# HUSSMAnn

**E-Commerce Grocery Program** 

**Medium Temperature** 



#### IMPORTANT

Keep in store for future reference!

# **EGP MERCHANDISERS**

## **Installation & Operation Manual**

Shipped With Case Data Sheets

P/N 3143044\_D January 2022 Spanish P/N 3143045



#### **BEFORE YOU BEGIN**

Read these instructions completely and carefully.

This manual was written in accordance with originally prescribed equipment that is subject to change. Hussmann reserves the right to change or revise specifications and product design in connection with any feature of our products.

## PERSONAL PROTECTION EQUIPMENT (PPE)









Only qualified personnel should install and service this equipment. Servicing is only to be done by factory authorized personnel. Personal Protection Equipment (PPE) is required. Wear safety glasses, gloves, protective boots or shoes, long pants, and a long-sleeve shirt when working with this equipment and while handling glass. Observe all precautions on tags, stickers, labels and literature attached to this equipment. Component parts shall be replaced with like components. Service is to be performed by factory authroized service personnel, so as to minimize the risk of possible ignition due to incorrect parts or improper service. Contact your Hussmann representative to arrange servicing.

The safety of our customers and employees is paramount. The precautions and procedures described in this manual are intended as general methods for safe use of this equipment. Please be sure to comply with the precautions described in this manual to protect you and others from possible harm.

The definitions at right are used to clarify the magnitude and urgency of harm and damage, considering problems arising from misuse.

Relative to their potential danger, the definitions are divided into four parts according to ANSI Z535 Series.

#### **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.

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#### INSTALLATION TOOL LIST

Unloading From Trailer:

Lever Bar (also known as a Mule.

Johnson Bar (J-bar) / Moving Dolly(s)

Setting Case Line-Up:

Level, 4 ft suggested

Ratchet

1/4 in. Socket

5/16 in. Socket

1/2 in. Socket

Battery Drill/Screw Gun

Caulking Gun

10 in. Adjustable Crescent Wrench

#### REVISION HISTORY

REVISION D - Updated for new pump assembly

REVISION C - Protective shipping trim needs to removed before the case is installed.

REVISION B - Updated door install instructions REVISION A - ORIGINAL ISSUE



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.

### **WARNING**

Excessive ambient conditions may cause condensation and therefore sweating of doors. Facility operators should monitor doors and floor conditions to ensure safety of persons.

Case ventilation openings must be clear of any obstructions. Do not damage the refrigerant circuit.

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 fans, heaters, thermostats and lights.

Do not use mechanical devices or other means to accelerate the defrosting process.

Do not use electrical appliances inside the food storage compartments of the case(s).

# IMPORTANT KEEP IN STORE FOR FUTURE REFERENCE

Quality that sets industry standards! This merchandiser is NSF\* certified.

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#### INSTALLATION

#### **UL LISTING**

These merchandisers are manufactured to meet ANSI/ UL 471 standard requirements for safety. Proper installation is required to maintain the listing.

#### FEDERAL / STATE REGULATION

These merchandisers at the time they are manufactured, meet all federal and state/ provincial regulations. Proper installation is required to ensure these standards are maintained.

Near the serial plate, each case carries a label identifying the environment for which the case was designed for use. For example:

#### ANSI/NSF-7 Type I

Display Refrigerator / Freezer intended for 75° F (24° C) / 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

#### ABOUT THESE CASES

These merchandisers are designed to be ready for remote installation. The case is programmed for medium temperature use and settings can be adjusted using the controller keypad. Lighting is not standard but offered as an option.

#### 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%.

Placing refrigerated merchandisers in direct sunlight, near hot tables or near other heat sources could impair their efficiency.

Like other display cases, these are sensitive to air disturbances. Air currents passing around cases will seriously impair their operation. Do NOT allow air conditioning, electric fans, open doors or windows, etc. to create air currents around the cases.

Excessive ambient conditions may cause condensation and therefore sweating of doors. Facility operators should monitor doors and floor conditions to ensure safety of persons.

To prevent sweating on the exterior surfaces of merchandisers, there must be a minimum clearance of 4 inches (102 mm) between the merchandisers and other fixtures or walls. 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.

#### 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. The carrier will supply necessary forms.

#### **Concealed Loss or Damage**

When loss or damage is not apparent until after equipment is uncrated, a claim for concealed damage is made. Upon discovering damage, make request in writing to carrier for inspection within 15 days and retain all packing. The carrier will supply inspection report and required claim forms.

#### EXTERIOR LOADING

Do NOT walk on top of case(s) or damage to the case(s) and serious personal injury could occur. They are not structurally designed to support excessive external loading such as the weight of a person.



Do not store items or flammable materials atop the unit. Do not walk on case.

#### LIFTING AND MOVING THE CASE

The case can be moved with pallet jacks and/or j-bars. Use the sheet metal lifting brackets as shown below. The brackets are at each end of the case. Position the jacks or j-bars underneath these lifting brackets for transit to the final location.

Be careful not to damage the ends of the case when positioning and moving. The edge guard can be removed if needed.



Lifting Bracket at each end of case

## REMOVE SHIPPING RIDERS AND BRACKETS

There are two 2" x 8" shipping riders that lift the case about a ¼" off of the floor. They are installed in the front and rear bottom interior. The riders are bolted to the case with sheet metal brackets. Remove the riders and brackets.



