HUSSMANN®

BCH
Medium Temperature Merchandisers

Models: BCH-8S and BCH-18 (1 Door)
BCH-45 (2 Door) and BCH-68 (3 Door)

COLD DRINKS

Cold Beverages

COLD BEVERAGES

Installation & Operation Manual

IMPORTANT
Keep in store for
future reference!

MANUAL- I/O BCH SC

ATTENTION

Merchandiser must operate for 24 hours
before loading product!

Regularly check merchandiser temperatures.
Do not break the cold chain.

Keep products in cooler before loading
into merchandiser. These merchandisers
are designed for pre-frozen products only.

⚠️

REVISION HISTORY

REVISION G — JUNE 2015

REVISION E — FEBRUARY 2013
Changed to letter "E" for Engineering purposes

REVISION B — DECEMBER 2010

Added Air Flow Drawing, Page 1-2
Added Serial Plate Location, Page 1-5
Added LED Locking Plug, Page 2-1
Added Door Switch, Page 1-7
Added Appendix A

ORIGINAL ISSUE — MARCH 2010

* *

ANSI Z535.5 DEFINITIONS

⚠ • **DANGER –** Indicate[s] a hazardous situation which, if not avoided, will result in death or serious injury.

⚠ • **WARNING –** Indicate[s] a hazardous situation which, if not avoided, could result in death or serious injury.

⚠ • **CAUTION –** Indicate[s] a hazardous situation which, if not avoided, could result in minor or moderate injury.

• **NOTICE –** *Not related to personal injury –* Indicates[s] situations, which if not avoided, could result in damage to equipment.

INSTALLATION

NSF CERTIFICATION

These merchandisers are manufactured to meet ANSI / National Sanitation Foundation (NSF®) Standard #7 requirements. Proper installation is required to maintain certification. Near the serial plate, each case carries a label identifying the type of application for which the case was certified.

ANSI/NSF-7 Type I - Display Refrigerator / Freezer
Intended for 75°F / 55% RH Ambient Application

ANSI/NSF-7 Type II - Display Refrigerator / Freezer
Intended for 80°F / 55% RH Ambient Application

ANSI/NSF-7 - Display Refrigerator
Intended for Bulk Produce

HUSSMANN PRODUCT CONTROL

The serial number and shipping date of all equipment is recorded in Hussmann's files for warranty and replacement part purposes. All correspondence pertaining to warranty or parts ordering must include the serial number of each piece of equipment involved. This is to ensure the customer is provided with the correct parts.

LOCATION

These merchandisers are designed for displaying products in air conditioned stores where temperature is maintained at or below the ANSI / NSF-7 specified level and relative humidity is maintained at or below 55%.

Recommended operating ambient temperature is between 65° F (18° C) with a maximum 55% relative humidity to 80 F (26° C) with a maximum 55% relative humidity.

Placing refrigerated merchandisers in direct sunlight, near hot tables or near other heat sources could impair their efficiency. Like other merchandisers, these self-contained units are sensitive to air disturbances. Air currents passing around merchandisers will seriously impair their operation. Do NOT allow air conditioning, electric fans, open doors or windows, etc. to create air currents around the case. *BCH units take in air and exhaust air through the front of the case, and require no clearance space on top, at the back or either side.* Product should always be maintained at proper temperature. This means that from the time the product is received, through storage, preparation and display, the temperature of the product must be controlled to maximize the life of the product.

For California Businesses:

⚠ WARNING

This product may contain chemicals known to the State of California to cause cancer, birth defects, or other reproductive harm.

This warning is the result of the California State law known as the California Safe Drinking Water and Toxic Enforcement Act of 1986, which is commonly referred to as "Proposition 65."
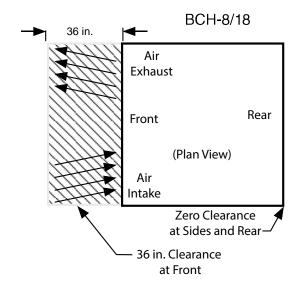
This warning does not mean that Hussmann products will cause cancer or reproductive harm, or is in violation of any product-safety standards or requirements. As clarified by the California State government, Proposition 65 can be considered more of a 'right to know' law than a pure product safety law. When used as designed, Hussmann believes that our products are not harmful. We provide the Proposition 65 warning to stay in compliance with California State law. It is your responsibility to provide accurate Proposition 65 warning labels to your customers when necessary. For more information on Proposition 65, please visit the California State government website.
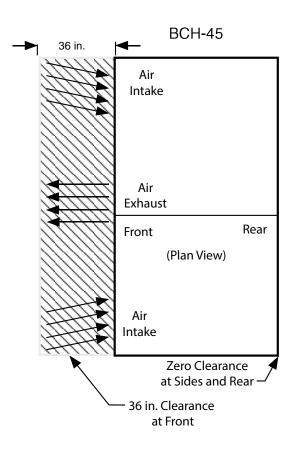
SELF CONTAINED (LOCATION)
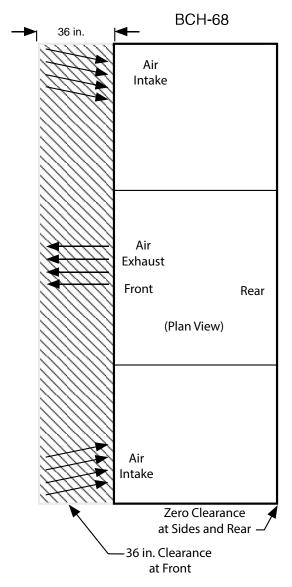
BE SURE TO POSITION SELF CONTAINED MERCHANDISERS PROPERLY.

SELF CONTAINED models have vented base panels to allow air circulation through the condensing unit.

Allow for a minimum 36 in. clearance in the front. Blocking or restricting air flow will adversely affect performance and may damage the refrigeration system.

BCH-8/18

36 in.

Air Exhaust

Front   Rear

(Plan View)

Air Intake

Zero Clearance at Sides and Rear

36 in. Clearance at Front

BCH-45

36 in.

Air Intake

Air Exhaust

Front   Rear

(Plan View)

Air Intake

Zero Clearance at Sides and Rear

36 in. Clearance at Front

BCH-68

36 in.

Air Intake

Air Exhaust

Front   Rear

(Plan View)

Air Intake

Zero Clearance at Sides and Rear

36 in. Clearance at Front

UNLOADING

Unloading from Trailer:

Lever Bar (also known as a Mule, Johnson Bar, J-Bar, Lever Dolly, or Pry Lever)

Move the merchandiser as close as possible to its permanent location and remove all packaging. Check for damage before discarding packaging. Remove all separately packed accessories such as kits and shelves.

Improper handling may cause damage to the merchandiser when unloading. To avoid damage:

1. Do not drag the merchandiser out of the trailer. Use a Johnson bar (Mule).

2. Use a forklift or dolly to remove the merchandiser from the trailer.

⚠ **CAUTION**

Do not walk or put heavy objects on case.

EXTERIOR LOADING

Do NOT walk on top of the merchandiser or damage to the merchandisers and serious personal injury could occur.

MERCHANDISERS ARE NOT STRUCTURALLY DESIGNED TO SUPPORT EXCESSIVE EXTERNAL LOADING such as the weight of a person. Do not place heavy objects on the merchandiser.

⚠ **WARNING**

Do NOT remove shipping crate until the merchandiser is positioned for installation.

SHIPPING SKID

Each merchandiser is shipped on a skid to protect the merchandiser's base and to make positioning the case easier.

Remove the top of the crate and detach walls from each other. Lift crate from the skid. Unscrew the case from the skid. The merchandiser can now be lifted off the crate skid. *Lift only at base of skid!* Remove any braces and/or skids attached (blanket wrapped merchandiser may have skids).

