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# *Euro Deli Service Merchandisers*

Delicatessen Merchandisers  
(Includes Wedge Installation)

**IMPORTANT**  
Keep in store for future reference!

## *Installation & Operation Manual*

Shipped With Case Data Sheets

**P/N 406928.**

Impact Series

April 2001

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IMPORTANT  
 KEEP IN STORE FOR FUTURE REFERENCE  
*Quality that sets industry standards.*

This merchandiser conforms to the  
 Commercial Refrigerator Manufacturers Association  
 Health and Sanitation Standard  
 CRS-S1-96.

## INSTALLATION

### LOCATION

These merchandisers are designed for displaying products in air conditioned stores where temperature is maintained at or below 75°F (24°C) 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 merchandisers, these 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 merchandisers.

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.



## CAUTION

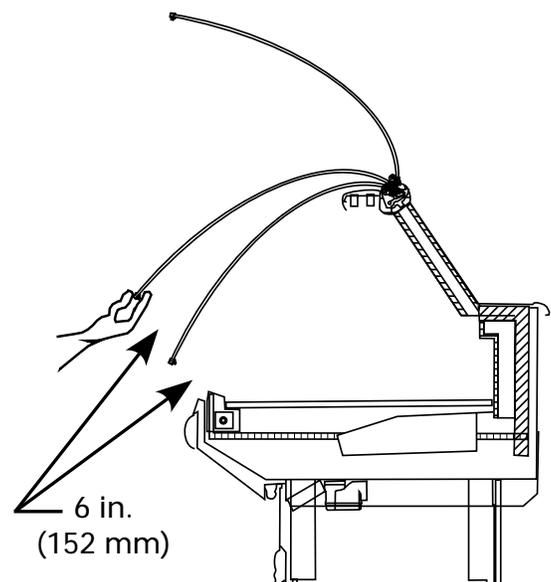
Read before raising front glass.

The top cylinders, which allow the raising and lowering of this glass, have been carefully installed and tested for the proper tension before shipment. However, during shipment and storage, the lubricant inside the cylinders may have settled. This settling can cause excessive or uneven tension on the glass to the point of breakage.

**To avoid any damage, please do the following before completely raising the front glass.**

1. Slowly raise and lower each glass section 6 times to a height of 6 in. (152 mm).
2. Increase the height to about 12 in. (305 mm) and raise and lower the glass 6 times.
3. Then raise the glass to the full extension and lower.

This should release any settled lubricant in the cylinders and prevent any stress on the front glass.





## WARNING

**Do NOT remove shipping braces until the merchandisers are positioned for installation.**

### 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 request to the carrier for inspection, within 15 days.



## CAUTION

Do not walk or put heavy objects on case.

### EXTERIOR LOADING

**Do NOT walk on top of merchandisers** 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 case.

### MERCHANDISERS SHIPPED WITH END INSTALLED

If the case was shipped with the end installed, two long bolts were used to hold the shipping brace to the end. If the shipping bolts are reinserted after removing the brace, they will extend into the product area. Therefore, be sure to replace these bolts with the shorter bolts provided. Refer to the detailed information provided in the **separate End Kit Instruction** shipped with each end.

Note: Be careful not to damage the factory installed end while moving the case. Make sure that tools are positioned past the end and beneath the merchandiser's support bar.

### SHIPPING BRACES

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

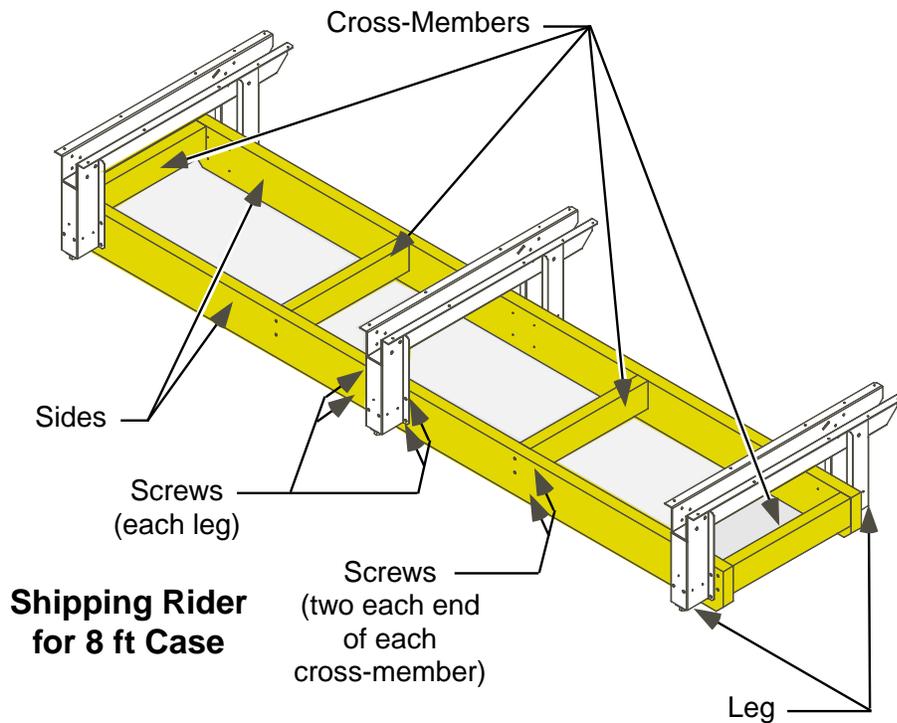
Remove all nut retainers used with shipping braces.

### SHIPPING RIDER

Each case is shipped on a rider to protect factory-installed legs, and to make positioning the case easier. Remove the rider after the case has been positioned.

Note: Once the rider is removed, the case must be lifted –NOT PUSHED– to reposition.

To remove the rider, remove screws attaching each leg to rider. Remove screws holding rider cross-members, then slide cross-members out from between sides. Once cross-members are out, slide the sides out.

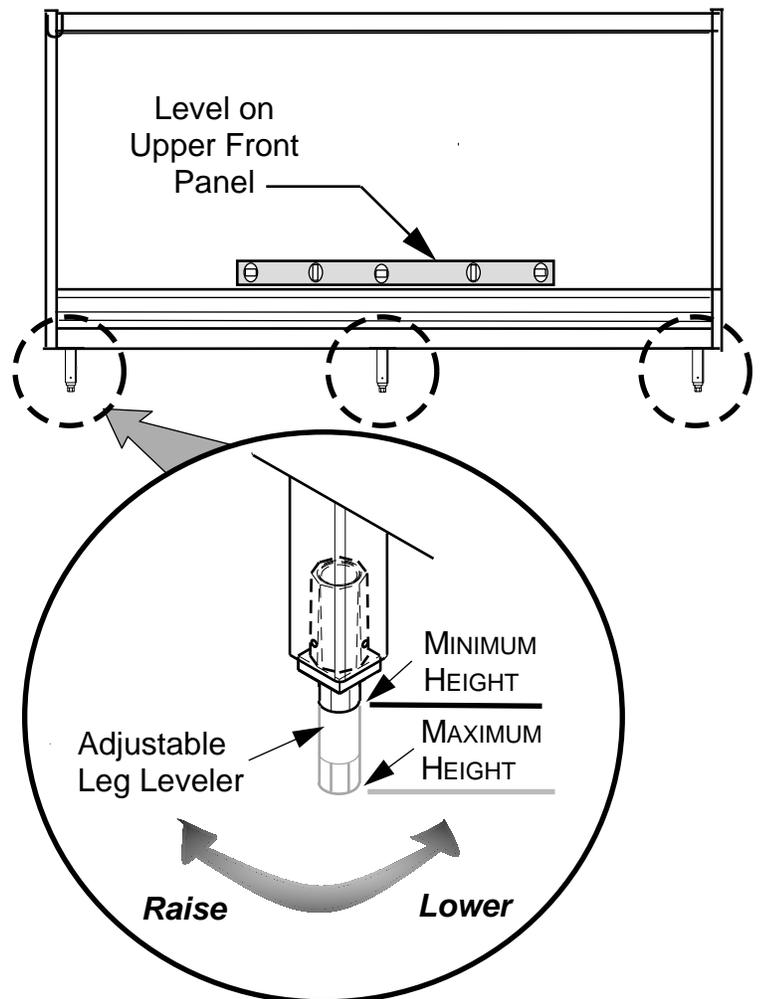


**LEVELING**

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

Set a long level (4 ft [1220 mm] or more) on the upper front panel of the merchandiser. Use an open-end wrench to turn leg levels until the merchandiser is level from end to end and from front to back. Check all 6 legs on 8 ft (2438 mm) cases, or 8 legs on 12 ft (3658 mm) cases.

