

# SHVSV BAKERY SERVICE MERCHANDISER

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## USER MANUAL

SHVSV - SHVSV-DWR-3-R  
- SHVSV-DWR-4-R  
- SHVSV-DWR-8-R  
- SHVSV-DWR-10-R  
- SHVSV-DWR-45IS-R

Remote

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# General Information

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## Case Description:

Description: Refrigerated Service Bakery Merchandiser

**Shipping Damage:** All equipment should be thoroughly examined for shipping damage before and during unloading. This equipment has been carefully inspected at our factory and the carrier has assumed responsibility for safe arrival. If damaged, either apparent or concealed, claim must be made to the carrier Immediately.

**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 claim forms.

**Concealed Loss or Damage:** When loss or damage is not apparent until after all equipment is uncrated, a claim for concealed damage is made. Make request in writing to carrier for inspection within 15 days, and retain all packaging. The carrier will supply inspection report and required claim forms.

**Shortages:** Check your shipment for any possible shortages of material (See Parts List page 9). If a shortage should exist and is found to be the responsibility of Hussmann Chino, notify Hussmann Chino. If such a shortage involves the carrier, notify the carrier immediately, and request an inspection. Hussmann Chino will acknowledge shortages within ten days from receipt of equipment.

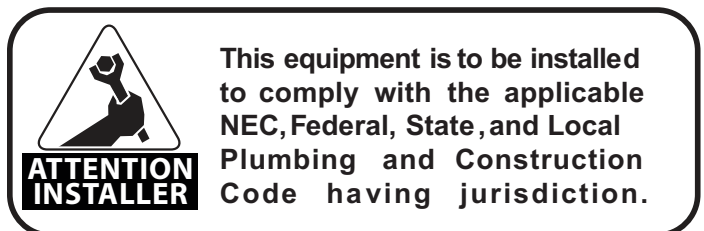
**Hussmann Chino Product Control:** The serial number and shipping date of all equipment have been recorded in Hussmann's files for warranty and replacement part purposes. All correspondence pertaining to warranty or parts ordering must include the serial number of each piece of equipment involved, in order to provide the customer with the correct parts.

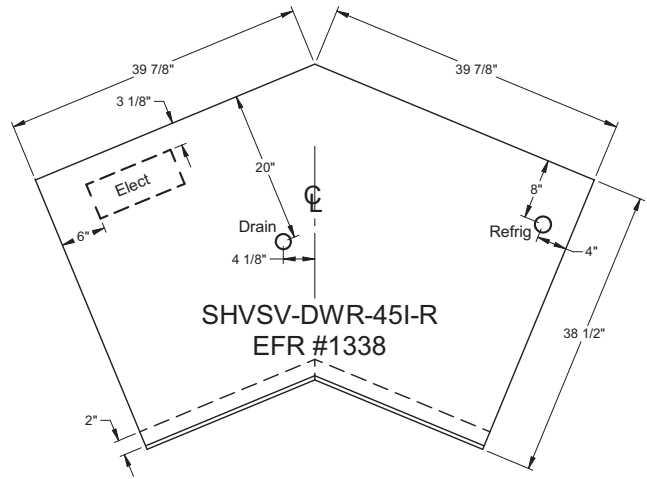
**Location/Store Conditions:** The SHVSV refrigerated merchandiser has been designed for use only in air conditioned stores where temperature and humidity are maintained at or below 75°F Dry bulb and 55% relative humidity. DO NOT allow air conditioning, electric fans, ovens, open doors or windows (etc.) to create air currents around the merchandiser, as this will impair its correct operation.

Keep this booklet with the case at all times for future reference.