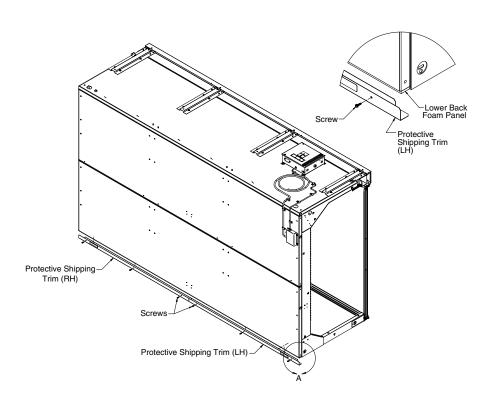
Front Shipping Rider (rear brace not shown)



Rider Brackets

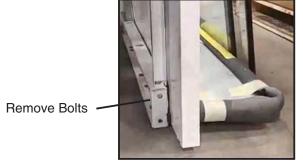
#### REMOVE PROTECTIVE SHIPPING TRIM

The protective shipping trim needs to be removed before the case is installed. Remove the screws and trim as shown in the illustrations below.



#### REMOVE SHEET METAL LIFTING BRACKETS

The brackets that were used as lifting points to move the case can now be removed from the case ends.



#### 1-4 INSTALLATION

#### LEVELING

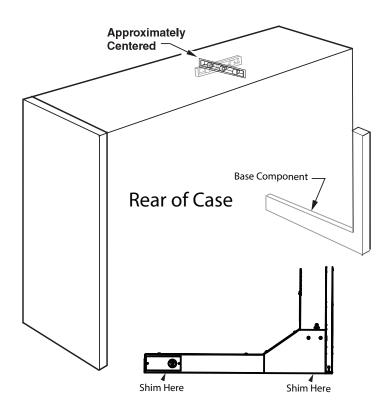
Merchandisers must be installed level to ensure proper operation of the refrigeration system and to ensure proper drainage of defrost water. When leveling merchandisers, use a carpenter's level. Leveling shims or wedges are provided with each merchandiser for use if needed.

NOTE: BEGIN LINEUP LEVELING FROM THE HIGHEST POINT OF THE STORE FLOOR.

The front shipping rider can be positioned at the front of the two end base uprights in order to help square and align the base for drilling to floor.

Place shims under the end bases if the floor is not level. Use a 4-ft level to make sure the case is level. Placing shims at other locations will cause uneven distribution of weight leading to piping leaks, as well as sagging or wracked doors.

Supports must be shimmed if not in full contact with the floor.



#### CASE-TO-CASE JOINING

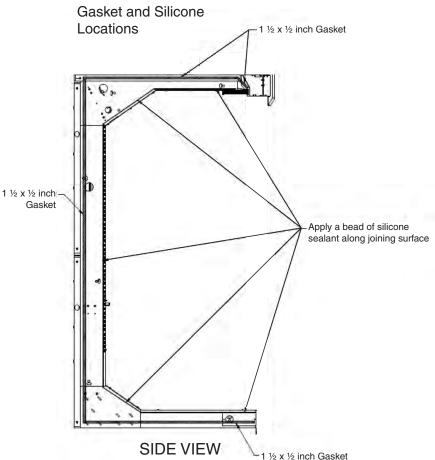
Sectional construction means that two or more merchandisers may be joined in line yielding one long continuous display requiring only one pair of ends. Joining kits and instructions are shipped with each merchandiser. Use the packaged hardware in the hardware joining kit.

#### IMPORTANT:

Before installing the cases together at the end base uprights, install the EPS insulation with the cover onto the end base uprights.

Install Gaskets and apply silicone sealant as shown below.





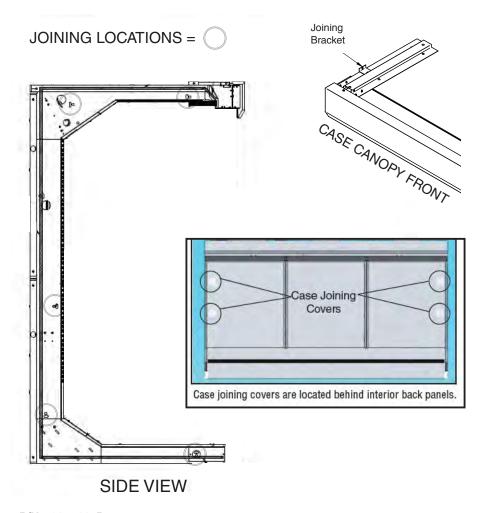
#### 1-6 INSTALLATION

#### ALIGN END FRAMES AND JOIN CASE ENDS TOGETHER

Cases are joined from left to right. Move the second case (case on right side facing the front) as close to the first as possible by using a j-bar or pallet jack.

Case joining covers must be removed. Use the joining locations as shown in the illustration below. Loosely fasten cap screws, washer and nut retainers at all locations. Tighten the rear and bottom locations first. Note there is a joining bracket on top of the case canopy as shown in the detail below. Tighten that locations last.