**Note:** To avoid removing concrete flooring, begin lineup leveling from the highest point of the store floor.



## **JOINING INSTRUCTIONS**

Sectional construction means that two or more merchandisers may be joined in line yielding one long continuous display requiring only one pair of ends.

All joints must be air-tight to prevent formation of ice or condensation.

Refer to the detailed information provided in the **separate *Joining Instruction*** shipped with each case.

## REFRIGERATION / ELECTRICAL

### REFRIGERANT

The correct type of refrigerant will be stamped on each merchandiser's serial plate. The case refrigeration piping is factory sealed, pressurized and leak tested. Before making refrigeration hookups, depress universal line valve to ensure that coils have maintained pressure during shipment.

**⚠ WARNING**

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

### REFRIGERANT PIPING

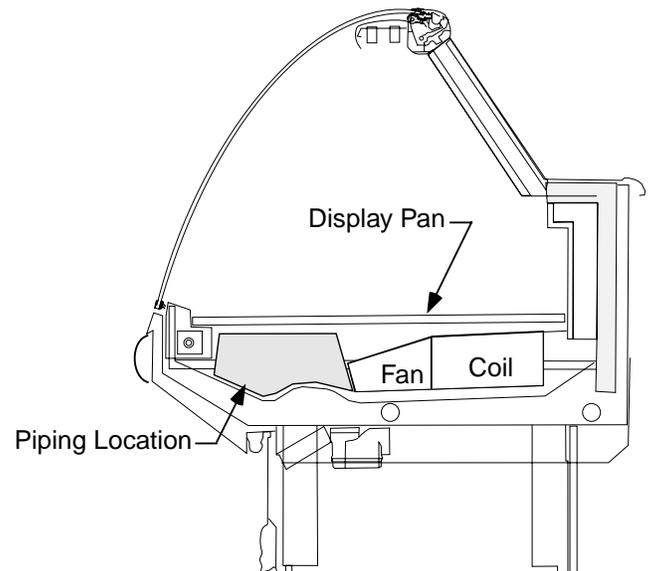
#### Connection Location

The refrigerant line connections are at the right-hand end of the merchandiser (as viewed from the front) beneath the display pans. A sticker marks the location of the connection "pod." The installer must saw a hole through the pod to exit the case. After connections have been made, seal this outlet thoroughly. Seal both the inside and the outside. We recommend using an expanding polyurethane foam insulation.

#### Multiplexing

Piping of merchandisers operating on the same refrigeration system may be run from merchandiser to merchandiser. **DO NOT RUN REFRIGERANT LINES THROUGH MERCHANDISERS THAT ARE NOT ON THE SAME REFRIGERATION SYSTEM BRANCH** as this may result in poor refrigeration control and compressor failure.

Interconnecting piping inside the merchandiser must be located as shown below to allow room for lifting the hinged fan plenums and for clearance beneath the display pans. The interconnecting piping may be run outside the case.



#### Line Sizing

Refrigerant lines should be sized as shown on the refrigeration legend that is furnished for the store or according to ASHRAE guidelines. Refer to the information on the next page for branch line piping of Hussmann Equipment.

#### Oil Traps

P-traps (oil traps) must be installed at the base of all suction line vertical risers.

#### Pressure Drop

Pressure drop can rob the system of capacity. To keep the pressure drop to a minimum, keep the refrigerant line run as short as possible using a minimum number of elbows. Where elbows are required, **USE LONG RADIUS ELBOWS ONLY.**

**⚠ CAUTION**

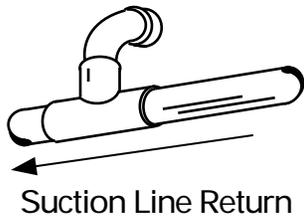
When brazing pipes be sure to use the insulation blanket shipped with the merchandiser to prevent damage to the plastic case bottom.

**INSULATION**

The suction and liquid lines should be clamped or taped together and insulated for a minimum of 30 ft (9144 mm) from the merchandiser. Additional insulation for the balance of the liquid and suction lines is recommended wherever condensation drippage is objectionable or lines are exposed to ambient conditions.

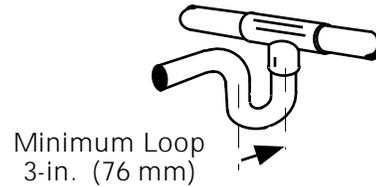
**SUCTION LINE**

- Pitch in direction of flow.
- May be reduced by one size at one third of case run load and again after the second third. Do not reduce below the case suction line size.
- Case suction lines should enter at the top of the branch line.



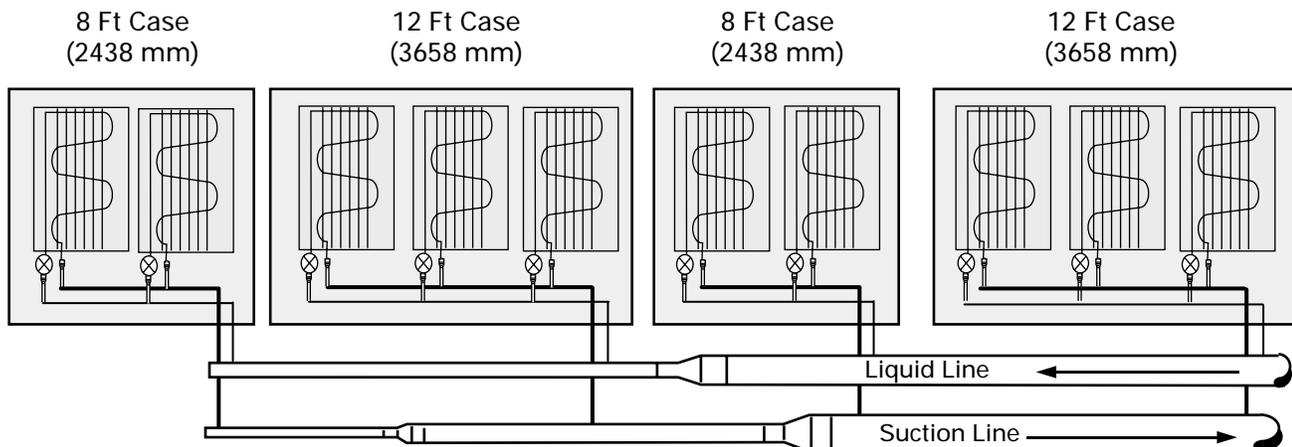
**LIQUID LINE**

- May be reduced by one size after one half the case run load. Do not reduce below the case liquid line connection size.
- Take-offs to case liquid lines should exit the bottom of the branch liquid line. Provide an expansion loop for each evaporator take-off. (Minimum 3 in. [76 mm] loop.)



Liquid Line Take Off

**Offtime Defrost**



## CONTROL SETTINGS

Merchandise data sheets are shipped with this manual. The data sheets provide case control settings and defrost data.

An evaporator pressure regulator or EPR (primary control) and a 3 – 5°F (1.7 – 2.7°C) differential thermostat (secondary control) must control refrigeration temperature. The EPR must be set to maintain the proper saturated evaporator temperature as listed in the data sheets. The thermostat must be set a couple degrees colder than the discharge air temperature specified in the data sheets. The thermostat will prevent product freezing should the EPR temperature drift downward during reduced load periods (lights off, lower ambient). The thermostat will be wired to control the compressor motor contactor (single compressor) or a liquid line solenoid valve (parallel compressor systems).