**HUSSMANN®/CHINO**

A publication of HUSSMANN® Chino  
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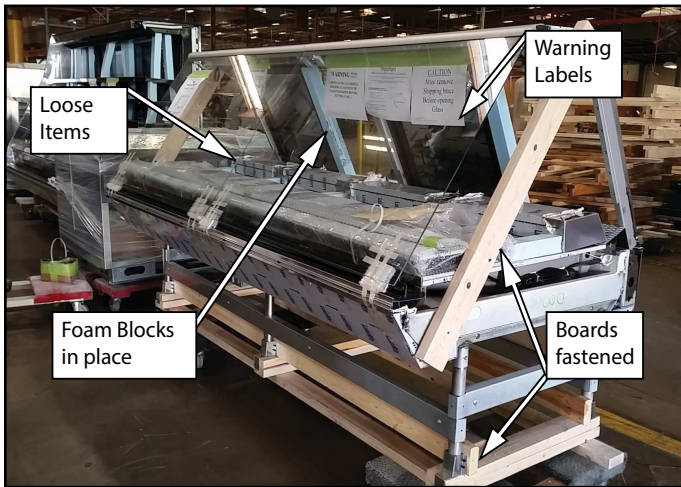


[illegible]

# Installation (Unloading)

## NOTICE

Do NOT remove Foam Blocks from shelves and glass until the merchandisers are positioned for installation. Shelves or merchandising glass may be damaged.



Case is to arrive at store as was shipped from factory. See reference above for proper shipment referencing. (Not actual case)

## Receiving Case

Upon receiving your new Hussmann Case 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 or claim form.

If there is 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.



**Glass can cause bodily damage. Check support hinges for periodic maintenance. Opening adjacent glass simultaneously could result in but not limited to glass breakage, damage to merchandiser, serious injury or death. To prevent injury, when glass is open, take adequate safety measures to protect shoppers.**

## Installation (Cont'd)

### SHVSV Lifting and Transport Instructions

1. The SHVSV can be lifted by a forklift using the skid which the merchandiser is mounted to.
2. Move the fixture as close as possible to its permanent location and then remove all packaging. Check for damage before discarding packaging. Remove all separately packed accessories such as kits and shelves.
3. Make sure that fork spacing and width will not damage drain or come in contact with piping, or electrical lines
4. Be sure that the forks are long enough to support beyond the center of the case but not damage near components. Check for proper balance before moving. A minimum fork length of 36" is recommended for 68" wide cases
5. The SHVSV merchandiser can be raised at one end underneath the deck with a forklift or J-Bar if forklift is not accesible to allow the placement of rollers or dollies.
6. Evenly support the entire base structure on rollers or dollies before attempting to move. Each Base Leg must have its own dollie to properly support the case.

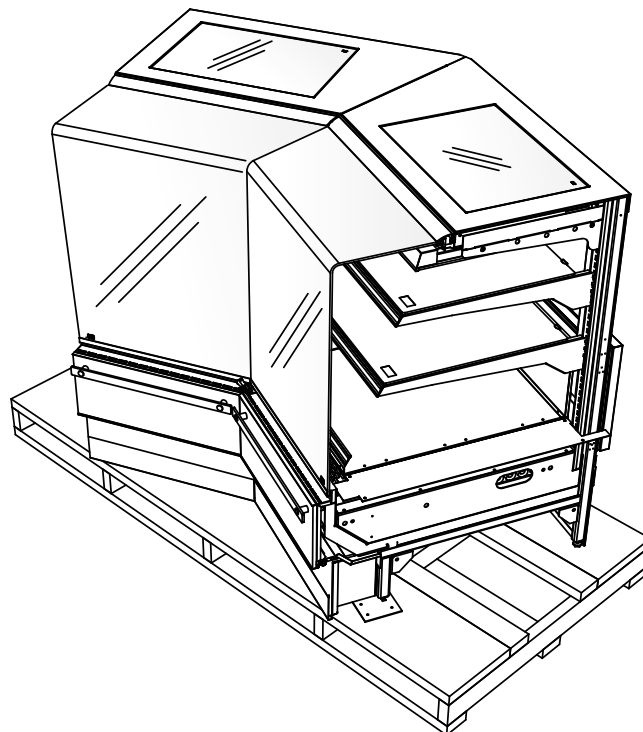


**Do NOT remove shipping braces until the merchandisers are properly anchored to the floor. Merchandisers are top heavy and could tip over causing serious injury. Merchandisers must be braced before removing the lag bolts.**

### **WARNING**

Improper placement of forks may damage drainage piping. Use a spotter when placing forks. Make sure that piping will not be damaged. Use J-Bars or Jacks if forks cannot be used safely

Lifting Points are typical and dependent upon size of case and refrigeration application, drainage configurations will call for altercations in Lifting Zones.