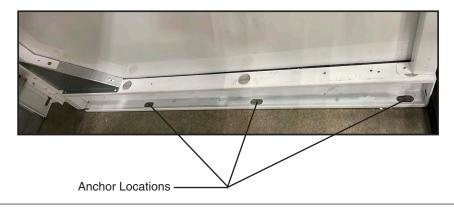
## ALL JOINTS MUST BE AIR-TIGHT TO PREVENT FORMATION OF ICE OR CONDENSATION.



#### SECURING CASE TO FLOOR

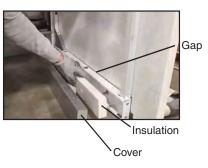
The case must be secured to the floor using anchors that are fastened to the two end base uprights.

- 1. Use a square. It is important to make sure the end base uprights are 90° from the backfoam assemblies before installing the 6 anchor bolts in the concrete.
- 2. Use a hammer drill to drill ½" diameter holes 2¾" inches deep in the concrete. (3 on each end of the case.) Clean out concrete dust from holes.
- 3. Install the ½" diameter anchor bolts. Tighten nuts to secure case to the floor.



## BASE UPRIGHT INSULATION & COVER INSTALLATION

- 1. Install the lefthand insulation.
- 2. Install the lefthand lower cover using supplied painted screws.
- 3. Install the lefthand upper cover. Repeat for righthand side of case base upright.
- 4. Apply silicone sealant to gap.





#### 1-8 DRIP PIPING

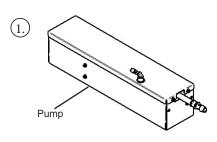
#### INSTALLING PUMP & COLLECTION PAN KIT

The bottom drain for defrost water from the evaporator coil of the case is connected to an evacuation pump, which uses plastic drain tubing to pump the water to the condensate pan on top of the case. See next page for part list assembly.

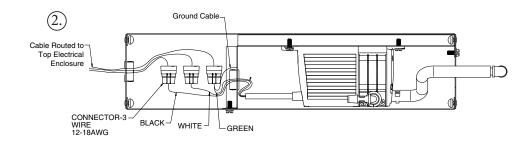
The tubing should be inspected through its entire length to ensure that it has not been cut, kinked, obstructed, or damaged during shipping and installation.

#### Steps:

- 1. Remove cover plates.
- 2. Connect case wire whip to pump.



Pump Kit (sits underneath case)

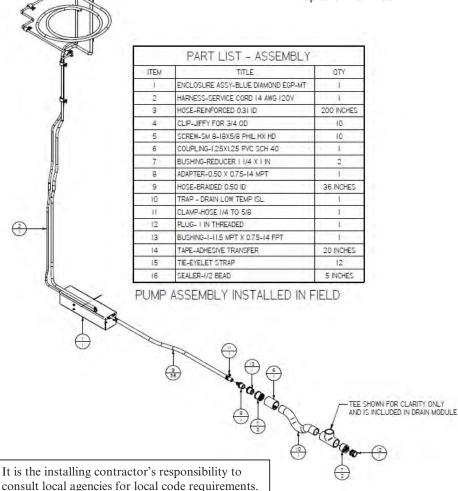


#### INSTALLING PUMP & COLLECTION PAN KIT

3. Pump Assembly Parts (for Reference)



P-trap and Drain Tee

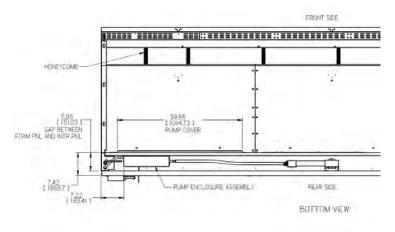


#### 1-10 DRIP PIPING

4. Attach hose to tee. Insert opposite end of drain hose to barb of pump assembly



5. Place pan underneath interior back panel.



6. Connect tubing to condensate pan, which is to be located on top of the case. See Page 2-2 of this manual for location of top-mounted condensate pan.



Condensate Pan (Installed on top of case)

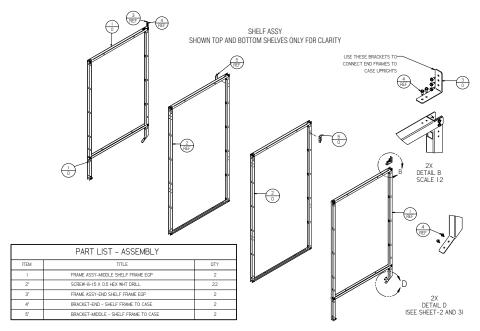
#### INSTALL INTERIOR BACK PANEL

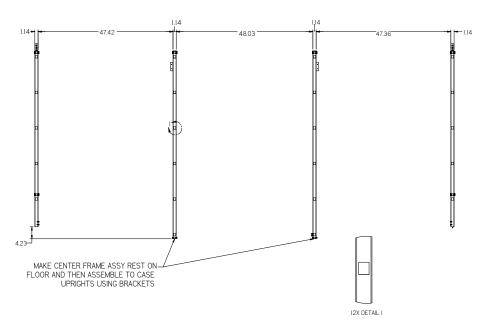
The interior back panel is packed separately with the case. The cutouts in the panel provide access to the valves, the pump and reservoir.



