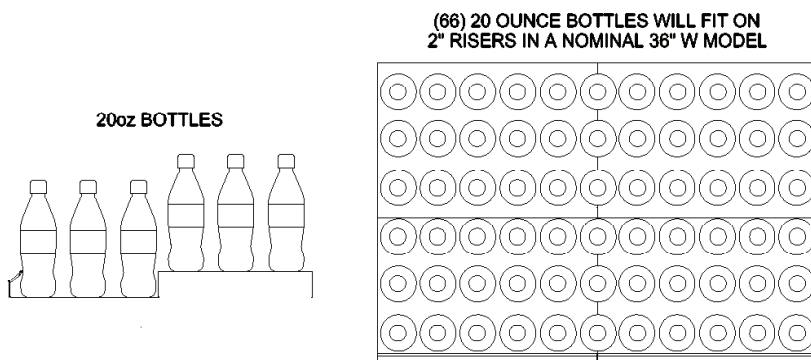
Be sure that the display case shelves are adjustable & removable to accommodate a variety of package sizes. To keep the display looking full and fresh, shelves should be adjusted to match the height of the product packaging. This prevents gaps of space between shelves that detract from the presentation.



Risers

Many display case models include an option for “display risers.” Risers provide an opportunity to increase product visibility.

This is an illustration of 2”H risers with the product capacity noted for 20-ounce bottled beverages.



What Will Be Displayed?

The following chart provides cubic capacity of display space for commonly specified air screen grab & go models.

Air Screen Model	Cubic Display Area Less Shelf Hardware	Total Cubic Display Area
B3632	15.6	13.9
B4732	25.1	22.5
B5932	26.2	23.4
B7132	31.8	28.4
B3424	11.4	9.9
B4524	15.4	13.4
B6624	23.0	20.1
B8824	31.0	27.0
CO35R	10.4	9.5
CO45R	13.8	12.7
CO55R	17.7	16.2
CO65R	21.5	19.7



Model B4732



Model B4524



Model CO45R

The following chart provides cubic capacity of display space for commonly specified combination models.

Combination Model	Cubic Display Area Less Shelf Hardware	Total Cubic Display Area
HMBC2	7.3	7.1
HMBC3	11.3	10.9
HMBC4	14.8	14.3
HMBC5	18.3	17.7
HMBC6	22.3	21.6



Model HMBC4

Where Will The Display Cases Be Positioned?

Consider where the display case will be positioned relative to walls, ceilings, HVAC vents, windows and other equipment discharging warm air.

The 5' - 10' - 15' rule

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.

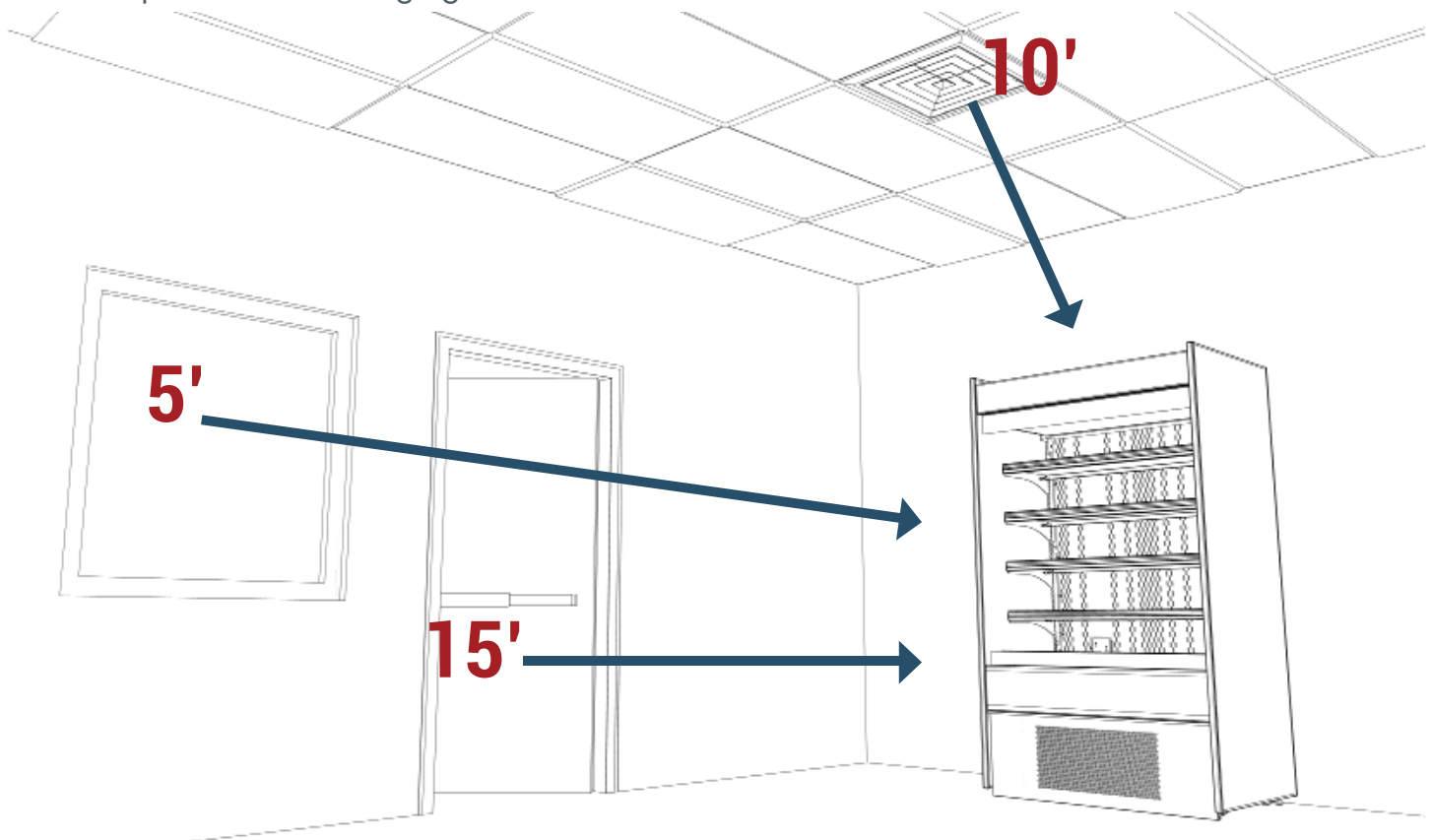
Position the display 15' away from exterior doors