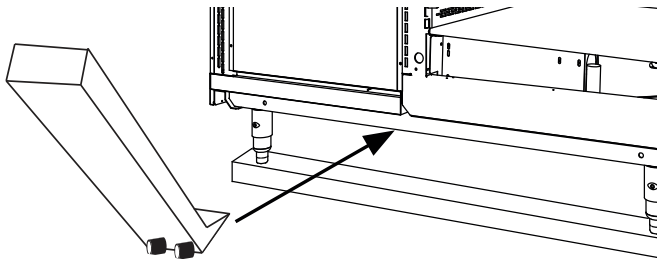
# Installation (Cont'd)

## Skid Removal

**Important:** See lifting instructions to properly lift case when being placed on dollies or permanent location. (See page 6 for Lifting Instructions.)

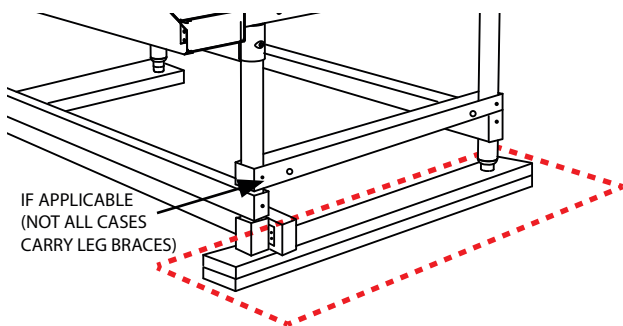
### Lifting Points

Leave all hardware and fittings in place until case is located at or near its preferred location. Using forklift or J-Bar lift the case from the 2x4 boards and placing dollies underneath each base leg, proceed to moving the case to its designated location if not done so already.



### Dollie Placement

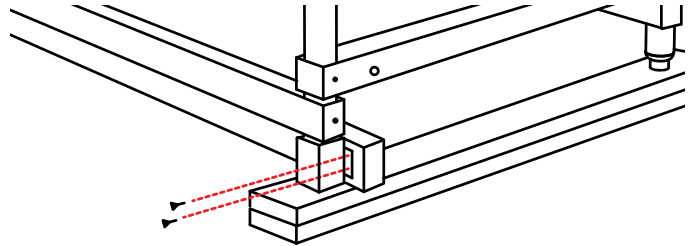
The illustration below demonstrates perfect placement of a dolly per 1 side for both base legs of the merchandiser.



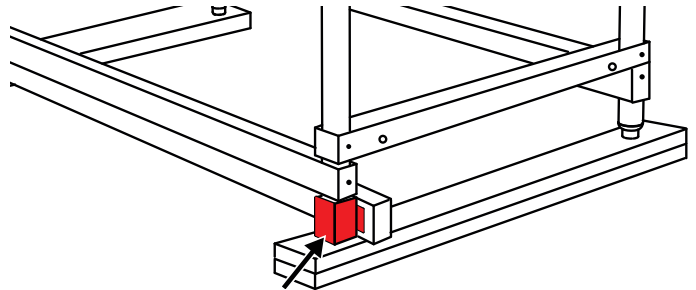
Move the fixture as close as possible to its permanent location and then remove all packaging and prepare to remove off Skid. Remove all separately packed accessories such as kits, and panels. Check for damage before discarding packaging.

## Hardware Removal

Remove screws as well as fastened plates bolted to each 2x4 board at each base leg.