#### SHELF FRAME INSTALLATION

### Frame Assembly Parts

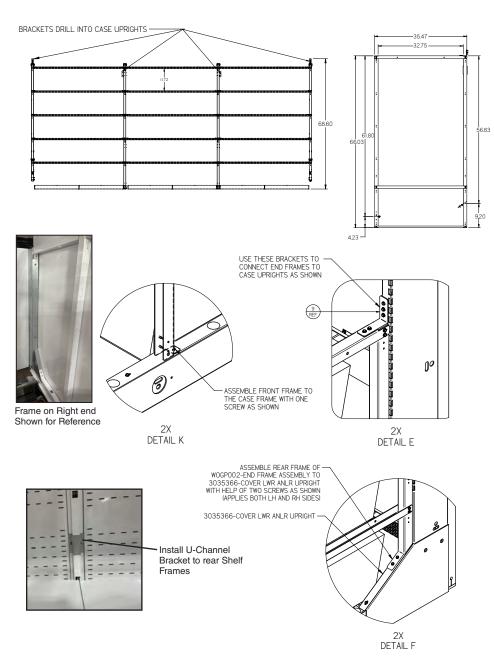




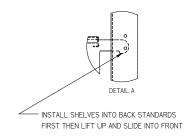
#### 1-12 INSTALLATION

#### SHELF FRAME INSTALLATION

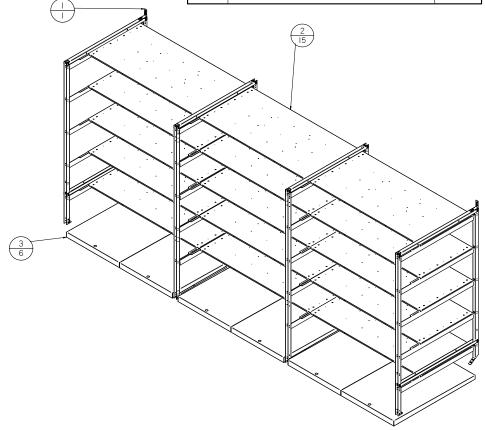
#### Frame to Case Installation



### SHELF INSTALLATION **Shelf and Base Pan Installation**

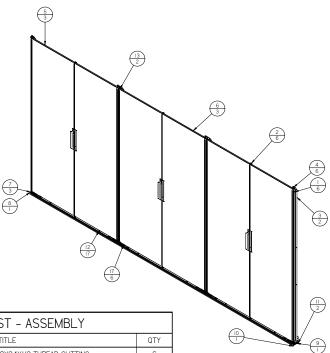


PART LIST - ASSEMBLY		
ITEM	TITLE	QTY
I	FRAME ASSY-EGP 54 ASSEMBLY	I
2	SHELF ASSY-EGP SHELF WELDMENT ASSEMBLY	15
3	PAN-BASE PAN	6



#### 1-14 INSTALLATION

# DOOR INSTALLATION Door Assembly Reference Parts



	PART LIST - ASSEMBLY		
ITEM	TITLE	QTY	
I	SCREW-HEX WASHER HEAD 10X24X1/2 THREAD CUTTING	6	
2	BUMPER-SQUARE	6	
3	MULLION	2	
4	BUSHING-GRAVITY TOP PIN	6	
5	DOOR ASSY-LH GLASS 24X74 WITH SOLID PIN BLACK	3	
6	DOOR ASSY-RH GLASS 24X74 WITH SOLID PIN BLACK	3	
7	PLATE ASSY-BOTTOM HINGE MODULAR	3	
8	RAIL-BOTTOM	I	
9	SUPPORT-EXT RAIL	I	
10	SUPPORT-BOTTOM RAIL	I	
П	BRACKET-BOTTOM SET	2	
12	SCREW 8-18 X I HEX WASHER HEAD STAINLESS STEEL BLACK #2	17	
13	MULLION-CTR BLACK	2	
14*	SUPPORT-RAIL	I	
15*	WIPER-DOOR FRAME 73.5 BLACK	6	
16'	WIPER-DOOR FRAME 46.3 BLACK	I	
17	SCREW187 SHOULDER 8-32 LOW PROFILE TORX NYLON LOCK PILOT	6	
18*	RETAINER-DOOR & WIPER 46.591 BLACK	2	
19"	RETAINER-DOOR & WIPER 46.300 BLACK	I	
20"	WIPER-DOOR FRAME 46.591 BLACK	2	
21'	BUMPER-SQUARE ADHESIVE BACKED BLACK	6	

#### DOOR INSTALLATION STEPS

Unpack door parts kit, and remove top of crate to access doors.

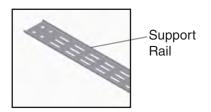
#### NOTE:

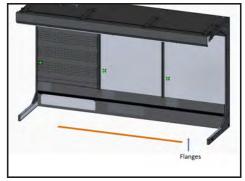
Some parts shown may not be included on the case(s) to be installed. The illustrations are only for door installation purposes.



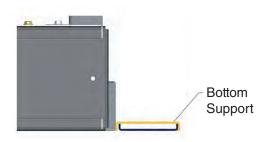
#### STEPS:

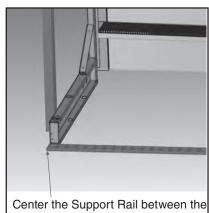
1. Locate the Support Rail, and place it between the uprights of the case with flanges facing up.





Place Bottom Support over Support Rail and center with the bottom uprights on case.