DO NOT TILT MERCHANDISER ON ITS SIDE OR END WHEN REMOVING SKID.

Once the skid is removed, the merchandiser must be lifted —NOT PUSHED— to reposition. To remove the skid, remove screws attaching skid to the merchandiser.

Check floor where merchandisers are to be set to if it is a level area.

SHIPPING DAMAGE

All equipment should be thoroughly examined for shipping damage before and during unloading. This equipment has been carefully inspected at our factory. Any claim for loss or damage must be made to the carrier. The carrier will provide any necessary inspection reports and/or claim forms.

Apparent Loss or Damage
If there is an obvious loss or damage, it must be noted on the freight bill or express receipt and signed by the carrier's agent; otherwise, carrier may refuse claim.

Concealed Loss or Damage
When loss or damage is not apparent until after equipment is uncrated, retain all packing materials and submit a written response to the carrier for inspection, within 15 days.

CABINET LEVELING

This merchandiser must be installed level (from back to front, and side to side) to allow maximum draining of the condensate water as well as proper door alignment and operation. Choose a level area to install case.
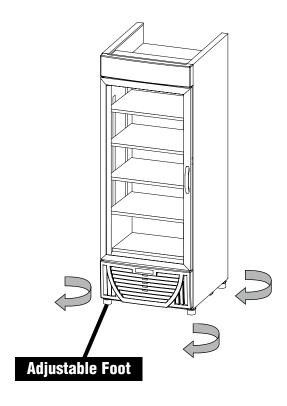
BCH-8S and BCH-18 cases have one adjustable cabinet foot at each bottom corner for easy adjustment if required. BCH-45 and BCH-68 also have an adjustable foot at center front and back. Turn the foot levelers clockwise to add length to each foot for leveling.

When optional 6-inch legs are used, screw the legs tight to the merchandiser base and then adjust the feet.

When optional casters are used, screw them tight to the merchandiser base. Once in final position, lock each caster.

Adjustable Foot

Thumbscrew Lock

Lock Each Caster

SEALING MERCHANDISER TO FLOOR

If required by local sanitary codes, or if the customer desires, merchandisers may be sealed to the floor using a vinyl cove base trim. The size needed will depend on how much variation there is in the floor, from one end of the merchandiser to the other. Sealing of the lower front and rear panels on self contained models may hamper their removal for servicing or maintenance of the condensing unit.

NOTE: Do not allow trim to cover any intake or discharge grilles located in the lower front panel.

DOOR SEAL

Check that hinge doors close automatically by opening the door 45 degrees and releasing. Ensure door closes and gasket seals door shut. To adjust the torque applied to the hinged door:

1. Place a wrench on each of the two lower support nuts located at the bottom hinge.

2. Loosen the lower nut while holding the upper nut in place.

3. Torque is increased or decreased by rotating the top nut. After adjustments are made, tighten the bottom nut while holding the upper nut in place. Torque bottom nut to a minimum of 20 ft-lb.

Adjust Door Closing Torque

SERIAL PLATE LOCATION

The serial plate is located at the interior left side of the merchandiser's cabinet. It contains all pertinent information such as model, serial number, amperage rating, refrigerant type and charge.

REFRIGERATION UNIT ACCESS

The merchandiser's front grille has two screws, which must be removed from either end at the top of the panel. The lower front panel may be removed by lifting the panel straight upward and over the tabs on which it is hanging. The panel is installed by reversing the above procedure. Ensure lower front panel is connected to the bottom brackets to prevent interference with door and to avoid air circulation problems.
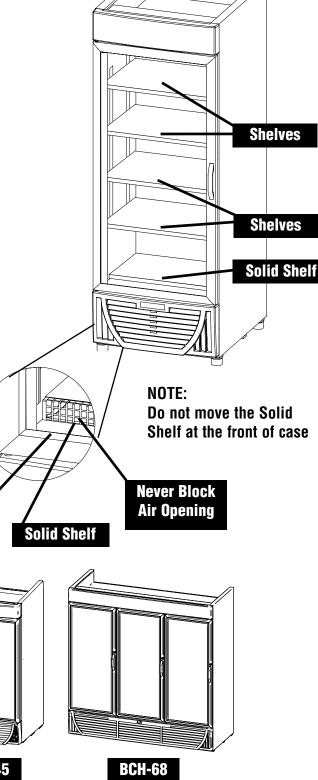

Remove Access Panel

SHELF INSTALLATION
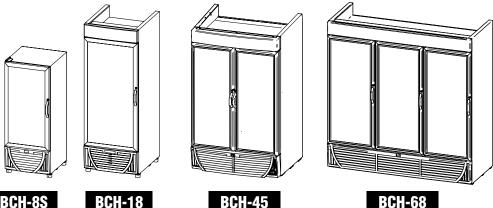
After the cabinet is leveled, the shelves may be installed. Wire shelves are adjustable. Shelf spacing can be adjusted by positioning the shelf clips according to individual loading requirements.

BCH-8S merchandisers have three movable wire shelves and one solid shelf. BCH-18, BCH-45 and BCH-68 merchandisers have four movable wire shelves and one solid shelf, per door. Additional shelves may be ordered as optional items.

NOTE: The movable wire shelves may be reversed so that the wire shelf lip is positioned in the front as a product stop.

NEVER BLOCK THE SOLID SHELF FRONT OPENINGS! THIS SPACE MUST REMAIN FREE OF PRODUCT FOR AIR CIRCULATION. BLOCKING THESE OPENINGS WILL ADVERSELY AFFECT PRODUCT TEMPERATURE.

Shelves

Shelves

Solid Shelf

NOTE:
Do not move the Solid Shelf at the front of case

Never Block Air Opening

Case Front   **Solid Shelf**

BCH-8S   **BCH-18**   **BCH-45**   **BCH-68**

LAMPS

The merchandiser's lights are illuminated when the merchandiser's plug is plugged into a powered receptacle. The merchandiser doesn't have a light switch.

LEDs are standard. The LED light fixture mounts the same way and is replaced in the same manner as a fluorescent fixture.

LED fixtures power supplies are 24 VDC, and are powered from one side only. See markings on the LED fixture for proper installation instruction.

DOOR SWITCH

The merchandiser's door switch controls the evaporator fan motor. The switch shuts the evaporator fan off when the door is opened. This reduces energy consumption and helps prevent product temperatures from increasing from the door being opened and closed.

LED Lamp

BCH Lamp

Door Switch

STOCKING

Product should NOT be placed in case until merchandiser is at proper operating temperature.

BCH merchandisers must remain in operation for at least 24 hours before product may be loaded into case.

Proper rotation of product during stocking is necessary to prevent product loss. Always bring the oldest product to the front and set the newest to the back.
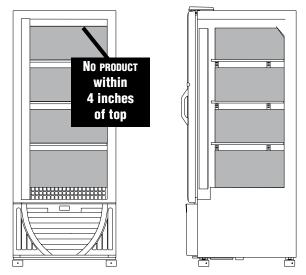
AIR DISCHARGE AND RETURN GRILLE MUST REMAIN OPEN AND FREE OF OBSTRUCTION AT ALL TIMES.

Do not allow product, packages, signs, etc. to block air discharge or return grille. Do not use non-approved shelving, baskets, display racks, or any accessory that could hamper air curtain performance.
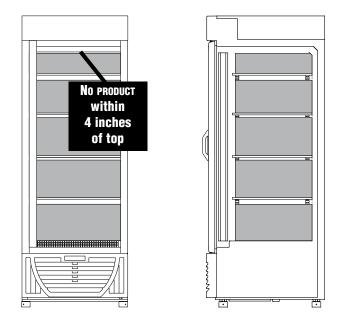
DO NOT STOCK PRODUCT IN THE TOP FOUR INCHES OF BCH MERCHANDISERS BECAUSE PRODUCT WILL BLOCK THE COLD AIR FLOW.