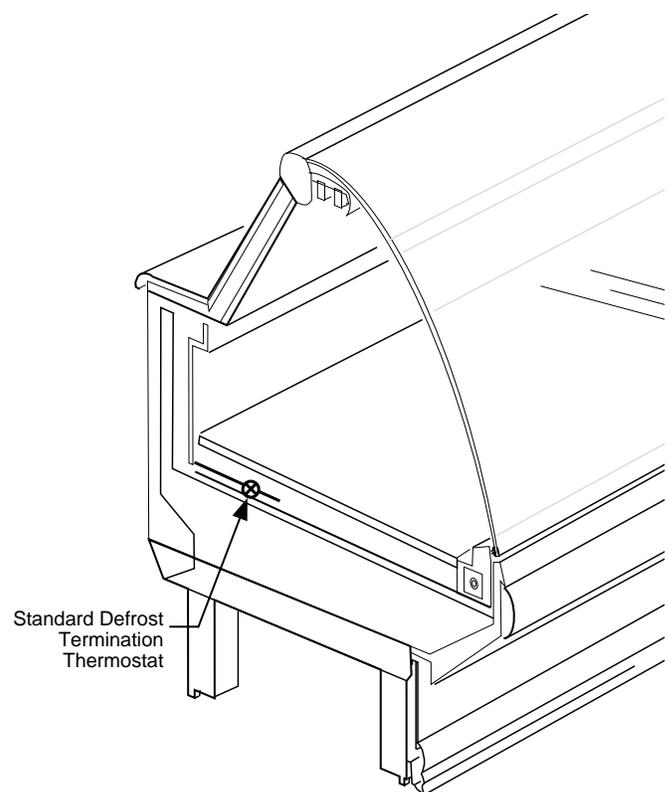
Defrost is Off Time. Defrost control settings are listed in the data sheets. When these merchandisers are connected to parallel compressor systems, a suction stop valve must be used to isolate the evaporator during defrost periods.

## REFRIGERATION THERMOSTAT

The bulb for the optional refrigeration thermostat is located in the discharge air of the evaporator. The optional refrigeration thermostat is located behind the exterior rear panel.

## DEFROST TERMINATION THERMOSTAT

The standard disc type defrost termination thermostat is not adjustable. This thermostat is clamped to the inlet of the coil on the left-hand (facing front) end of the merchandiser.



**MERCHANDISER ELECTRICAL DATA**

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

**ELECTRICAL CONNECTIONS**

All wiring must be in compliance with NEC and local codes. All electrical connections are to be made in the electrical raceway or *Handy Box*.

**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. **ALWAYS CHECK THE SERIAL PLATE FOR COMPONENT AMPERES.**

**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.

**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.

PINK .....	REFRIG. THERMOSTAT LOW TEMP.	ORANGE OR	
LIGHT BLUE ..	REFRIG. THERMOSTAT NORM TEMP.	TAN .....	LIGHTS
DARK BLUE ..	DEFROST TERM. THERMOSTAT	MAROON...	RECEPTACLES
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.  
CASE MUST BE GROUNDED**

## DRIP PIPING AND SPLASHGUARDS

### WASTE OUTLET AND WATER SEAL

The waste outlet is located in front of the fan plenum 6 ft (1829 mm) from the left-hand of the merchandiser (facing case front) allowing drip piping to be run under the fixture lengthwise. A 1<sup>1</sup>/<sub>2</sub> in. (38 mm) water seal is supplied with each fixture. The water seal must be installed to prevent air leakage and insect entrance into the fixture. A tee, adapter, ell, and plug have been shipped to allow field installation to determine direction of drain.

#### NOTES:

**Water seal outlet must clear front skid rail.**

PVC-DWV solvent cement is recommended. Follow the manufacturer's instructions.

### INSTALLING DRIP PIPING

Poorly or improperly installed drip pipes can seriously interfere with the operation of these merchandisers, and result in costly maintenance and product losses. Please follow the recommendations listed below when installing drip pipes to ensure proper installation.

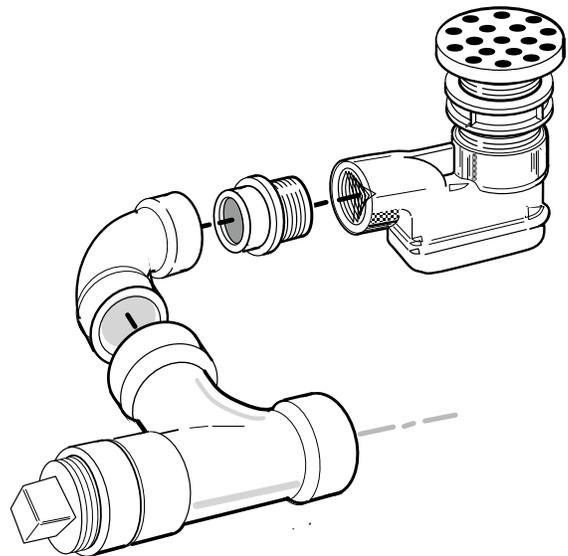
1. Never use drip piping smaller than the nominal diameter of the pipe or water seal supplied with the merchandiser.
2. When connecting drip piping, the water seal must be used as part of the drip piping to prevent air leakage or insect entrance. Never use two water seals in series in any one drip pipe. *Double water seals in series will cause an air lock and prevent draining.*
3. Pitch the drip piping in the direction of flow. There should be a minimum pitch of 1/8 in. per foot (3 mm per 300 mm).

4. Avoid long runs of drip piping. Long runs make it impossible to provide the pitch necessary for good drainage.
5. Provide a suitable air break between flood rim of the floor drain and outlet of drip pipe.
6. Prevent drip pipes from freezing:

A. Do NOT install drip pipes in contact with uninsulated suction lines. Suction lines should be insulated with a non-absorbent insulation material.

B. Where drip pipes are located in dead air spaces, such as between merchandisers or between a merchandiser and a store wall, provide means to prevent freezing.

**Note:** To prevent condensation problems, the water seal should be insulated.

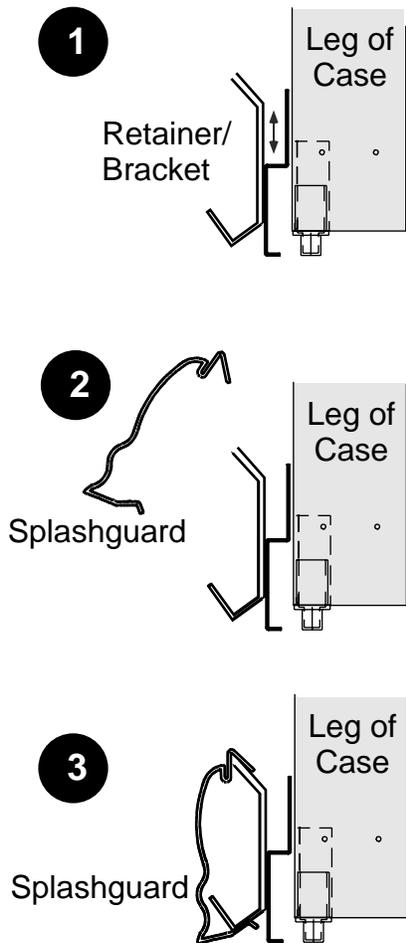


**INSTALLING SPLASHGUARD AND LOWER FRONT PANEL**

**Make certain that the end assemblies, end splashguards and end panels have been installed according to the End Kit instruction.**

The splashguard and lower front panel are shipped inside each case. *After* merchandisers have been leveled and joined, and all drip piping, electrical and refrigeration work has been completed, install the splashguard and lower front panel.

1. At front of merchandiser, attach a splashguard retainer/bracket to each leg with sheet metal screws.
2. Position top of splashguard over the top edge of the retainer/bracket as shown below.