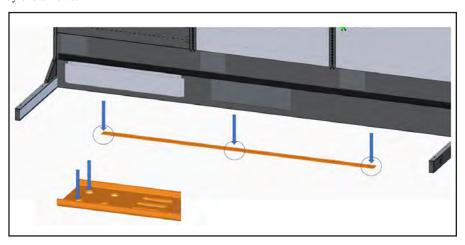




Center the Support Rail between the two bottom uprights. It should align with the end frame.

#### 1-16 INSTALLATION

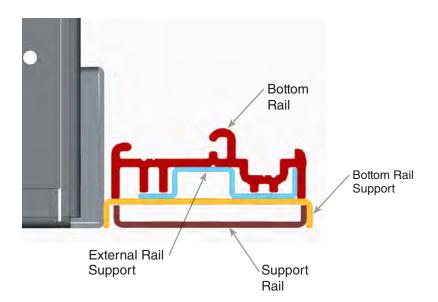
3. Remove the Bottom Support Rail. The support rail is now in the correct location and can be mounted to the floor in 3 locations with masonry screws in the locations shown by the arrows.



4. Reinstall Bottom Support over Support Rail.

Place Exterior Rail Support on top of Bottom Rail Support.

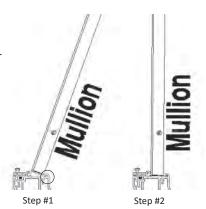
Place Bottom Rail over Exterior Rail Support.



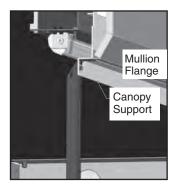
 Install mullions onto Support Rail. Angle the mullion toward inside of the case and engage the flange in the extrusion (Step 1).
 Straighten mullion (Step 2).

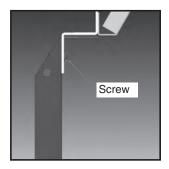
#### NOTE:

End mullions are thinner than center mullions.



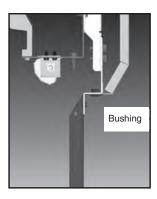
 Slide top flange on mullion through slot in canopy support. Attach with screw.
 Repeat for all center and end mullions.





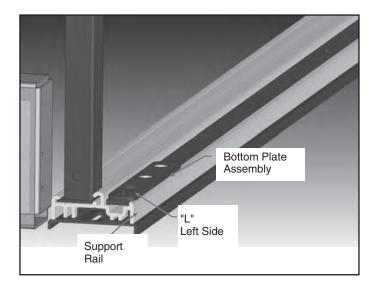
#### 1-18 INSTALLATION

7. Install one bushing into each mullion.

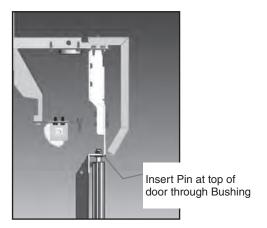


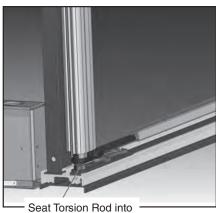
8. Install the bottom plate assembly in the Support Rail. The bottom plate assembly is marked "L" and "R". Frame of reference is standing in front of the case. Repeat for other openings.

Install one screw #8-18 x 1 (black) into center slot of each bottom plate assembly to secure.



9. Repeat the steps in the illustrations below for all doors.





Seat Torsion Rod into plate assembly. Rotate door slightly to verify torsion rod is seated properly.

 Use ½"open end wrench to add closing tension to the door. Typically 4 to 6 clicks is recommended. Do not exceed 6 clicks.

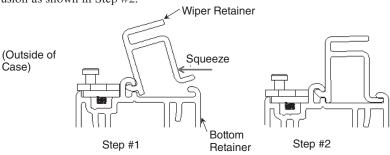
Turn wrench toward the door handle to increase door tension.

To remove tension from door, lift the door assembly out of the plate assembly. Do not attempt to turn rod away from the door handle.



11. Insert wiper retainer at an angle into bottom extrusion as shown in Step #1

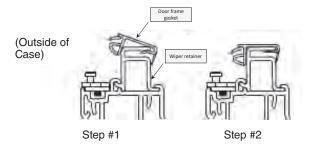
Squeeze the wiper retainer, and insert into bottom extrusion as shown in Step #2.



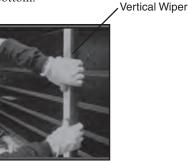
**EGP Merchandisers** 

#### 1-20 INSTALLATION

12. Install door frame gaskets to wiper retainer. Start the wiper by angling the part as shown.

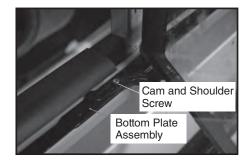


13. Attach vertical wipers to mullions. Start at the bottom, approximately ½" from bottom.



#### 14. Attach cam and shoulder screw

Insert the shoulder screw through the slot in the cam, and attach the screw to the bottom plate assembly. Use impact driver to seat screw. The torques should be approximately 19"/lbs. Never pry the cam open when installing. Prying the cam will permanently damage the cam.



#### 14. ADJUSTING DOORS.

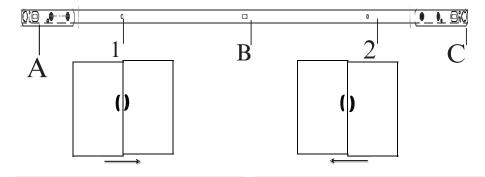
A. Leveling — Merchandisers must be installed level to ensure proper operation of the refrigeration system, and to ensure proper drainage of defrost water.