LOAD LIMITS

Product must be within designated load limit to ensure proper refrigeration and air curtain performance.

NO PRODUCT within 4 inches of top

Load Limit for BCH-8S Merchandisers

NO PRODUCT within 4 inches of top

Load Limit for BCH-18, BCH-45 and BCH-68 Merchandisers

At no time should product be stocked:
- **Beyond the front of shelves**
- **Near the air discharge duct located at the top rear of case**
- **Near or covering the front return air grille**
- **Within four inches of the top of the cabinet (This space must be free of product and other materials.)**

DO NOT LOAD CASE WITH WARM PRODUCT.

ELECTRICAL / REFRIGERATION

⚠ WARNING

**Merchandiser must be grounded.
Do not remove the power supply cord ground.**

REFRIGERATION

BCH merchandisers are equipped with a hermetic compressor. The condenser is of fin and tube construction. The air is taken into the merchandiser from the front of the cabinet and is also discharged from the front. See page 1-2 for details. BCH models use R-134A refrigerant. The systems employ capillary tubes for refrigerant flow. The capillary tube is soldered to the suction line pull-out coil for proper heat exchange. If the capillary tube should become plugged or damaged, it is better to replace the heat exchanger (capillary tube and suction line).

PLUG

The plug cord is 7 ft long and is located on the right hand rear of the merchandiser. Disconnect power before servicing. BCH merchandisers require a dedicated electrical circuit with ground. 12AWG is the minimum sized acceptable wire.
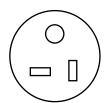
⚠ WARNING

— LOCK OUT / TAG OUT —
To avoid serious injury or death from electrical shock, always disconnect the electrical power at the main disconnect when servicing or replacing any electrical component. This includes, but is not limited to, such items as doors, lights, fans, heaters, and thermostats.

• BCH-8S and BCH-18 require a dedicated 15 AMP/115V circuit with grounded wall receptacle (NEMA 5-15R).
• BCH-45 and BCH-68 require a dedicated 20 AMP/115V circuit with a grounded wall receptacle (NEMA 5-20R).
• Always use a dedicated circuit with the amperage stated on the unit.
• Plug into an outlet designed for the plug.
• Do not overload the circuit
• Do not use long or thin extension cords. Never use adapters.
• If in doubt, call an electrician.

If the power supply oscillates beyond the range given in the following table, a voltage regulator is required.

NEMA 5-15R   NEMA 5-20R
Receptacle   Receptacle
BCH-8S   BCH-45
BCH-18   BCH-68

ALWAYS CHECK THE SERIAL PLATE FOR COMPONENT AMPERES

Nominal Voltage	Minimum Voltage	Maximum Voltage
120	108	132

⚠ CAUTION

Risk of Electric Shock. If cord or plug becomes damaged, replace only with a cord and plug of the same type.

OPERATING Safe-NET III CONTROLS

The Safe-NET III electronic temperature and defrost controller is located in the cassette compartment. The controller comes factory set at position #5 and is ready to go.
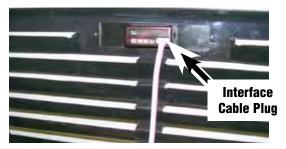

Safe-NET III Controller Location

The front grille must be removed in order to access this control. To remove the grille, open the door and remove the two plastic screws and retainers on the top of the grille, then tilt out and lift up to remove.

Remove Plastic Screws

When removing the grille for this operation or for condenser cleaning, care must be taken not to damage the display interface cable. It may be unplugged during this task.

Interface Cable Plug

Unplug Interface Cable

The temperatures can be adjusted by rotating the knob counter-clockwise for a warmer setpoint, or clockwise for a colder setpoint. The display shows the setpoint for a few seconds when changed, then reverts to showing the sensed temperatures in the merchandiser.
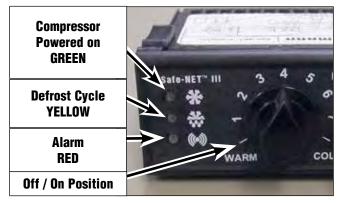
The adjustment knob allows the user to select a pre-configured cold setpoint, warm setpoint or any setpoint within this range. The adjustment knob is also configured with OFF/ON functionality to power off the controller. The off position shuts off the compressor only.

UNPLUG THE UNIT FOR SERVICE.

Remove Plastic Screws

The top, or green, LED indicates the case is in refrigeration mode. The center, or yellow, LED indicates the case is in defrost mode. The bottom (red) LED indicates an alarm condition, such as merchandiser warming up because the door is not closed.

| Compressor Powered on GREEN |
| Defrost Cycle YELLOW |
| Alarm RED |
| Off / On Position |

Safe-NET III Indicators

START-UP / OPERATION

The defrost cycle is initiated at power on. (This cycle will quickly terminate on the initial start-up of a warm merchandiser.) Another defrost cycle will follow every 8 hours thereafter. The defrost times will reset whenever power is interrupted. Therefore, the standard defrost times can be reset by interrupting power (full stop, then start) at the desired time. This will reset the initial time and restart the 8-hour cycle.

During the compressor-on time (1 minute), or compressor-off time (2 minutes), built-in protection time will delay the defrost initiation. **If you force a defrost cycle during this time, the feature will initiate but not start until the compressor protection mode times out.**

ALARMS AND CODES

Safe-NET III is available with an audible alarm (located in the display module) that sounds in the event a failure occurs.

FLASHING TEMPERATURE OR SENSOR ALARM LED, E1 OR E2
If the Temperature or Sensor Alarm LED (red) on the controller and display is flashing, a temperature sensor has failed (or sensor is disconnected). The display shows E1 if the case sensor has failed (or disconnected) or E2 if the evaporator sensor has failed (it is disconnected).

If the merchandiser sensor fails, refrigeration will run continuously. Turn off, or repeat a duty cycle of a few minutes on and a few minutes off.

Troubleshooting

Alarm or Code	Indicates	Action
Red LED remains ON after startup	• Firmware corruption on controller • Controller is not operating	• Call Service immediately
Red LED turns on during operation	• Case temperature is too warm or too cool	• Make sure the door is closed • Make sure that cold air is not being blocked or deflected • Check the temperature using the optional display or a thermometer • If the LED does not turn off after on hour, call Service
Red LED flashes	• Temperature sensor failure • E1 indicates a case temperature failure • E2 indicates an evaporator temperature sensor failure	• Check the optional display for error code E1 or E2 and call Service immediately

MANUAL DEFROST

Note:
This procedure initiates a manual or forced defrost.

IMPORTANT:
Return the control knob to its original setting (Step 1) once the manual defrost has been initiated.