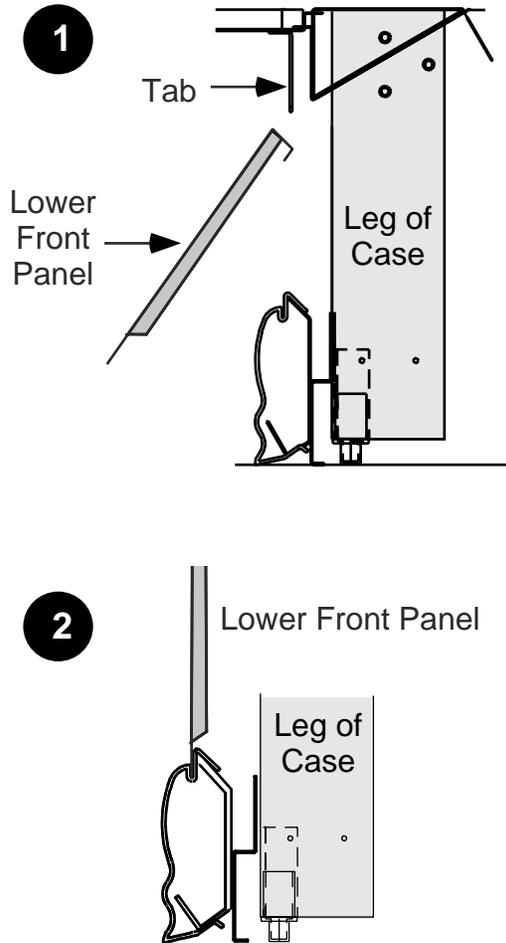


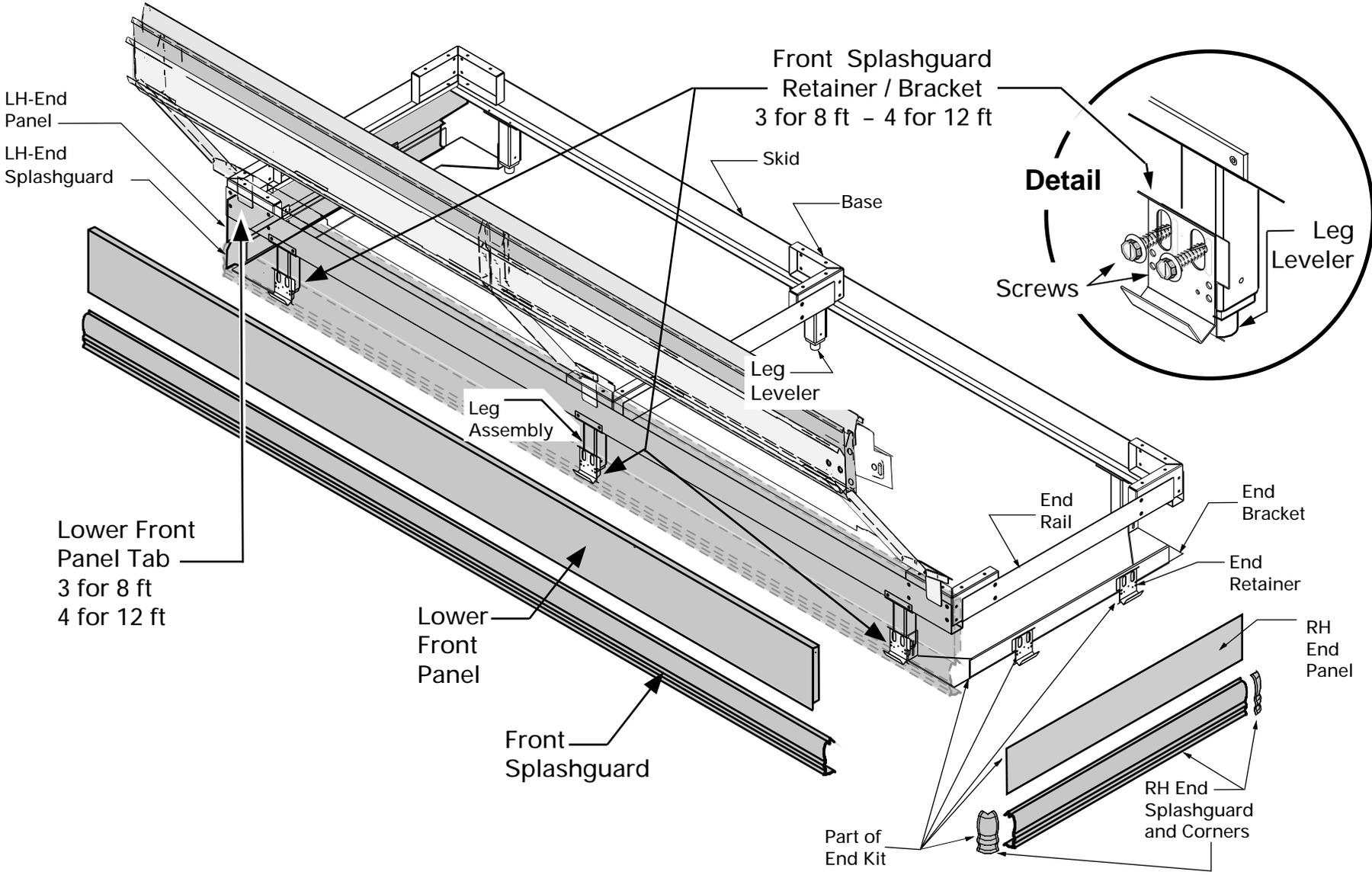
3. Push the lower edge of the splashguard toward the bottom of the bracket until it snaps into place.

**To Install Lower Front Panel**

1. Position the lower front panel with the top angled as shown in the illustration. Tabs extending from the upper front assembly are designed to fit into the slots on the top of the lower front panel.
2. Once the top is positioned, lift the panel up and drop it into the groove at the top of the splashguard.

Do not use additional fasteners or sealant to hold splashguards or panels in place. To meet cleanliness requirements, splashguards and panels must be removable without tools.



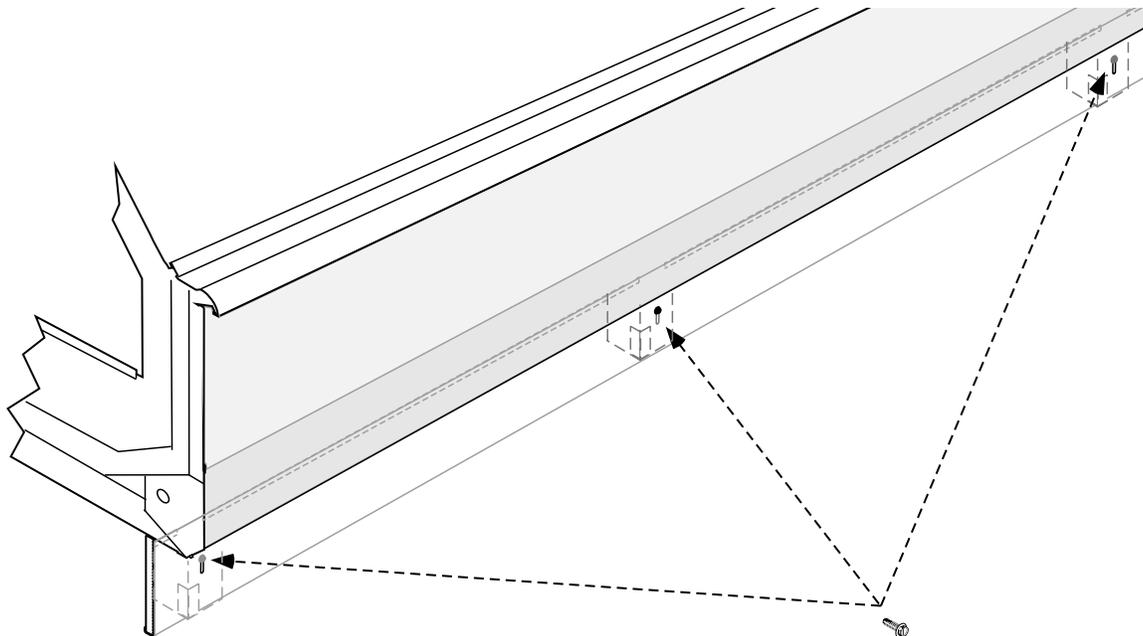


## 3-4 DRIP PIPING AND SPLASHGUARDS

### INSTALLING BOTTOM REAR PANEL

For fixed installation:

1. Align slots in bottom rear panel with center of legs.
2. Drive a hex head sheetmetal screw through each slot into each leg.



## START UP / OPERATION

### START UP

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

Each 4 ft (1219 mm) section has its own evaporator coil and pre-set non-adjustable thermostatic expansion valve (TEV). No adjustment is required. **DO NOT REMOVE THE CAP ON THE TEVs.** This cap is to be removed only for valve disassembly.

 <b>CAUTION</b>
<b>Removal of the TEV cap will result in refrigerant loss unless the system is first isolated and the refrigerant recovered.</b>

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

### STOCKING

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

Proper rotation of product during stocking is necessary to prevent product loss.