Glass alignment is also affected with improper leveling of the merchandisers. All steps of setting, joining and case leveling is critical. Attention to the glass position is also critical. Do not attempt to make glass adjustments prior to case leveling.

B. Door Adjustment — Loosen the screws A, B and C as shown below (Do not remove the screws completely).

Slide the bottom plate left and right until proper alignment is achieved. Retighten the screws A, B and C. Install fasteners in locations 1 and 2 as shown below.

#### **ECOVISION DOOR ALIGNMENT - MODULAR BOTTOM HINGE PLATE**



To Correct Shift the Bottom Plate to the Right

To Correct Shift the Bottom Plate to the Left

### Sealing the Door Frame



Seal the inside and outside of Support where it meets the floor. Seal any gaps between the end uprights.

#### 1-22 INSTALLATION

NOTES:

#### **REFRIGERATION / ELECTRICAL**

#### REFRIGERANT

The correct type of refrigerant will be stamped on each merchandiser's serial plate. The merchandiser refrigeration piping is leak tested, factory sealed and pressurized. See the merchandiser's Technical data sheet for refrigerant settings and defrost requirements.

Bring merchandisers down to the operating temperature listed on the data sheet.

Each four-foot section has its own evaporator coil and pre-set thermostatic expansion valve or (TEV).

**DO** NOT REMOVE THE CAP ON THE **TEVs.** This cap is to be removed only for valve disassembly. Removal of this cap during merchandiser maintenance will result in refrigerant loss unless the system is first isolated and the refrigerant recovered.

### **A** CAUTION

Removal of the TEV cap will result in refrigerant loss unless the system is first isolated and the refrigerant recovered.

The TEV has been factory set to provide the recommended performance settings as specified on the merchandiser data sheets.

## **⚠ WARNING**

Refrigeration lines are under pressure and should be depressurized before attempting to make any connections.

Refrigerant vapor is hazardous to your health and can cause death.

Avoid breathing refrigerant and lubrication vapor or mist. Exposure may irritate eyes, nose and throat. If accidental system discharge occurs, ventilate work area before resuming service.

Always wear safety goggles and protective gloves when working with refrigerants. Contact with refrigerant may cause injury. Disconnect hoses with extreme caution! All hoses may contain liquid refrigerant under pressure.

Be sure that any room where you are working is thoroughly ventilated, especially if a leak is suspected.

Read all safety information regarding the safe handling of refrigerant and refrigerant oil, including the Material Safety Data Sheet. MSDS sheets can be obtained from your refrigerant supplier.

### **A** 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.

#### ELECTRICAL CONNECTIONS

All wiring must be in compliance with NEC and local codes. All electrical connections are to be made in the electrical junction box. Circuits must be sized for all case components. See next page for wiring routes.

#### MERCHANDISER ELECTRICAL DATA

Technical data sheets are included with this manual. The data sheets provide merchandiser electrical data, electrical schematics, parts lists and performance data. Refer to merchandiser serial plate or case data sheets for electrical information.

## **A** 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.

#### FIELD WIRING

Field wiring must be sized for component amperes stamped on the serial plate. Actual ampere draw may be less than specified. Field wiring from the refrigeration control panel to the merchandisers is required for defrost termination thermostats and for optional refrigeration thermostats. When multiple merchandisers are on the same defrost circuit, the defrost termination thermostats are wired in series.

#### IDENTIFICATION OF WIRING

Leads for all electrical circuits are identified by colored plastic bands. These bands correspond to the *color code sticker* (shown below) located inside the merchandiser's raceway cover.

ALWAYS CHECK THE SERIAL PLATE FOR COMPONENT AMPERES.

#### WIRING COLOR CODE

Leads for all electrical circuits are identified by a colored plastic band: neutral wire for each circuit has either White insulation or a White plastic sleeve in addition to the color band.

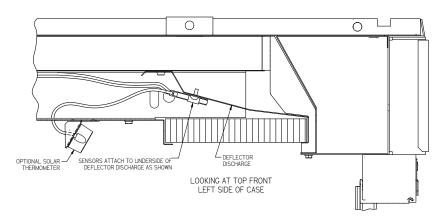
ORANGE OR LIGHT BLUE ......REFRIG. THERMOSTAT NORM TEMP. TAN LIGHTS DARK BLUE ......DEFROST TERM. THERMOSTAT MAROON RECEPTACIES PURPLE.....CONDENSATE HEATERS YELLOW **DEFROST HEATERS 120V** Brown .....Fan Motors Red **DEFROST HEATERS 208V** GREEN\* .....GROUND \*EITHER COLORED SLEEVE OR COLORED INSULATION

ELECTRICIAN NOTE: Use copper conductor wire only.

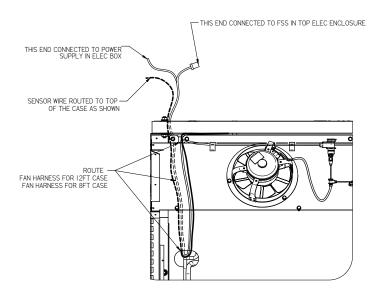
MERCHANDISER MUST BE GROUNDED

THESE ARE MARKER COLORS WIRES MAY VARY.