TEMPERATURE ADJUSTMENT

1. Rotate the adjustment knob counter clockwise for a warmer setpoint or clockwise for a colder setpoint.

2. While adjusting the temperature, the display shows the setpoint (cut out value). A few seconds after the temperature is set, the controller reverts to the sensed temperature in the merchandiser.
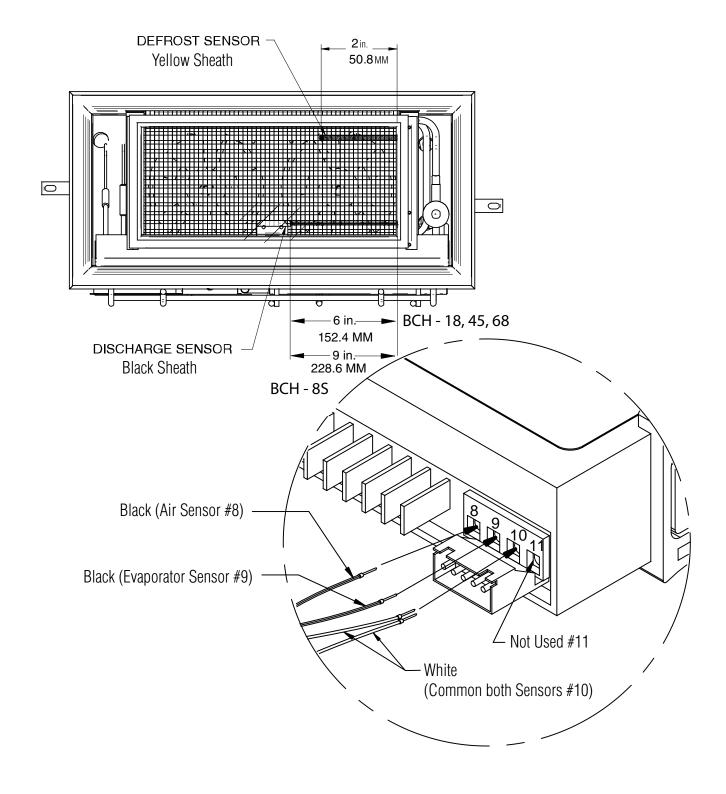
3. To verify merchandiser settings, turn the dial to warm and cold. Output readings should be within one degree of the temperatures shown above.

The control has protective settings to prevent short cycling of the compressor.
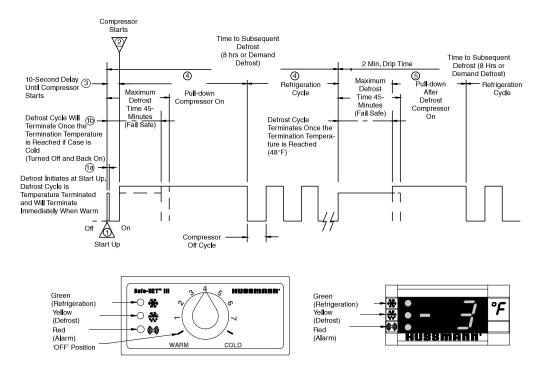
A. The compressor may run for up to 60 sec. after Step 2 is completed. Start the 10 sec. count down for Step 3, once the display is blank.

B. The defrost initiation may be delayed for up to 120 sec. after Step 3 is completed.

Typical Sensor to Control Configuration

DEFROST SENSOR
Yellow Sheath

2 in.
50.8 MM

6 in.
152.4 MM   BCH - 18, 45, 68

DISCHARGE SENSOR
Black Sheath

9 in.
228.6 MM

BCH - 8S

Black (Air Sensor #8)

8 9 10 11

Black (Evaporator Sensor #9)

Not Used #11

White
(Common both Sensors #10)

Sequence of Operation — LTH Merchandisers

① NOTE: The 65°C Version Controller includes a Parameter Code Number. This number indicates what program has been loaded into the controller. When the Controller is first powered up or is turned off and then back on a 2 digit Parameter Code Number will display for 3 seconds. Then the Self Check will Start.

①a. **The Safe-NET Parameter Code is 59 for BCH-8S and BCH-18. Code is 76 for BCH-76 and 77 for BCH-68.** If the case is warm at initial start-up, the defrost will be initiated and will terminate almost immediately. (Display will lock in current temperature when defrost is initiated.)

①b. If the case is cold (as if it is turned off and then back on), the defrost cycle will continue until the termination temperature is reached or the fail-safe time has expired.

② The compressor will start 10 seconds after the power is applied.

③ The compressor will run for 10 minutes. Then, defrost will be initiated.

④ During defrost, the display will show the temperature before defrost, and it will continue to show this temperature for 1 hour. Compressor will turn back on once coil is defrosted.

⑤ The compressor will continue to run until it reaches its cut-out temperature (pull down).

⑥ The refrigeration cycle will continue until the next scheduled (8 hours) or demand defrost.

⑦ ③ and ④ will repeat until power is interrupted.

NOTE: If power is interrupted, sequence will start at ④. Defrost will be initiated and the time to subsequent defrost will reset.

CONTROLS and ADJUSTMENTS

Model	Refrigeration Controls		Defrost Controls			
	Product Application	Discharge Air Temperature	Defrost Frequency (per day)	Type of Defrost	Termination Temperature	Failsafe Time (Minutes)
BCH-8S **BCH-18** **BCH-45**	Medium Temp. (Dairy, Deli)	32° F to 34° F	3	Off Time	48	30
BCH-68	Medium Temp. (Dairy, Deli)	32° F to 34° F	3	Off Time	48	30

MODEL	Parameter Code	Display at Full Cold	Display at #1 Position
BCH8S	59	24°F	7°F
BCH18	59	24°F	7°F
BCH45	76	27°F	7°F
BCH68	77	24°F	10°F

Your Case Configuration

Factory Setting	Average product temperature Knob position #5 -10°F
Adjustment knob has OFF position	Yes
Delay before compressor runs after startup	Delay Time 10 sec.
Compressor operation if case sensor fails	Compressor On
What the display shows during defrost?	dF
The case defrosts when the power is turned on	Yes
The method used to end defrost	Evaporator Sensor Temperature
Defrost terminated by termination switch	No
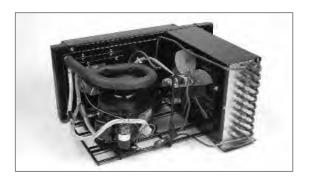
1. The Safe-NET III Controller controls refrigeration temperature. This is factory installed in the control panel. Adjust this control knob to maintain the discharge air temperature shown. Measure discharge air temperatures at the center of the discharge air opening.

Defrosts are time initiated and temperature terminated for self contained. The defrost setting is factory set as shown above.

To ensure a thorough defrost, defrost must be terminated by the temperature termination setting — not by time.

DEFROST WATER EVAPORATION

External drain plumbing is not required. Behind the condensing unit housing cover, there is a tray for gathering and directing defrost water from the evaporator coil to the condensing unit area. The tray serves as a reservoir for storing water until the water is evaporated by a hot gas loop from the compressor.

INSTALLING FDA/NSF REQUIRED THERMOMETER

The following pages provide the same information that ships with the thermometer.

This requirement does not apply to display refrigerators intended for bulk produce (refer to page 1-1).

Please note that the tape cannot be exposed after installation.
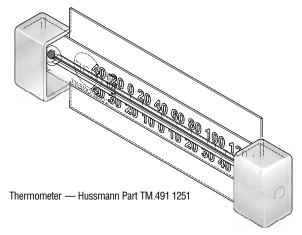
The thermometer is located at the top interior of the merchandiser's cabinet.