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 use non-approved shelving, baskets, display racks, or any accessory that could hamper air curtain performance.

### LOAD LIMITS

Each merchandiser has a load limit decal.



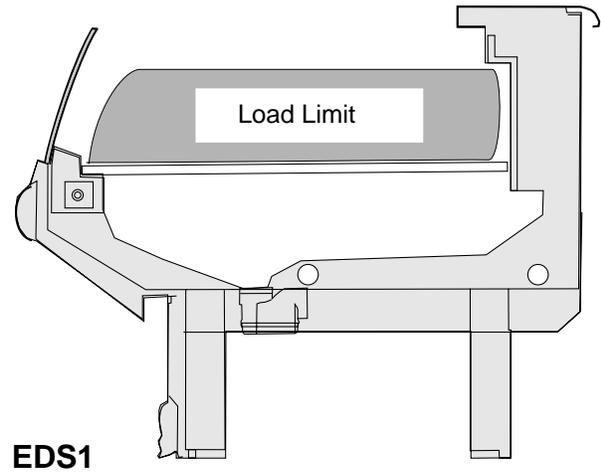
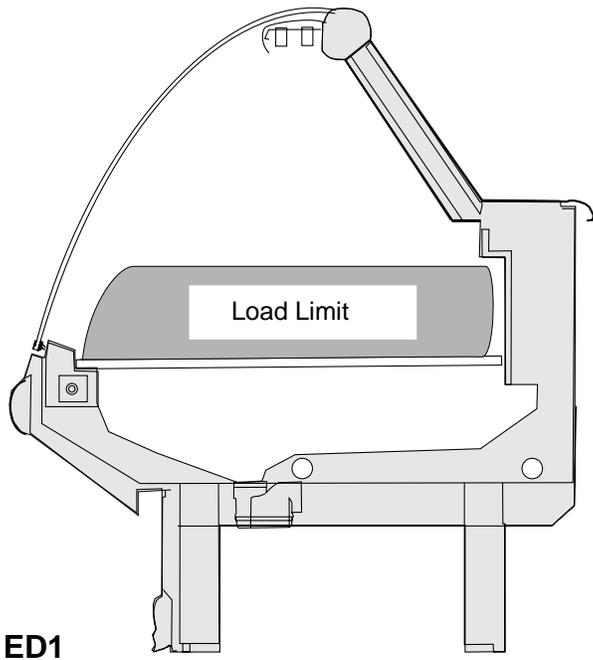
Recommended load limit profiles are shown on the next page.

Shelf life of perishables will be short if load limit is violated. Overstocking will adversely affect product temperature and merchandiser efficiency.

 <b>WARNING</b>
<b>At no time should merchandisers be stocked beyond the load limits indicated.</b>

**DO NOT BLOCK AIR GRILLE.**

**LOAD LIMIT PROFILES**



## 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, at least 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 CLEANSERS OR SCOURING PADS.**

#### Interior Surfaces

The interior surfaces may be cleaned with most domestic detergents, ammonia based cleaners and sanitizing solutions with no harm to the surface. Removable parts are labeled **REMOVE FOR CLEANING.**

Removable stainless steel parts may be cleaned and sanitized in dishwasher.

See next page for detailed direction.

#### *Do Not Use:*

- Abrasive cleansers and scouring pads, as these will mar the finish.
- A hose on lighted shelves or submerge the shelves in water.
- Solvent, oil or acidic based cleaners on any interior surfaces.

 **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.**

#### *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.
- **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 MERCHANDISER'S SEALING CAUSING LEAKS AND POOR PERFORMANCE.**
- Lift or remove fan plenum for cleaning. Hook chain in rear panel to secure plenum during cleaning. Be sure to reposition the fan plenum after cleaning merchandiser.
- 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 to the merchandiser.

 **WARNING**

**ALWAYS SHUT POWER OFF DURING CLEANING PROCESS.**

 **WARNING**

**Do NOT allow product to sit in a non-refrigerated area.**

INTERIOR CLEANING STEPS

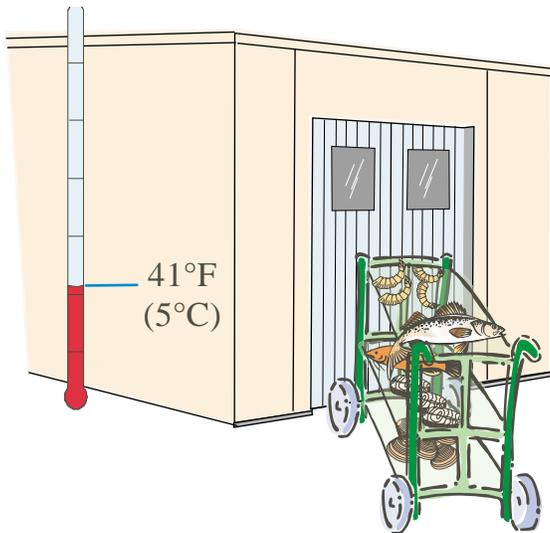
**⚠ WARNING**

**Do NOT allow product to sit in a non-refrigerated area.**

**⚠ WARNING**

**ALWAYS SHUT POWER OFF DURING CLEANING PROCESS.**

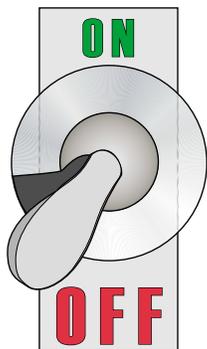
**STEP 1 – Remove product to cooler.**



**STEP 4 – Remove display pans.**



**STEP 2 – Turn off refrigeration.**



**STEP 5 – Lift out discharge air grille.**



**STEP 3 – Shut power off.**

Note that refrigeration controls and power controls are not in the merchandiser. Consult the store legend or facility manager.

**STEP 6 – Lift out interior back panel.**



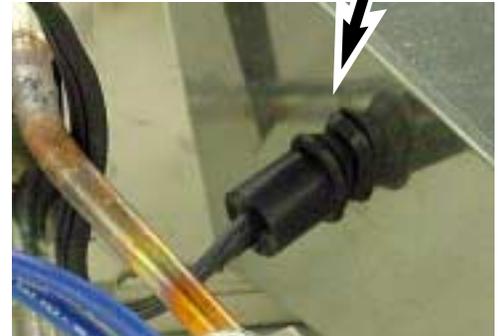
**STEP 7 – Lift out return air grille (from front).**



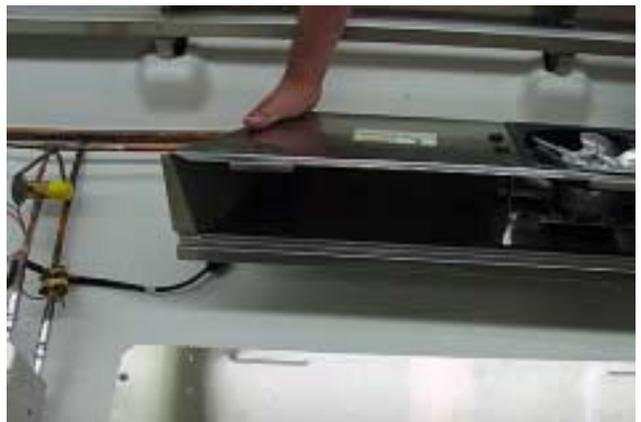
**OR**

**Unplug fan harness.**

**STEP 8 – Rotate fan plenum up and back; hook chain at rear of liner.**



**Lift fan plenum up and back to remove.**  
(view is from the back)

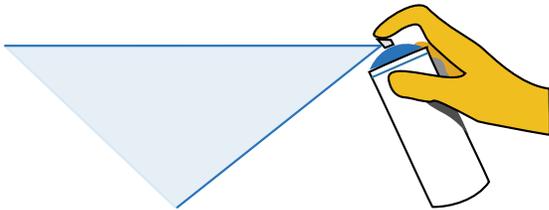


**STEP 9 – Clean inside the merchandiser.**

Once interior parts have been removed, collect loose debris for removal. Do not clog waste outlet.