#### SENSOR LOCATION



#### **FAN WIRING ROUTE**



2-4	REFRIGERATION /	ELECTRICAL

**NOTES:** 

#### START UP / OPERATION

#### PRIOR TO START-UP CHECK LIST

- Is the case connected to its proper nameplate power supply?
- Is there power on at the breaker panel?
- Are there any leaks condensate water leaks?
- Are the doors properly leveled and self closing? Check each door at the fully open position and at 1-inch open position.
- Do evaporator fans rotate freely? Are they plugged in? (Fans are behind interior back panel; manually rotate each fan to confirm free rotation and visually inspect that the electrical connections are secure.

#### STARTUP AND OPERATION

See the merchandiser's Technical Data Sheet for refrigerant settings and defrost requirements. Bring merchandisers down to the operating temperatures listed on the data sheet.

Once the cases are running, listen for any unusual sounds or events. Examples include: evaporator fan blade interference.

The discharge air output at the top inside front of the case (honeycomb area) should be relatively even across the length of the case.

VERIFY there are no leaks at connections for the waste condensate water.

#### 12 HOURS AFTER STARTUP CHECKLIST

- Check case temperature.
- Check if there is any controller alarms.
- Check water connections around the pump and pan for leaks or accumulation of water.
- Inspect for any water accumulation due to incorrect or unsealed penetrations where electrical or other lines pass through insulated walls of the case.
- Check the door operation again to ensure doors open and close properly once the case is down to operating temperature.
- Check that all inspection plates and covers have been properly replaced.

## **A** WARNING

Excessive ambient conditions may cause condensation and therefore sweating of doors. Facility operators should monitor doors and floor conditions to ensure safety of persons.

#### STOCKING

Products should not be placed in cases until all refrigeration controls have been adjusted and merchandisers are at proper operating temperature.

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.

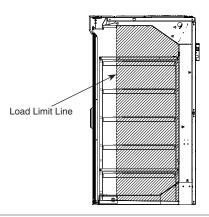
Air discharge and return flues must remain open and free of obstruction at all times to provide proper refrigeration and air curtain performance. Do not allow product, packages, signs, etc. to block these grilles. Do not prop doors open while stocking. And keep the doors closed as much as possible to prevent coil frosting and high merchandiser temperature.

## TENTION

Regularly check merchandiser temperatures. Do not break the cold chain. Keep products in freezer before loading into merchandiser

Medium temperature merchandisers are designed for loading ONLY pre-chilled products. Low temperature merchandisers are designed for loading ONLY frozen products.

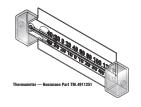




#### INSTALLING FDA/NSF REQUIRED THERMOMETER

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 for definitions.. Please note that the tape cannot be exposed after installation. A digital thermometer may be ordered as an optional kit. Suggested mounting locations for EGP cases is on the interior end panel in a location where the temperature can easily be seen.

This is an NSF-7 & US FDA Food Code Required Thermometer



## Important - Please read!

This thermometer is provided in response to United States Food and Drug Administration (US FDA) Food Code [ http://www.fda.gov/]

onal 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 include flexible plastic for price tag 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 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

P/N 3143044 D 4-1

#### **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.

#### Fan Plenum

The fan plenum is located behind the interior back panels. Remove the back panels to get access to the fans.



SHUT FANS OFF DURING CLEANING PROCESS.

#### **Glass Doors**

Wipe inside of glass with isopropyl alcohol and a soft cloth. Allow surface to dry before closing door. Use of other cleaners or abrasives may damage the surface, and/ or void the warranty. Refer to manual that ships with doors.

#### **Interior Surfaces**

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



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.

#### **Exterior Surfaces**

The exterior surfaces should be cleaned with a mild detergent and warm water to protect and maintain their attractive finish. Never use abrasive cleansers or scouring pads.

#### 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.

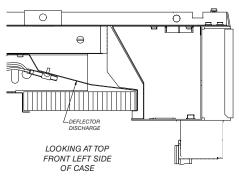
#### Do:

- Remove the product and all loose debris to avoid clogging the waste outlet.
- Store product in a refrigerated area such as a freezer. Remove only as much product as can be taken to the freezer in a timely manner.
- First turn off refrigeration, then disconnect electrical power.
- 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.
- The fan plenum is located behind the interior back panels. The plenum should be cleaned regularly according to store environment conditions
- Take care to minimize direct contact between fan motors and cleaning or rinse water
- Rinse with hot water, but do not flood.
   Never introduce water faster than the waste outlet can remove it.
- Allow merchandisers to dry before resuming operation.
- After cleaning is completed, turn on power and refrigerant to the merchandiser.
- Verify that merchandiser is working properly.

#### CLEANING HONEYCOMB ASSEMBLIES

Honeycombs should be cleaned every six months. Dirty honeycombs will cause merchandisers to perform poorly. The honeycombs may be cleaned with a vacuum cleaner. Soap and water may be used if all water is removed from the honeycomb cells before reassembling. Be careful not to damage the honeycombs.

- 1. Pull the honeycomb assembly out of the interior top panel to remove it.
- 2. Clean and dry the honeycomb.
- 3. After cleaning, reassemble in reverse order of removal.