NSF Thermometer
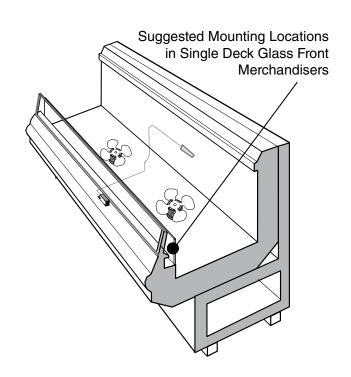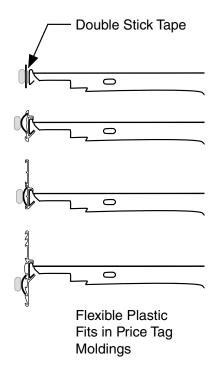
This is an NSF-7 & US FDA Food Code Required Thermometer
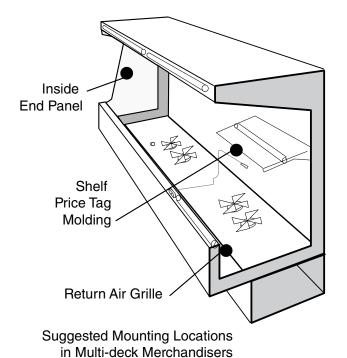
Thermometer — Hussmann Part TM.491 1251

Suggested Mounting Locations
in Single Deck Glass Front
Merchandisers

Double Stick Tape

Flexible Plastic
Fits in Price Tag
Moldings

Inside
End Panel

Shelf
Price Tag
Molding

Return Air Grille

Suggested Mounting Locations
in Multi-deck Merchandisers

Hussmann   P/N 0429971_C   10/2007

Important – Please read!

**This thermometer is provided in response to United States
Food and Drug Administration (US FDA) Food Code [http://www.fda.gov/]
and
National Sanitation Foundation (NSF / ANSI) Standard 7 [http://www.nsf.org/]**

Each installation will be different depending on how the unit is stocked, shopping patterns in the department and ambient conditions of the store. The suggested locations provided herein are possible locations. It is the responsibility of the purchaser / user to determine the location within the food storage area of the unit that best meets the code requirements above.

The thermometer may need to be moved several times to find the warmest location. Mounting options include flexible plastic for price tag molding application, magnet applied to back of flexible plastic for steel end wall, and double stick tape. Tape must not be exposed after installation.

Questions about either code should be addressed to local agencies or other appropriate officials.

Keep with merchandiser

or give to store manager.

DO NOT DESTROY.

MAINTENANCE

CARE AND CLEANING

Long life and satisfactory performance of any equipment is dependent upon the care it receives. To ensure long life, proper sanitation and minimum maintenance costs, these merchandisers should be thoroughly cleaned, all debris removed and the interiors washed down, weekly.

Exterior Surfaces

The exterior surfaces must be cleaned with a mild detergent and warm water to protect and maintain their attractive finish.

NEVER USE ABRASIVE CLEANERS OR SCOURING PADS. NEVER USE CAUSTIC SODA, KEROSENE, GASOLINE, THINNER, SOLVENTS, DETERGENTS, ACIDS, CHEMICALS OR ABRASIVES. DO NOT USE AMMONIA-BASED CLEANERS ON ACRYLIC PARTS.

> ## ⚠ WARNING
>
> **Do not use HOT water on COLD glass surfaces. This can cause the glass to shatter and could result in personal injury. Allow glass fronts, ends and service doors to warm before applying hot water.**

> ## ⚠ WARNING
>
> **To reduce the risk of fire, electrical shock or injury when cleaning this merchandiser:**
>
> - **Unplug the merchandiser before cleaning;**
> - **Keep all liquids away from electrical and electronic components;**
> - **Do not use any mechanical device or other means to speed the defrost process, except as recommended by the manufacturer.**

Interior Surfaces

DO NOT USE AMMONIA-BASED PRODUCTS TO CLEAN LIGHT SHIELDS. NEVER USE ABRASIVE CLEANSERS OR SCOURING PADS.

The interior surfaces may be cleaned with most domestic detergents and sanitizing solutions with no harm to the surface.

Product must be stored in a cooler when product is removed from merchandiser for cleaning.

Do NOT Use:

- Abrasive cleansers and scouring pads, as these will mar the finish.

- Coarse paper towels on coated glass.

- Ammonia-based cleaners on acrylic parts.

- Solvent, oil or acidic based cleaners on any interior surfaces.

- Do not use high pressure water hoses.

> ## ⚠ WARNING
>
> **Product will be degraded and may spoil if allowed to sit in a non-refrigerated area.**

> ## ⚠ WARNING
>
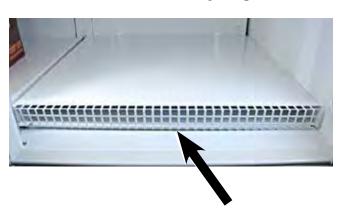> **Do NOT allow cleaning agent or cloth to contact food product.**

Do:

•Remove the product and all loose debris to avoid clogging the waste outlet.

•Store product in a refrigerated area such as a cooler. Remove only as much product as can be taken to the cooler in a timely manner.

•**Disconnect electrical power before cleaning.**

•Thoroughly clean all surfaces with soap and hot water. **DO NOT USE STEAM OR HIGH WATER PRESSURE HOSES TO WASH THE INTERIOR. THESE WILL DESTROY THE MERCHANDISERS' SEALING CAUSING LEAKS AND POOR PERFORMANCE.**

•Take care to minimize direct contact between fan motors and cleaning or rinse water.
•Do NOT flood merchandiser with water.

Cleaning Shelves

Shelves and shelf clips are easily removed for cleaning the interior. Wipe down the shelves and interior with a mild detergent and replace. The bottom shelf is removable for cleaning. Lift bottom shelf up and pull out. Pay attention to the two metal tabs on the rear of the shelf. Clean case interior, and replace shelf. Metal tabs must fit in the original position.

Remove Bottom Shelf
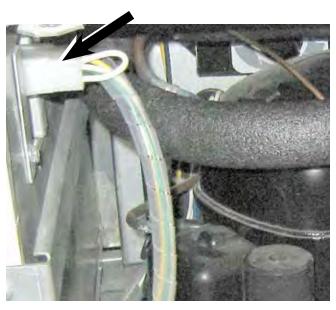
Cleaning Coils

To maintain peak operating efficiency, the coil should be cleaned at least once each month. A dirty coil slows product cooling significantly and increases energy consumption by as much as 20%. Dirt buildup on coils can also cause the compressor to lock up damaging the condensing unit.

• Remove screws on top of each side of the louvered grille, then lift off the grille.
• Next, detach the merchandiser's electrical wire harness located on the right or left hand side near the coil.

Remove Access Panel

Unplug Power Harness

Remove the two screws securing refrigeration unit cassette in place.

Use the center black bar to pull the refrigeration unit's cassette forward to access the coils.

USE ONLY THE CENTER BAR TO PULL OUT THE CASSETTE. PULLING ON REFRIGERATION LINES OR OTHER PARTS WILL CAUSE DAMAGE TO THE REFRIGERATION UNIT.

Use a soft hand brush attachment on a vacuum to remove accumulated dust and debris.

Consult an authorized service technician if more extensive cleaning is needed. If the refrigeration unit is damaged, it can be replaced with a new cassette.
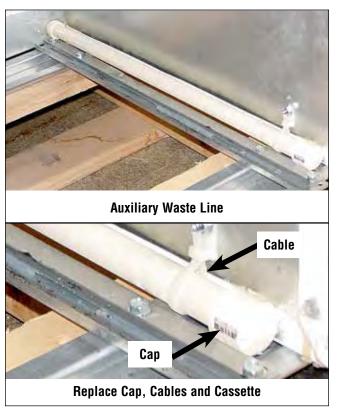
Cleaning the Wash Out Drain

The wash out drain is located behind the refrigeration cassette and can be cleaned with water and wiped with a soft cloth. Ensure drain is unobstructed before replacing cassette.

Wash Out Drain

The washout drain flows into an auxiliary waste line. Next, remove the auxiliary waste line cap to drain any excess water. Place a dry towel over the line to absorb water.

Replace cap, cables and cassette.

Auxiliary Waste Line

Replace Cap, Cables and Cassette

TIPS AND TROUBLESHOOTING

There are a few simple things to check before calling for service:

1. Product not cold? Refrigeration unit requires 24 hours at initial startup to cool down to operating temperature with **NO PRODUCT LOADED** in merchandiser. Ask when merchandiser was stocked, and what the usage has been.