- 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.

Minimum 4" clearance to walls & ceilings.

Some models can be positioned right to the wall & ceiling.

Refer to spec sheets & design guide for further information.

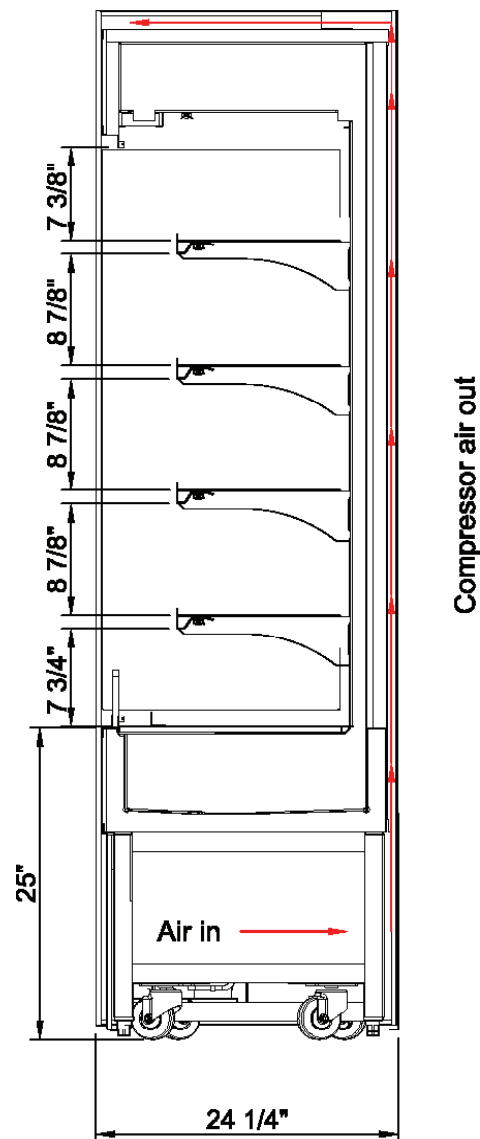


Where Will The Display Cases Be Positioned?

There are BOX style models that are designed to fit in alcoves with the proper air flow for compressor ventilation. Models are standard with front compressor air intake and discharge.

- These models can be positioned against walls & tight to the ceiling because compressor air is channeled up the rear of the display and out the top at the front.
- The lower front panel cannot be blocked.
- Ceilings must remain no closer than the top of the end panel to provide room for discharge air.

Room for compressor air to discharge



Model(s)

B3424 - 34 1/2"L, 24 1/4"D, 82 3/8"H

B3632 - 36 5/8"L, 32 1/4"D, 82 1/2"H

B4524 - 45 1/2"L, 24 1/4"D, 82 3/8"H

B4732 - 47 5/8"L, 32 1/4"D, 82 1/2"H

B6624 - 66 3/8"L, 24 1/4"D, 82 3/8"H

B7132 - 71 5/8"L, 32 1/4"D, 82 1/2"H

B8824 - 88 3/8"L, 24 1/4"D, 82 3/8"H

B8832 - 88 3/8"L, 32 1/4"D, 82 1/2"H

Where Will The Display Cases Be Positioned?

Consider the noise level of the refrigerated display. Today's building designs do not allow for much noise absorption. With locations like kiosks in non-traditional areas or quiet zones, refrigeration system noise could be an issue.



The latest in quiet compressors!

New compressor technology has reduced noise levels significantly.
Ask the display case manufacturer for compressor noise ratings.









With remote refrigeration, the evaporator coil and fan(s) are supplied with the display case. There could be 1-3 fans depending on the case size.