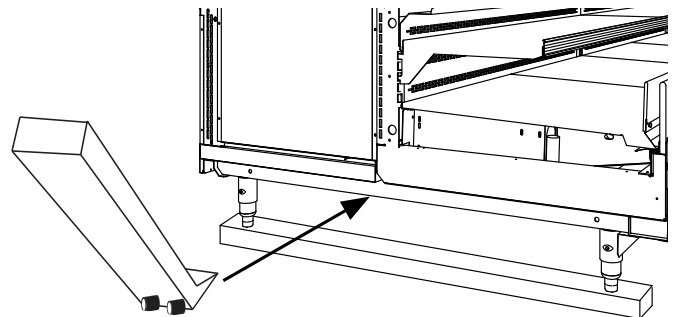


Remove fastened plates only upper brace legs are to remain fastened onto case.



Fastened plate

Once the fastened plates are removed a J-Bar can be used to lift at each end of the leg braces to remove the below 2x4 boards.



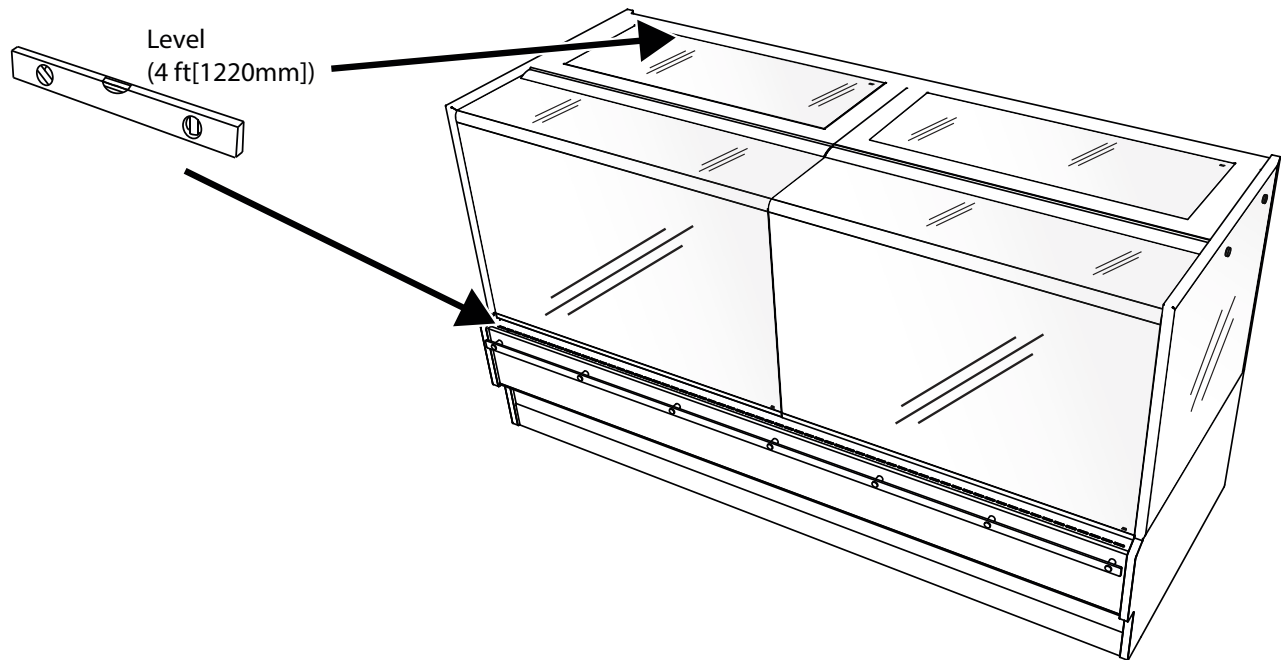
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## Installation (Cont'd)

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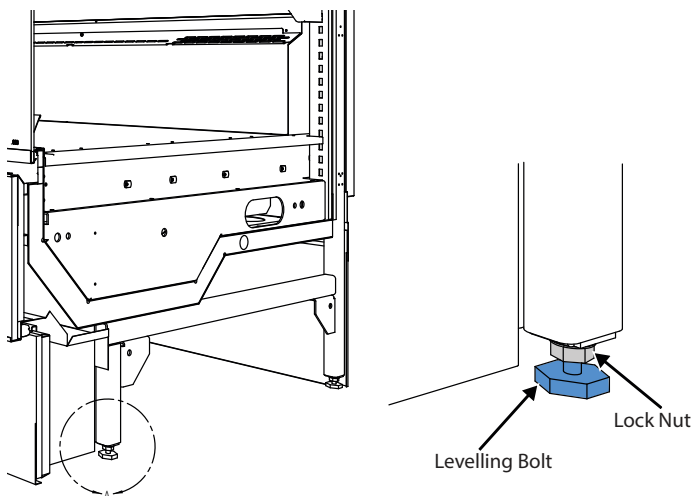
### Level Case