2. Check the door and door seal for air leaks.

3. Power Supply:
   Is the unit plugged in?

   Is there power to the unit?

4. Location:
   What are the ambient conditions — temperature and humidity, direct sun, nearby source of heat, such as oven or grill?

   Is the unit level?

   Has the unit been moved recently?

5. Shelves and Stocking:
   Are the standard shelves in the correct places?

   Is the product stocked properly?

   Is the bottom shelf at the proper location?

   Is air circulating properly through air openings?

IMPORTANT INFORMATION

For prompt service when contacting the factory, be sure to have the case model and serial number from the case serial plate.

⚠ **WARNING**

— LOCK OUT / TAG OUT —
To avoid serious injury or death from electrical shock, always disconnect the electrical power at the main disconnect when servicing or replacing any electrical component. This includes, but is not limited to, such items as doors, lights, fans, heaters, and thermostats.

⚠ **CAUTION**

DO NOT FLOOD!
Use only enough water necessary to clean surface. Water must not drip down the case!

Never use ammonia based cleansers, abrasive cleansers, or scouring pads.

SERVICE

⚠ WARNING

— LOCK OUT / TAG OUT —

To avoid serious injury or death from electrical shock, always disconnect the electrical power at the main disconnect when servicing or replacing any electrical component. This includes, but is not limited to, such items as doors, lights, fans, heaters, and thermostats.

REPLACING DISPLAY LAMP
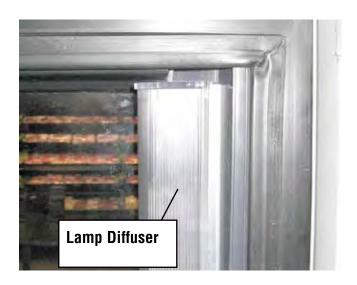
NOTE: BCH-8 does not have a display lamp.

Disconnect power to the merchandiser. Remove the display from the top of the equipment. Remove any cover connection points. Remove the merchandiser's display cover panel and change out the lamp. Replace the display panel cover.

REPLACING INTERIOR LAMPS

BCH merchandisers have interior case LEDs located on the inside of the door.

The LEDs are protected by a clear, plastic diffuser. The plastic shield must be removed to replace the LED fixture.

Lamp Diffuser

Remove and replace light fixture

To replace the LED, do the following:

Turn OFF the electrical power to the merchandiser. Unscrew the metal clip that holds the shield in place. Grasp the plastic shield at the rear near the merchandiser's front glass as shown below.

Carefully loosen the shield from the side of the merchandiser. Once the shield is out of the rear track, the lamp shield can be removed. **For LEDs, ensure the new fixture's markings are installed on the same side as the LED being removed.**

Remove the LED, and replace with a new LED. Install lamp shield in rear track first to replace. Replace metal clips.

Replacing LED

REPLACING POWER SUPPLIES

The LED power supply for the BCH-8S is located on the refrigeration cassette. This power supply operates the interior lamp.

The LED power supply for the BCH-18, BCH-45 and BCH-68 is located on the top of the merchandiser under a sheet metal enclosure. (BCH-68 shown.)

To access the LED power supply, the protective enclosure is removed by removing screws as shown below.

BCH Parts List:

Models	Part Number	BCH8S	BCH-18	BCH-45	BCH-68
Standard Parts					
Power Cord (NEMA 5-15P)	1803998	X	X		
Power Cord (NEMA 5-20P)	1804010			X	X
Door Switch (fans)	03S121	X	X	X	X
Defrost Sensor (Yellow) 1.5MM	0509123	X	X	X	X
Air Sensor (Black) 1.5MM	0509122	X	X	X	X
Safe-Net III Controller 65C	0524127	X			
Safe-Net III Controller 65C	0524127		X		
Safe-Net III Controller 65C	0551128			X	
Safe-Net III Controller 65C	0552453				X
Safe-Net III Display (F°) 65C	1H59052001	X	X	X	X
Safe-Net III Display Interface Cable 1M	0509783	X	X	X	X
Safe-Net III Control Harness	0513058	X			
Safe-Net III Control Harness	0507356		X		
Safe-Net III Control Harness	0513058			X	X
Compressor Relay (T92P11A22-120)	1804291	X	X		
Compressor Relay (T92P7A22-120)	0459304001			X	X
Time Delay Relay	1701674			X	X
Pilaster Strip (30")	0501242	X			
Pilaster Strip (42")	0501240		X	X	X
Shelf Clips (insert into pilaster strips)	0403363	X	X	X	X
Wire Shelf (White) 19 X 21	1201506	X			
Wire Shelf (Black) 19 X 21	0515030	X			
Wire Shelf (White) 25.5 X 25.75	1201509		X		
Wire Shelf (Black) 25.5 X 25.75	0517824		X		
Wire Shelf LH (White) 26 X 24	1201514			X	X
Wire Shelf LH (Black) 26 X 24	0514390			X	X
Wire Shelf RH (White) 26 X 24	1201513			X	X
Wire Shelf RH (Black) 26 X 24	0514391			X	X
Wire Shelf CTR (White) 26 X 25.75	1201551				X
Wire Shelf CTR (Black) 26 X 25.75	0517826				X

BCH Parts List (2):

Models	Part Number	BCH8S	BCH-18	BCH-45	BCH-68
Standard Parts					
Interior Light Cover	0507791	X			
Interior Light Cover	0506054		X	X	X
Feet (Adjustable)	1005319	X	X	X	X
Horizontal Thermometer	1700559	X	X	X	X
LED Power Supply	0515168	X			
LED Power Supply 100W 2VDC	0518898		X	X	X
Led Light LY13-11027 18 IN	0521112	X			
Led Light E1N5K-4100K-C3-S2	0515963		X		
Led Light E1N5K-4100K-C3-S4	0515965		X	X	X
Led Light E1N5K-4100K-C3-S3	0515964				X
Lampholder	1803435	X	X	X	X
Lampholder Top	0516006			X	X
Corner light lens	1005413	X			
Corner light lens	1005415		X	X	
Top cap Lens	1005431	X	X	X	
Bottom cap lens	1005432	X	X	X	
Door LH Black	0539232	X			
Door LH Black	0539231		X		
Door LH Black	0539230			X	X
Door RH Black	0539229			X	
Door Gasket	1501487		X		
Door Gasket	1501448		X		
Door Gasket	0506159			X	X
Torsion Rod	0507228	X	X	X	X
Door Bushing	0519882	X	X	X	X
Door Lock	0505225	X	X	X	X
Door Handle (Black)	1004348	X	X	X	X
Bracket Door Lock	0494798	X	X	X	X
Plastic Lower Front Grille (KO for SNIII)	0506912	X			
Plastic Lower Front Grille (KO for SNIII)	0516530		X		
Plastic Lower Front Grille (KO for SNIII)	0506816			X	
Plastic Lower Front Grille (KO for SNIII)	0506817				X
PTM Bottom Shelf	0518307		X		
PTM Bottom Shelf	0518308			X	X

BCH Parts List (3):

Models	Part Number	BCH8S	BCH-18	BCH-45	BCH-68
Upper Lighted Canopy					
Plastic Display	1H12756001		X		
Plastic Display	0506944			X	
Plastic Display	0506945				X