## CLEANING STAINLESS STEEL SURFACES

Use non-abrasive cleaning materials, and always polish with grain of the steel. Use warm water or add a mild detergent to the water and apply with a cloth. Always wipe rails dry after wetting.

Use alkaline chlorinated or non-chlorine containing cleaners such as window cleaners and mild detergents. Do not use cleaners containing salts as this may cause pitting and rusting of the stainless steel finish. Do not use bleach.

Clean frequently to avoid build-up of hard, stubborn stains. A stainless steel cleaning solution may be used periodically to minimize scratching and remove stains. Rinse and wipe dry immediately after cleaning. Never use hydrochloric acid (muriatic acid) on stainless steel.

#### **CLEANING COILS**

Never use sharp objects around coils. Use a soft brush or vacuum brush to clean debris from coils

Do not puncture coils!

Do not bend fins. Contact an authorized service technician if a coil is punctured, cracked, or otherwise damaged.

Do NOT use chlorine or ammonia-based cleaners to clean aluminum coils.

ICE in or on the coil indicates the refrigeration and defrost cycle is not operating properly. Contact an authorized service technician to determine the cause of icing, and to make adjustments as necessary. To maintain product integrity, move all product to a cooler until the unit has returned to normal operating temperatures.



Product will be degraded and may spoil if allowed to sit in a non-refrigerated area.

Do NOT allow cleaning agent or cloth to contact food product.

## **Minimum Suggested Cleaning and Maintenance Frequency**

Case Component	Type of Scheduled Maintenance	Maintenance Frequency (Times / Year)*	Average Maintenance Duration (hours)*	Total Estimated Maintenance Time/Year (hours)
Evaporator Coil / Case Interior	Cleaning	1	2	2
Honeycomb	Cleaning	1	0.05	0.05
Return Air Grille	Cleaning	12	0.1	1.2
Drip Piping (Optional)	Cleaning	6	0.1	0.6
Condenser Coil	Cleaning	4	0.1	0.4
Condensate Evaporation Pan	Cleaning	4	0.2	0.8
Condensate Evaporation Pan Heater	None	N/A	N/A	N/A
Condensate Pump	Cleaning	6	0.05	0.03
Electromechanical Thermostats	Replacement	0.2	1	0.2

<sup>\*</sup>This table is provided for reference only. The suggested maintenance frequency is the minimum required to reduce unexpected equipment failure. Performance and efficiency may be enhanced with more frequent cleaning. Individual cleaning schedules must take into account local environment and usage, as well as all applicable health codes.

4-4	Maintenance
	IIIAIIIIEIIAIIOE

**NOTES:** 

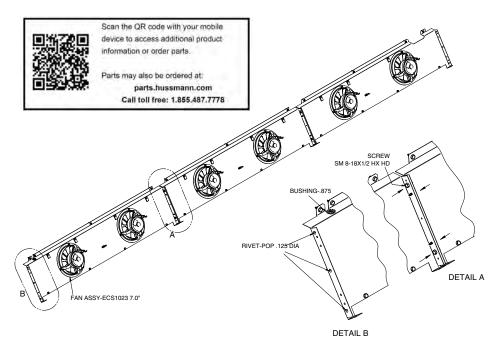
#### **SERVICE**

#### REPLACING FAN MOTORS AND BLADES

See cross section for location of evaporator fans. Should it ever be necessary to service or replace the fan motors or blades be certain that the fan blades are re-installed correctly.

#### For access to these fans:

- 1. Turn off power.
- 2. Remove interior top and back panels.
- 3. Disconnect fan from wiring harness.
- 4. Remove screws holding fan motor/bracket assembly to plenum and remove assembly.
- 5. Replace fan motor/bracket assembly and reinstall screws.
- 6. Reconnect fan to wiring harness.
- 7. Turn on power.
- 8. Verify that motor is working and blade is turning in the correct direction.
- Replace interior top and back panels. Bring merchandiser to operating temperature before restocking.



#### 5-2 Service

#### REPAIRING ALUMINUM COIL

The aluminum coils used in Hussmann merchandisers may be easily repaired in the field. Materials are available from local refrigeration wholesalers.

Hussmann recommends the following technique:

#### NOTE:

Hussmann Aluminum melts at 1,125°F (607°C)

Aladdin 3-in-1 rod at 732°F (389°C)

X-Ergon Acid core at 455°F (235°C)

#### **Technique:**

- 1. Locate Leak.
- 2. REMOVE ALL PRESSURE.
- 3. Brush area UNDER HEAT.
- 4. Use PRESTOLITE TORCH ONLY. Number 6 tip.
- 5. Maintain separate set of stainless steel brushes and USE ONLY ON ALUMINUM.
- 6. Tin surface around area.
- 7. Brush tinned surface UNDER HEAT, thoroughly filling the open pores around leak.
- 8. Repair leak. Let aluminum melt solder, NOT the torch.
- 9. Don't repair for looks. Go for thickness.
- 10. Perform a leak check.
- 11. Wash with water.
- 12. Cover with a good flexible sealant.

# HUSSMANN®

To obtain warranty information or other support, contact your Hussmann representative.

Please include the model and serial number of the product.

Hussmann Corporation, Corporate Headquarters: Bridgeton, Missouri, U.S.A.

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