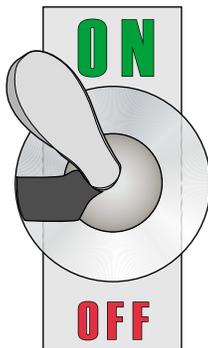


**STEP 10 – Clean and sanitize according to local requirements.**



**STEP 11 – Reassemble in reverse order.**

Turn on power, then refrigeration. Make certain merchandiser has cooled to operating temperature before restocking.



**REMOVING SCRATCHES FROM BUMPER**

Most scratches and dings can be removed using the following procedure.

1. Use steel wool to smooth out the surface area of the bumper.
2. Clean area.
3. Apply vinyl or car wax and polish surface for a smooth glossy finish.

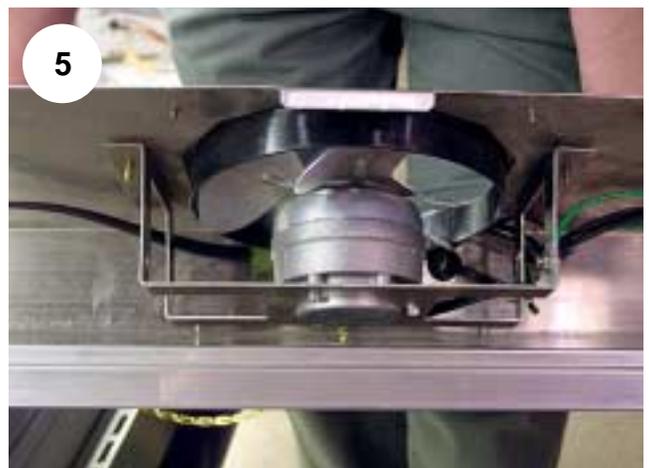
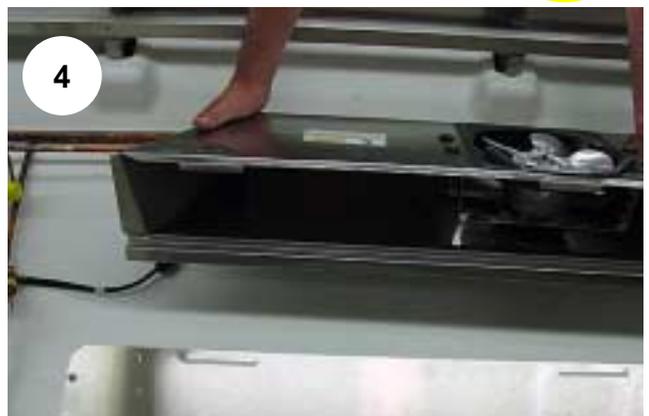
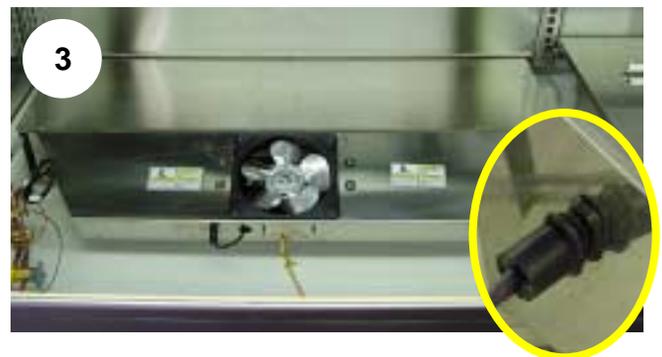
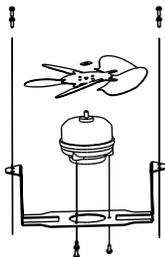
## SERVICE

### 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. **THE BLADES MUST BE INSTALLED WITH RAISED EMBOSING (PART NUMBER ON PLASTIC BLADES) POSITIONED AS INDICATED ON THE PARTS LIST.** (Refer to the case data sheet for each model.)

For access to evaporator fans:

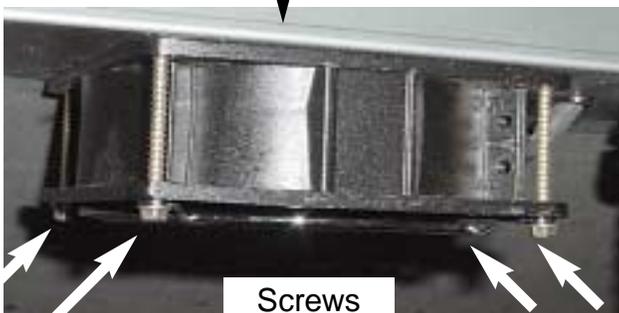
1. Turn off power
2. Remove bottom display pans.
3. **Disconnect fan from wiring harness.**
4. Lift fan plenum out of case. Place on stable work surface.
5. Remove screws holding fan basket to plenum. Fan blade may be removed after fan assembly is removed from plenum.
6. Remove screws holding bottom of motor to fan basket.
7. Replace fan motor and blade in fan basket.
8. Reinstall fan basket in plenum and reinstall plenum in case.
9. Reconnect fan to wiring harness. Turn power on.
10. Verify that motor is working and blade is turning in the correct direction.



## 6-2 SERVICE

For access to ambient fans:

1. Turn off power.
2. Remove lower front panel.
3. Disconnect fan from wiring harness.
4. Remove screws holding motor and grille.
5. Replace fan motor and grille.
6. Reconnect fan to wiring harness. Turn power on.
7. Verify that motor is working and blade is turning in the correct direction.
8. Replace lower front panel.



## REMOVING OPTIONAL RAIL LAMP POLYCARBONATE COVER

The rail covers are removed without tools. From the front of the case, grasp the cover with both hands. Apply pressure as shown in the photo. Pull forward and up until the back of the cover clears the retainer.

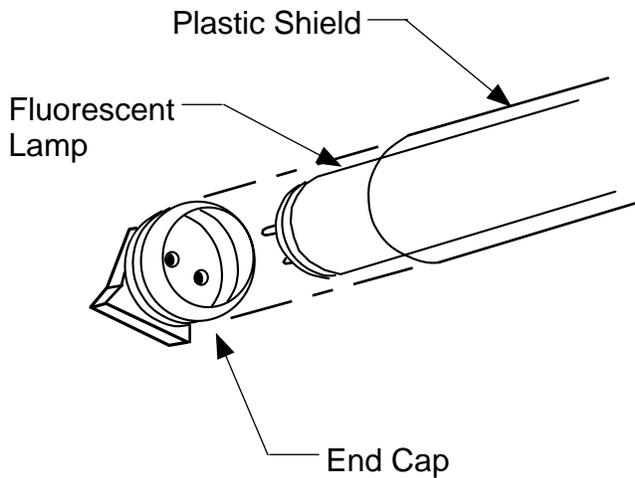


## ELECTRICAL SERVICE RECEPTACLES

The receptacles located on the exterior back of the merchandisers are intended for scales and other light duty appliances that are found in meat and delicatessen departments. The receptacles are not intended for large motors.

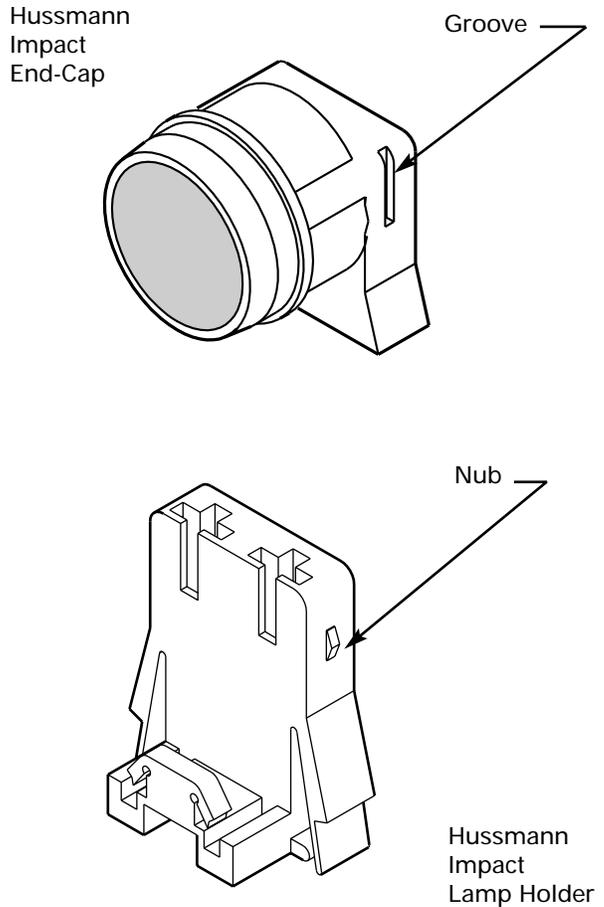
**REPLACING FLUORESCENT LAMPS**

Fluorescent lamps are furnished with moisture resistant lamp holders and end caps. Lamps on lighted shelves have plastic shields. Whenever a fluorescent lamp is replaced, be certain to re-install the plastic shields and end caps.