Specifying remote refrigeration will completely eliminate compressor noise but remember, there will still be noise from the evaporator coil fans.

Calculate the daily energy consumption for each piece of equipment to compare total life cycle costs before making an equipment selection.

$\text{kWh/day} \times \text{kWh rate} \times 365 \text{ days} = \text{annual electricity cost}$

Total Cost of Ownership Study

	 <small>Manufacturer's equivalent of under counter refrigerated grab & go merchandiser</small>	 <small>Acquisition \$*</small>	 <small>Start Up \$</small>	 <small>Energy***</small>	 <small>Cleaning****</small>	 <small>Product Shrink**</small>	<small>First Year Cost to Own</small>	<small>Following Years Cost to Own</small>	<small>5 Year Cost to Own</small>
Structural Concepts		\$8,600	\$92	\$493	\$2,162	\$0**	\$11,347	\$2,655	\$21,967
Federal Industries		\$8,687	\$64	\$891	\$3,765	\$0**	\$13,407	\$4,656	\$32,031
Turbo Air		\$10,947	\$40	\$514	\$1,155	\$0**	\$12,656	\$1,669	\$19,332

SCC lowest acquisition price & daily energy consumption
Turbo Air quickest start up
Turbo Air lowest total cost of ownership

- Not all display equipment is created equal in terms of energy use.
- Most equipment meets Department of Energy 2017 energy standards, but there are some manufacturers with equipment that exceeds the standards.
- Use the formula on the left to compare equipment in terms of electricity costs.
- Be sure to factor electricity costs in the total life cycle for the equipment.

Where Will The Display Cases Be Positioned?

Consider the temperature and humidity levels of the environment where the display will be operating. NSF has two operating environment parameters against which food display cases must be tested.

Group	Requirement
Type I	Cases operating in environments that don't exceed 75°F and 55% relative humidity. At a minimum, all display cases must pass this criteria.
Type II	Cases operating in higher ambient conditions up to 80°F and 55% relative humidity.

- All food display cases are required to pass NSF Type I testing criteria.
- Most foodservice environments exceed 75°F and 55% relative humidity during some part, if not most, of the day. This causes condensation to develop on the exterior of the display and/or water to overflow on the floor due to the evaporator pan not being able to keep up.
- Be sure to consider the impact that an energy management system or smart thermostat plays on the temperature and humidity of the environment over a 24-hour period. The display case is running 24/7 and will be affected by temperature adjustments made during the evening and weekends.
- Look for food display equipment that is designed to operate in NSF Type II conditions, especially when specifying refrigerated air screen grab & go models. Solutions are available to accommodate ambient conditions that exceed 75°F and 55% relative humidity to help alleviate the symptoms described above.
- Consider adding a night curtain or security cover to help offset higher ambient temperatures over night. These accessories help keep warmer ambient air from entering the refrigerated zone and provide an added bonus of energy savings.
- NOTE: If operating conditions are too extreme, exterior condensation will be an issue regardless of whether the display case is designed for Type II environments.

How To Create An Eye-Catching Display

Deli Cases

There are different styles of deli display cases that should be considered for a deli operation—medium and low capacity. Selecting the right style of deli case is important to the success of the operation.

Low Capacity Models



- Only the area below the rear doors is refrigerated.
- No refrigerated shelf is available.
- Built-in rear 7 3/4" D work ledge.
- Removable rear doors (unit can operate w/o doors).
- Perfect for high volume locations where removing the rear doors expedites service during peak serving times.
- Also available with a condiment rail for final prepping before serving.

Medium Capacity Models



- The entire display area is refrigerated using forced air.
- Designed so that risers & pedestals can be used for displaying food.
- Includes a lighted mezzanine shelf that can be removed without tools.
- Full height angled rear sliding doors. These doors cannot be removed without affecting refrigeration performance & product temperatures.
- No "built-in" rear work ledge.
- A "traditional" grocery deli appearance.

How to Create an Eye-Catching Display



- Take advantage of an optional riser & increase product visibility while having the ability to accommodate a variety of products.
- Make use of all your space by adding additional products on top of the counter behind your under counter unit to increase sales opportunity within the same footprint.

Undercounter

- Position a grab & go display in between the POS counter or under the counter for additional sales opportunities.
- A great way to offer freshly prepared items from your menu.
- Easily create a built-in look without the custom price tag.



Wall Built-ins

- Add grab & go models behind a prep counter to keep unpackaged fresh food within easy reach.
- Great for salads, smoothies, and juices made-to-order.
- Be sure that the grab & go model is approved for the display of unpackaged food.



- Create a wall of beverages with grab & go merchandisers to increase impulse sales.
- Models are available that offer zero clearance ventilation for the refrigeration system to allow for a completely built-in look.



How to Create an Eye-Catching Display

Islands

- Add a dual sided grab & go to serve twice as many customers at one time.
- Great for schools, hospital cafeterias and more.



Endcaps

- Utilize end cap space for high margin grab & go food products.
- Perfect near POS locations.
- Low profile height increases sight lines.
- Great for convenience stores & schools.



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