Models	Part Number	BCH8S	BCH-18	BCH-45	BCH-68
Refrigeration					
Compressor (NF5.5FX) 1/5 hp	2000170	X			
Compressor (SC15G)	2000192		X	X	X
Condenser	2100204	X			
Condenser (On BCH45,68 LH Cassette)	2100214			X	X
Condenser (On BCH45,68 RH Cassette)	2100213		X	X	X
Condenser Fan Motor w/blade	1803698	X			
Condenser Fan Motor	1700502		X	X	X
Condenser Fan Blade	0500354		X	X	X
Evaporator Fan Motor Assy	1803590	X	X	X	X
Evaporator Coil	2200145	X			
Evaporator Coil	2200149		X		
Evaporator Coil LH	2200180			X	
Evaporator Coil RH	2200181			X	
Evaporator Coil LH	2200152				X
Evaporator Coil RH	2200143				X
Drier	1700481	X	X	X	X
Condenser Gasket	1501341	X			
Condenser Gasket	1501342		X		
Condenser Gasket	1501345			X	X
Evaporator Gasket	1501344	X			
Evaporator Gasket	1501343		X		
Evaporator Gasket	1501355			X	X

Models	Part Number	BCH8S	BCH-18	BCH-45	BCH-68
Painted Parts					
Bottom Solid Shelf Assy	7407296	X			
Bottom Solid Shelf Assy White w/PTM	7407605		X		
Bottom Solid Shelf Assy Black w/PTM	0518316		X		
Bottom Solid Shelf Assy LH white w/ PTM	7407818			X	X
Bottom Solid Shelf Assy LH Black w/ PTM	0514341			X	X
Bottom Solid Shelf Assy RH White w/PTM	7407819			X	X
Bottom Solid Shelf Assy RH Black w/PTM	0514342			X	X
Bottom Solid Shelf Assy Center White w/PTM	7408044				X
Bottom Solid Shelf Assy Center Black w/PTM	0518315				X
Door Hinge Lower	0521105	X	X	X	X
Door Hinge Lower (Center and Right)	0403561				X
Hinge Plate Upper Assy (w/ pin)	7408832	X			
Door Hinge Assy Upper	0505093		X	X	X

| | | | | Dimensions (in inches) | | | | | | |
| | | | | Exterior | | | | Interior (useable) | | |
Model	Doors	Ref.	Cu. Ft. Cap.	L	D*	D End Only	H**	L	D	H
BCH 8S	1	R-134A	10.6	$24^{5}/_{8}$	$27^{5}/_{8}$	$23^{5}/_{8}$	$60^{3}/_{4}$	$20^{5}/_{8}$	$18^{1}/_{8}$	$40^{5}/_{8}$
BCH 18	1	R-134A	22.0	$29^{3}/_{8}$	34	30	$80^{3}/_{4}$	$25^{3}/_{8}$	$23^{1}/_{2}$	54
BCH 45	2	R-134A	41.0	52	34	30	$80^{3}/_{4}$	48	$27^{1}/_{2}$	56
BCH 68	3	R-134A	68.6	$78^{1}/_{4}$	34	30	$80^{3}/_{4}$	$73^{1}/_{4}$	$26^{13}/_{16}$	54

*Note: Depth dimension "D" includes 1-1/2" for door handle
**Note: Overall height includes 1 1/2 for leveling pods

Electrical									
Model	Unit H.P.	Voltage HZ/PH	Run Amps	Fuse Size	Power Cord	NEMA* Plug Nos.	Ship Weight	A/C Load (BTU/h)	Energy Consumption for optional LEDs (kWh/day)*
BCH 8S	$1/2$	60/1	8.8	15-AMP	Yes	5-15R	310	1984	4.44
BCH 18	1	60/1	11.5	15-AMP	Yes	5-15R	535	4200	5.96
BCH 45	$(2)1/2$	115 V /60/1	11.7	20-AMP	Yes	5-20R	1014	8400	8.69
BCH 68	$(2)3/4$	115 V /60/1	13.5	20-AMP	Yes	5-20R	1036	8400	11.04

*Note: Locking plug required when LEDs are specified

Model	No. Wire Upper Display Shelves	Cans	No. Can Facings	12 oz Bottles	20 oz Bottles	No. 20 oz Bottle Facings
BCH 8S	3	392	8	224	168	7
BCH 18	4	900	10	450	415	9
BCH 45	8	1870	16	945	760	16
BCH 68	12	2760	24	1380	1115	—

REFRIGERATION DATA

Note: This data is based on store temperature and humidity that does not exceed 75°F and 55% R.H. unless otherwise stated. Schedule defrost at night while lights are off.

BCH

Thermostat Setting CI/CO (°F)

BCH-8S/45/68	39 / 23
BCH-68	35 / 30

Condensing Unit (hp)

BCH-8S	$1/5$
BCH-18	$1/2$
BCH-45 / 68	$1/2$ x 2

Condensing Unit Capacity

BCH-8S	1625
BCH-18	3440
BCH-45 / 68	3440 x 2

20º F evaporator and 130º F condenser temperature

DEFROST DATA

Frequency (hr)

BCH-8S, 18, 45	
BCH-68	3 per day

OFFTIME
Failsafe (minutes)

BCH-68	30

Defrost Temperature Termination

BCH-68	48º F

PHYSICAL DATA

Refrigerant Charge

BCH-8S	8 oz	0.226 kg
BCH-18	11.5 oz	0.326 kg
BCH-45	11 oz	0.312 kg each cassette (2)
BCH-68	11 oz	0.312 kg each cassette (2)

Electrical Data

Note: These are rated values for individual components and should not be added together to determine total merchandiser electrical load.

	8S	18	45	68
Number of Evaporator Fan Motors	1	2	4	4
Evaporator Fans 115V, 60Hz Standard				
Amperes	0.54	1.08	2.16	2.16
Watts	41	82	164	164
Condensing Unit (115V, 1Ph, 60Hz) Standard				
Compressor LRA	22.2	42	42 each	42 each
Compressor RLA	3.0	6.35	6.35 each	6.35 each

Product Data

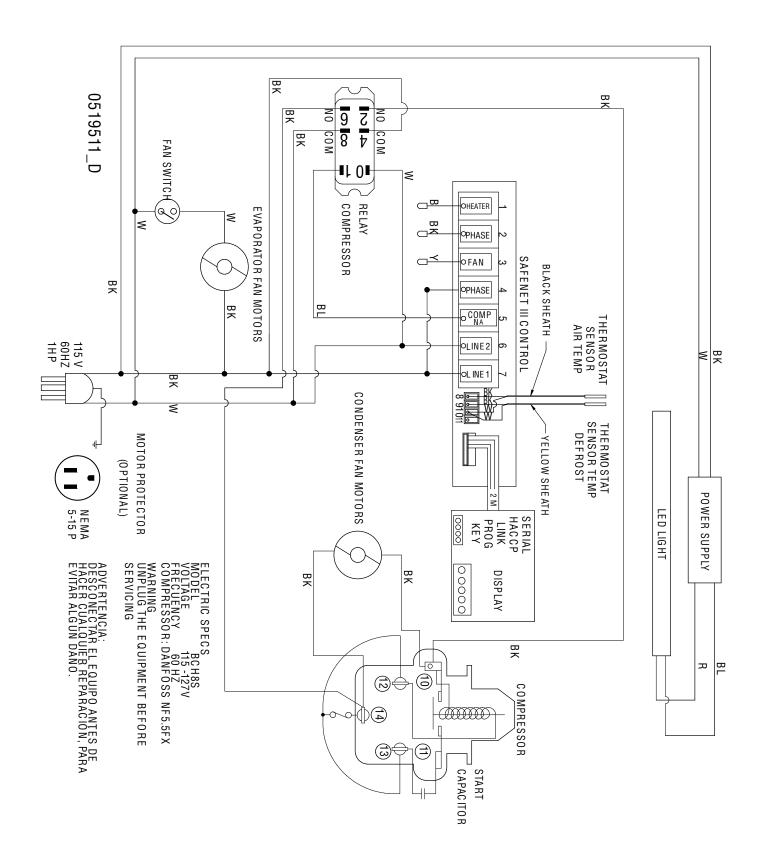*Refrigerator interior volume [liters] (cu.ft)*