**REPLACING LAMP HOLDERS AND END CAPS**

The Hussmann Impact lamp holder is designed to snap into the sheet metal of the case. The lamp holder has a locking 'nub' which fits inside the groove of specially designed end caps.



**IMPORTANT!**

Always replace lamp holders and end caps with Hussmann lamp holders and end caps.

Use of non-Hussmann parts may result in poor electrical contact and short lamp life.

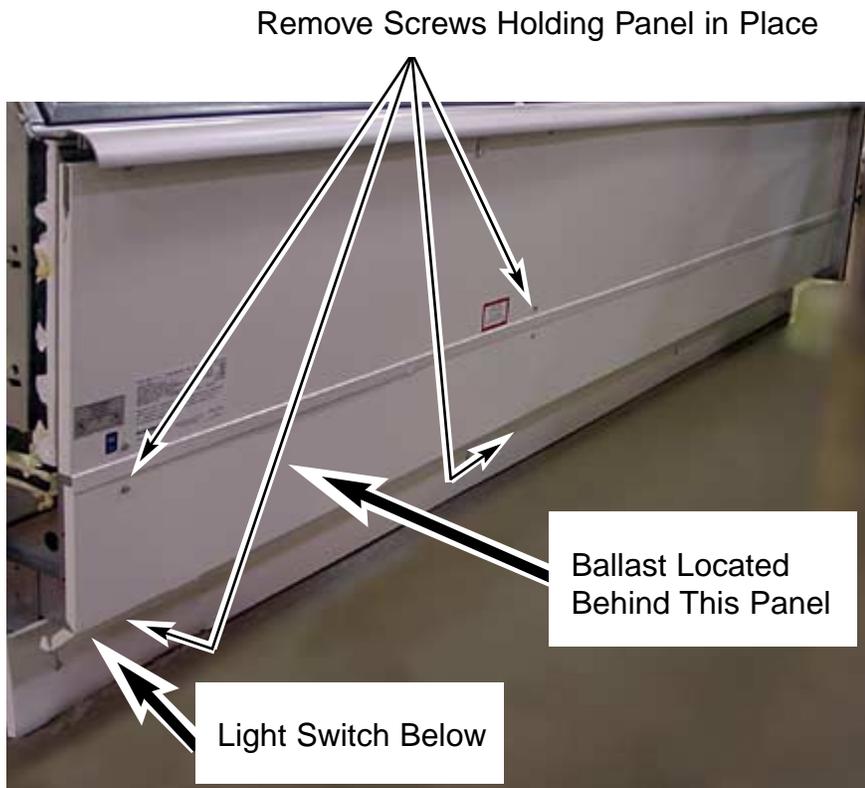
### REPLACING ELECTRONIC BALLAST

#### Lamp Ballast

The lamp ballast are located in the raceway, behind the back lower panel at the left-hand end of the merchandiser (facing rear of case). NOTE: The switch for the lamp is located in this panel.

To gain access:

1. Disconnect the electrical power to the merchandiser.
2. Remove the left lower rear panel.
3. Service or replace ballast as required. Reassemble items as they were originally installed.
4. Reconnect the electrical power.



**REPLACING CYLINDERS —  
SINGLE PANE GLASS**

**⚠ WARNING**

**Glass is heavy and can cause bodily damage. Check support cylinders for periodic maintenance.**

**⚠ CAUTION**

Cylinders are a wear item. They are designed:

- to support the glass when fully open.
- to allow the glass to come down (or close) slowly.

Have your Service Contractor replace the cylinders when required.

**⚠ WARNING**

**Once cylinders are removed, front glass will have NO support to maintain it in a raised position. Support the front glass at all times until cylinder is replaced or the glass is lowered.**

When cylinders need to be replaced, the lifting force of the cylinder must be known. The lifting force can be determined by the data printed on the cylinder being replaced. The following shows the part number for the 300N and 400N cylinders.

- 300N Cylinder – P/N 0412539
- 400N Cylinder – P/N 0406925

1. Raise the front glass to open completely.
2. Use special hand tool, shown in photo, to compress and remove cylinder.

**Note:** Cylinders cannot be removed without special hand tool.

**Cylinder Removal Tool**

**P/N 0425326**



**Removing a Cylinder**

**⚠ CAUTION**

Cylinder rods must point down so oil will lubricate the rod and seals. Failure to lubricate will severely shorten cylinder life.

## REPLACING SINGLE PANE FRONT GLASS (Requires more than one person.)

### WARNING

Once set screws are loose, the glass and glass clamp have NO support or retainers. Support the front glass at all times until the top glass clamp and set screws are secured, or glass is removed.

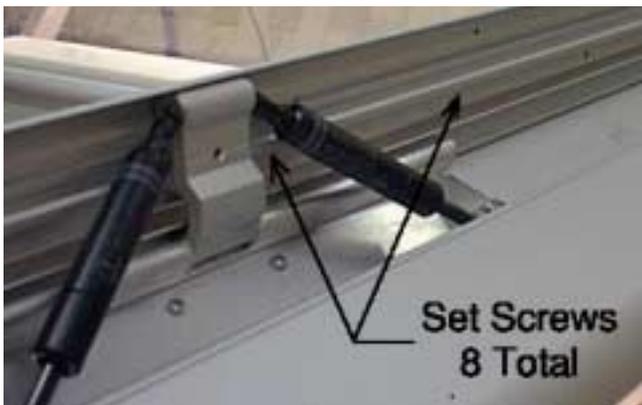
1. Raise the front glass to open completely.
2. Loosen all set screws along the inside bottom of the glass clamp.

**Note:** All cylinders do not have to be removed to remove the glass

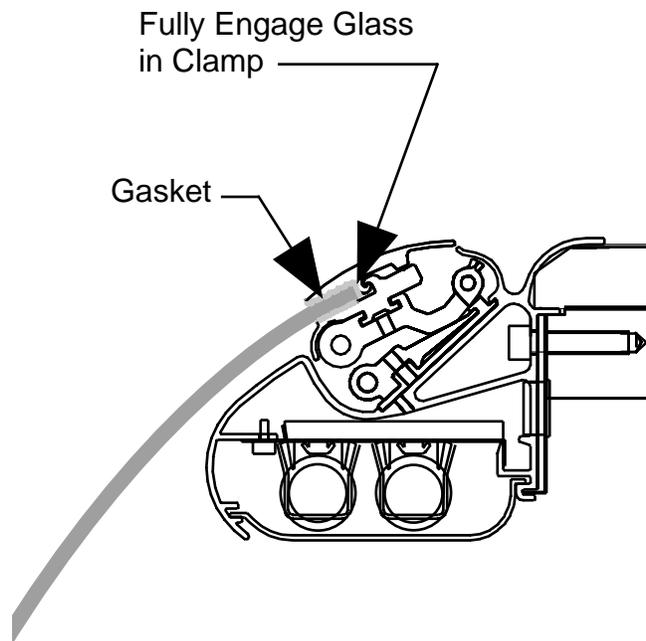
### IMPORTANT

When reinstalling glass, be certain that:

1. Gasket is on glass evenly.
2. Glass bottom is fully in retainer.
3. When set screws are tightened, glass is firmly held in place by the glass clamps.