Position the case at the highest point. Set a long magnetized level (4ft [1220 mm] or more) on either underneath the deck or on top of the case. Ensure to level case from front to back and side to side.



### Leg Adjustment

Adjust the legs at each corner of the case to level out any discrepancies in order to optimize case performance and proper drainage.



Note: To avoid removing concrete flooring, begin line up levelling from the highest point of the store floor.

A wrench or pliers may be used to adjust each base leg.

- Loosen the lock nut.
- Turn the levelling bolt to raise or lower the height of the case as necessary.
- Tighten Lock Nut to set Levelling Bolt in place.



# SHVSV-DWR JOINT CHECKSHEET

PART#: CS00033

INSPECTOR \_\_\_\_\_

SALES ORDER # \_\_\_\_\_

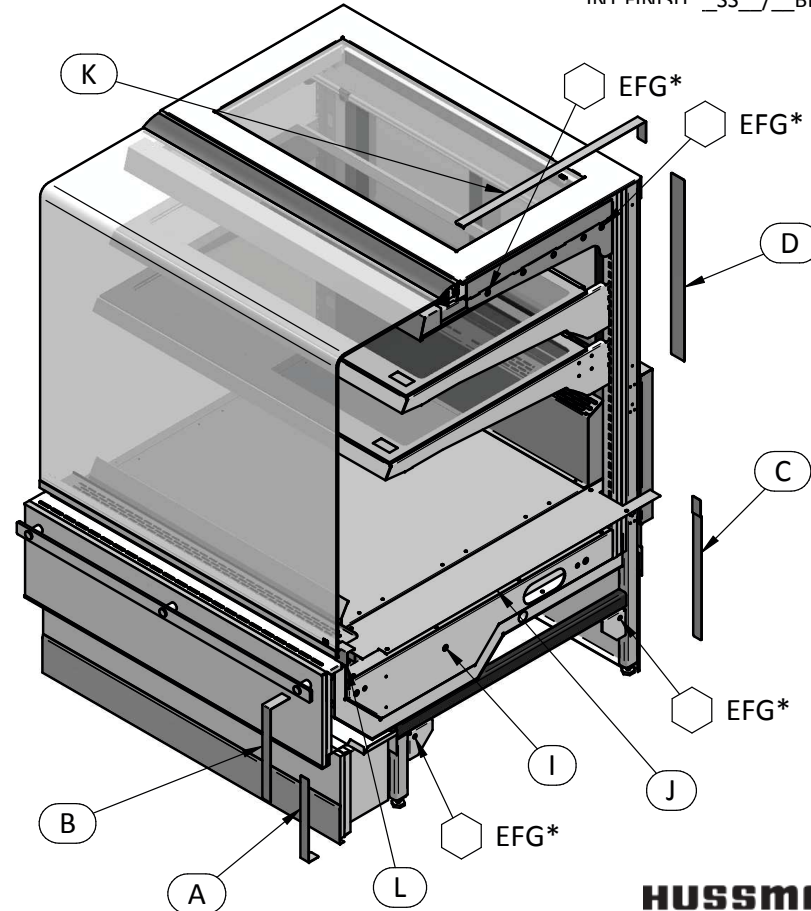
EXT COLOR \_\_\_\_\_

INT FINISH SS / BLACK

\*SEE INSTALLATION GUIDE

 INDICATES CASE BOLTING/ALIGNMENT POINT

CHK	ITEM	PART #	QTY	GRAPHIC
<input type="checkbox"/>	TRIM-SHVSV-JOINT FRNT BOT	3056717004 (STAINLESS) 3056717005 (EXT COLOR)	1	A
<input type="checkbox"/>	TRIM-SHVSV-JOINT FRNT	3054108005 (EXT COLOR) 3054108004 (STAINLESS)	1	B
<input type="checkbox"/>	TRIM-SHVSV-JNT REAR BOT	3054110004 (STAINLESS)	1	C
<input type="checkbox"/>	TRIM-SHVSV-JOINT REAR	3054109004 (STAINLESS)	1	D
<input type="checkbox"/>	NUT, 3/8 - 16	300-03-1370	4	E
<input type="checkbox"/>	WASHER, 5/16"	300-03-1315	8	F
<input type="checkbox"/>	BOLT, 3/8 - 16 X 1	300-03-0845	4	G
<input type="checkbox"/>	GASKET SEAL TAPE	225-01-0628	16 FT	H