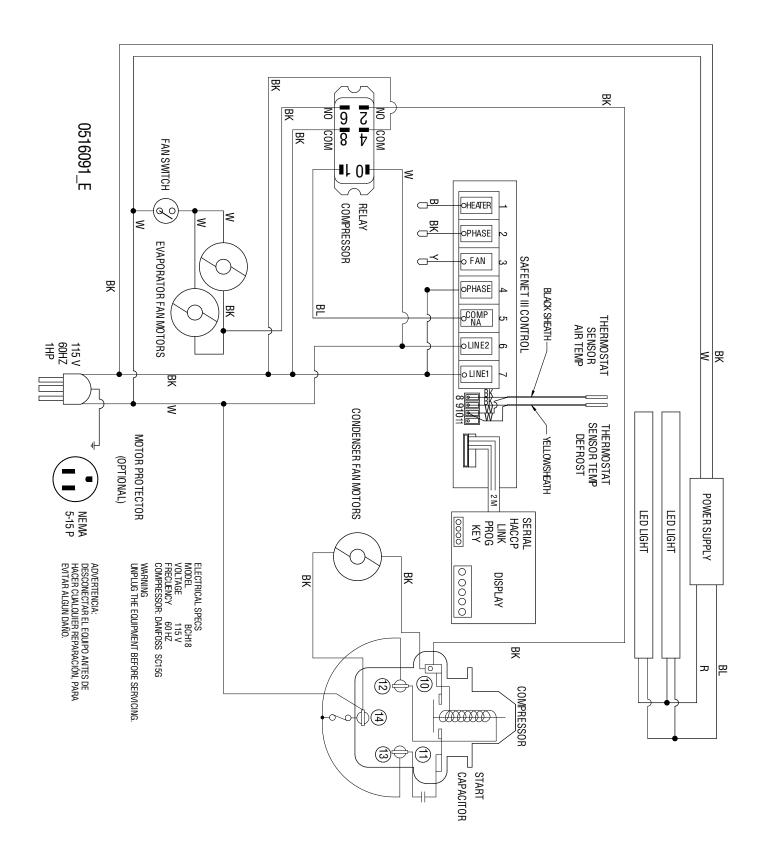BCH-8S 314.31 liters /case (11.4 cu. ft /case)

BCH-18 594.65 liters /case (24.7 cu. ft /case)

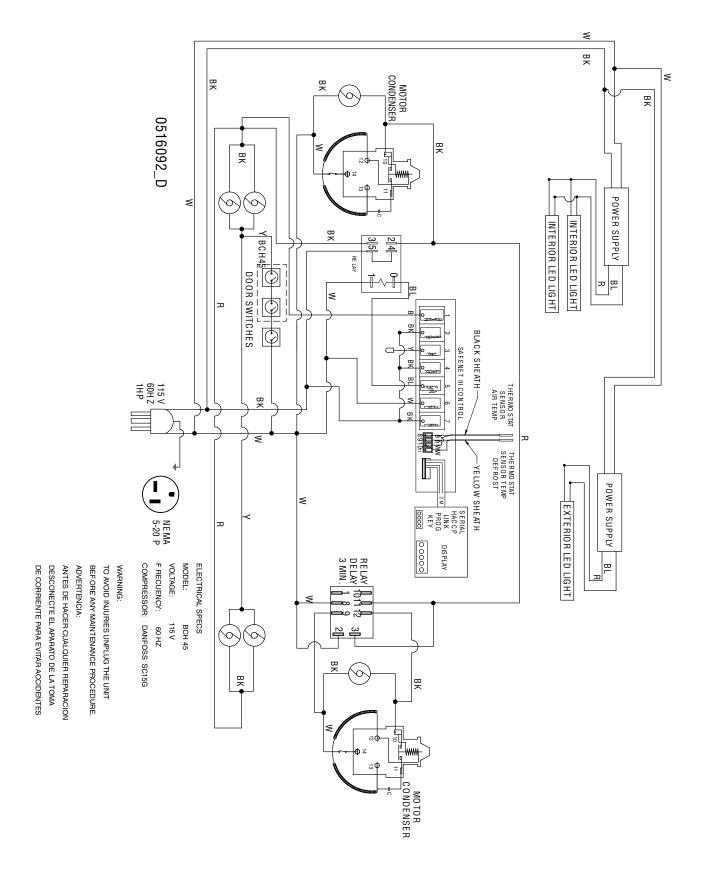BCH-45 1247.92 liters /case (44.7 cu. ft /case)

BCH-68 1939.70 liters /case (68.5 cu. ft /case)
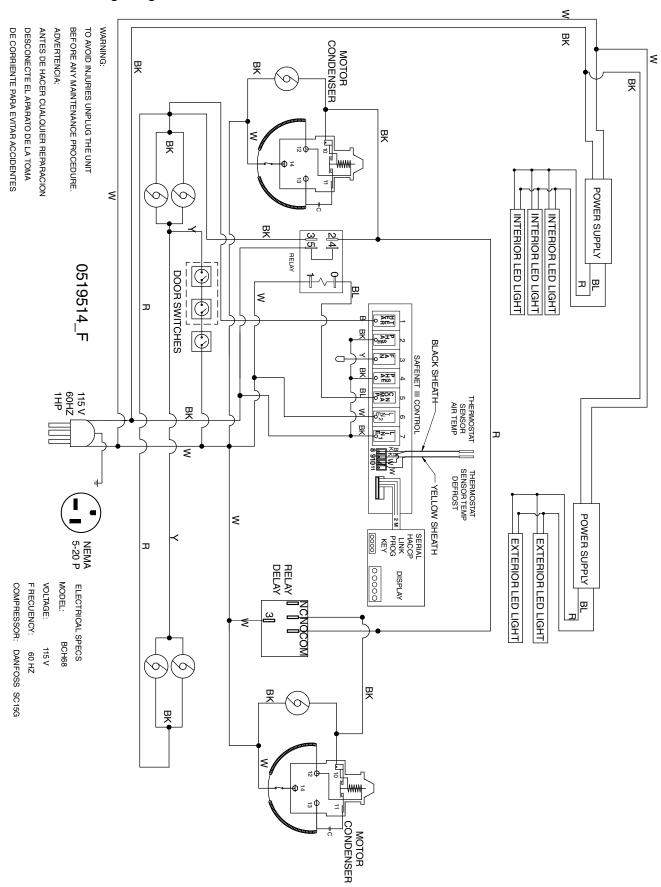
BCH 8S — Wiring Diagram

BCH 18 — Wiring Diagram

BCH 45 — Wiring Diagram

0516092_D

ELECTRICAL SPECS

MODEL: BCH 45
VOLTAGE: 115 V
FREQUENCY: 60 HZ
COMPRESSOR: DANFOSS SC15G

WARNING:
TO AVOID INJURIES UNPLUG THE UNIT
BEFORE ANY MAINTENANCE PROCEDURE.

ADVERTENCIA:
ANTES DE HACER CUALQUIER REPARACION
DESCONECTE EL APARATO DE LA TOMA
DE CORRIENTE PARA EVITAR ACCIDENTES

BCH 68 — Wiring Diagram

HUSSMANN®

To obtain warranty information
or other support, contact your
Hussmann representative.
Please include the model and
serial number of the product.

Hussmann Corporation
12999 St. Charles Rock Road
Bridgeton, MO 63044-2483
www.hussmann.com