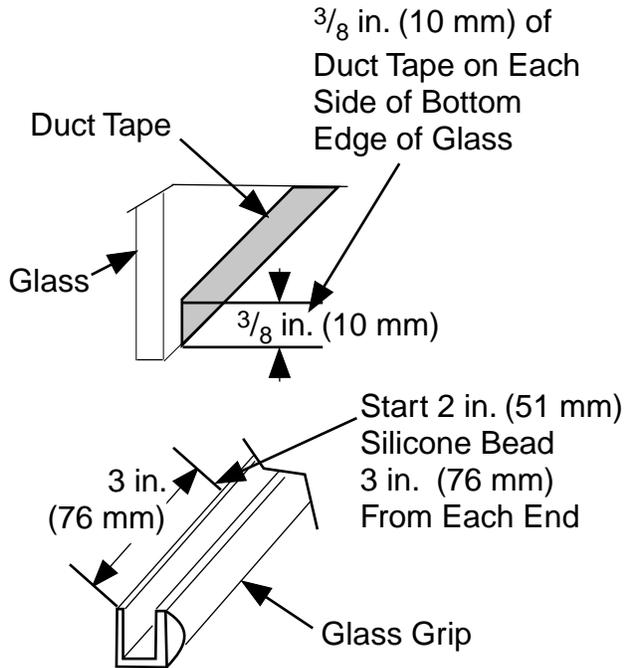


Set Screw Locations

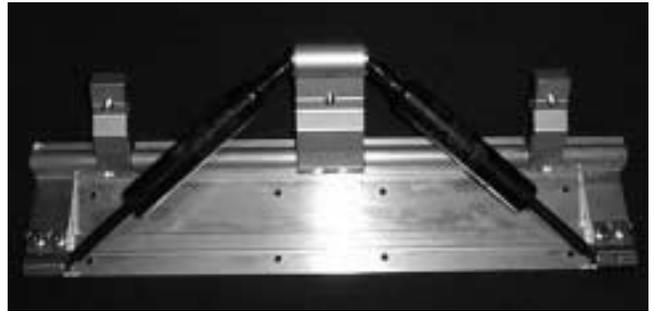


**REPLACING GLASS HAND GRIP**

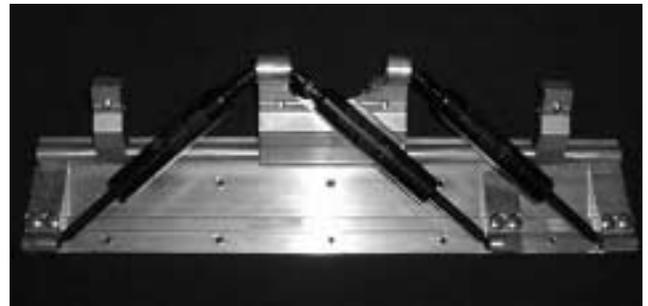
The hand grip is fastened to the curved glass as shown below. A 2 inch (51 mm) bead of silicone needs to be placed 3 inches (76 mm) from each end and in the center of the hand grip. The duct tape is placed on the glass to provide a tight fit.



Type: Two cylinders and three fastening points.  
 P/N 0407352  
 Used on: 30° outside wedge.

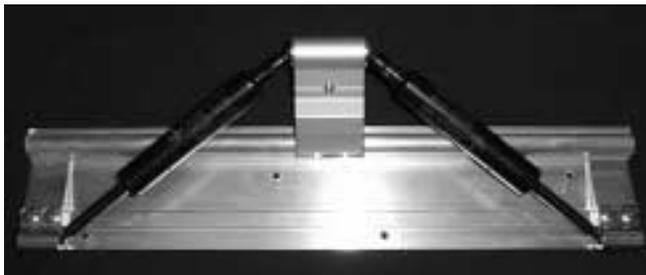


Type: Three cylinders and four fastening points.  
 P/N 0412538  
 Used on 90° inside wedge, 45° outside and inside wedge, 30° inside wedge.  
 Note: This hinge assembly, when used on the 90° and 45° inside wedge, uses only two cylinders.



**HINGE HARDWARE**

Type: Two cylinders and one fastening point.  
 P/N 0401884  
 Used on: 8 ft and 12 ft (2438 mm and 3658 mm) parent cases and as a joining bracket.



Type: Four cylinders and five fastening points.  
 P/N 0413170  
 Used On: 90° outside wedge.



### 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 solders and technique:

#### Solders

Aladdin Welding Products Inc.  
P.O. Box 7188  
1300 Burton St.  
Grand Rapids, MI 49507  
Phone: 1-800-645-3413  
Fax: 1-800-645-3414

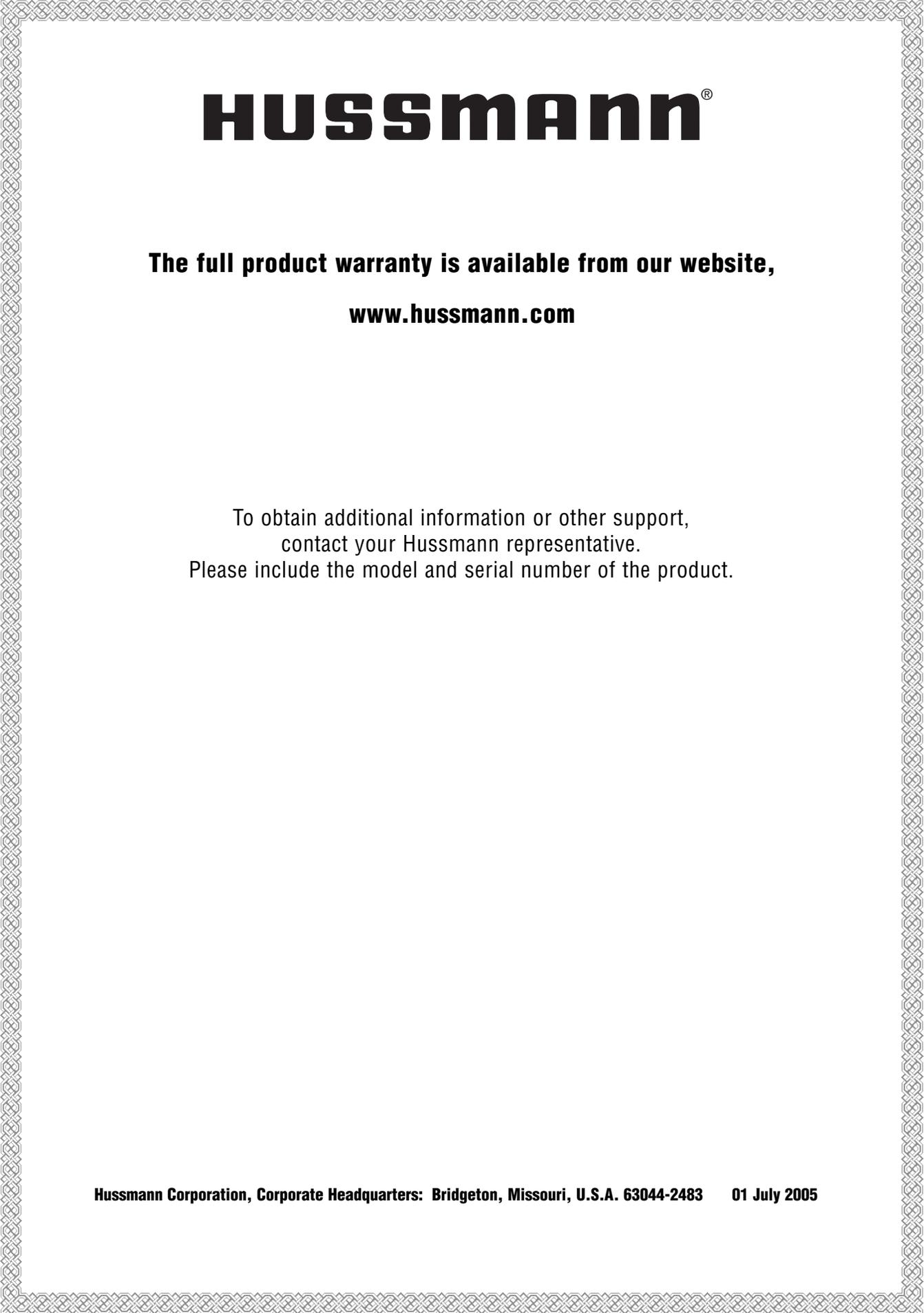
X-Ergon  
1570 E. Northgate  
P.O. Box 2102  
Irving, TX 75062  
Phone: 1-800-527-9916

#### NOTE:

Hussmann Aluminum melts at	1125°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<sup>®</sup>**

**The full product warranty is available from our website,  
[www.hussmann.com](http://www.hussmann.com)**

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