<input type="checkbox"/>	SEALANT, BUTYL, TUBE	100-01-0121	1	I
<input type="checkbox"/>	DRAWER-SHVSV-TRIM-JNT-CTR	3040423005 (INT COLOR) 3040423004 (STAINLESS)	1	J
<input type="checkbox"/>	TRIM-SHVSV-JOINT TOP	3056718005 (EXT COLOR) 3056718004 (STAINLESS)	1	K
<input type="checkbox"/>	TRIM-SHVSV-JOINT FRNT CAP	3056719005 (INT COLOR) 3056719004 (STAINLESS)	1	L
<input type="checkbox"/>	SEALANT, SILICONE, TUBE	100-01-0051 (WHITE) 100-01-0063 (SILVER) 100-01-0065 (BLACK)	1	-
<input type="checkbox"/>	SCREW, SELF TAP #8 X 1/2	300-03-0037	20	-
<input type="checkbox"/>	VHB DOUBLE-SIDED TAPE	175-01-0562	16 FT	-
<input type="checkbox"/>	FTNG, ELB, 3/4", PVC	00000581	1	-
<input type="checkbox"/>	3/4" SPIGXSOC 90 ST ELL S40	00000582	1	-
<input type="checkbox"/>	3/4X1", SLIPXFPT, 435-102, PVC	00000586	1	-
<input type="checkbox"/>	3/4" SCH 40 R TRAP	00001309	1	-


**HUSSmann**  
REV A 02/21/2018

## Installation (Cont'd)

### Setting and Joining

The sectional construction of these models enable them to be joined in line to give the effect of one continuous display.

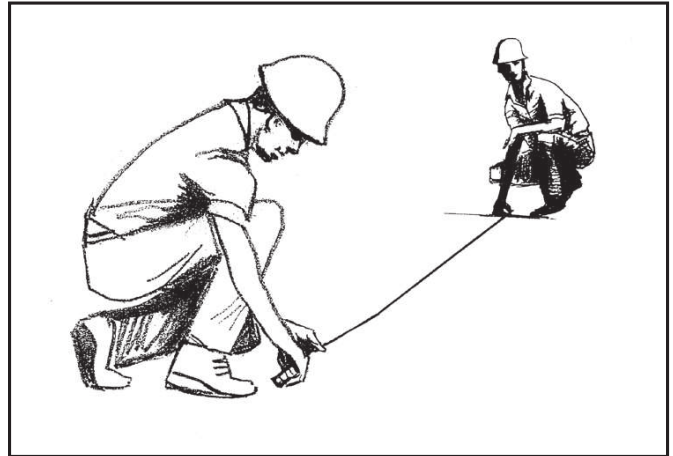
An alignment pin kit is supplied with every case and must be used in alignment.

### Leveling

**IMPORTANT! IT IS IMPERATIVE THAT CASES BE LEVELED FROM FRONT TO BACK AND SIDE TO SIDE PRIOR TO JOINING. A LEVEL CASE IS NECESSARY TO INSURE PROPER OPERATION, WATER DRAINAGE, GLASS ALIGNMENT AND OPERATION OF THE HINGES SUPPORTING THE GLASS. LEVELING THE CASE CORRECTLY WILL SOLVE MOST HINGE OPERATION PROBLEMS.**

### Snapping Chalk Lines

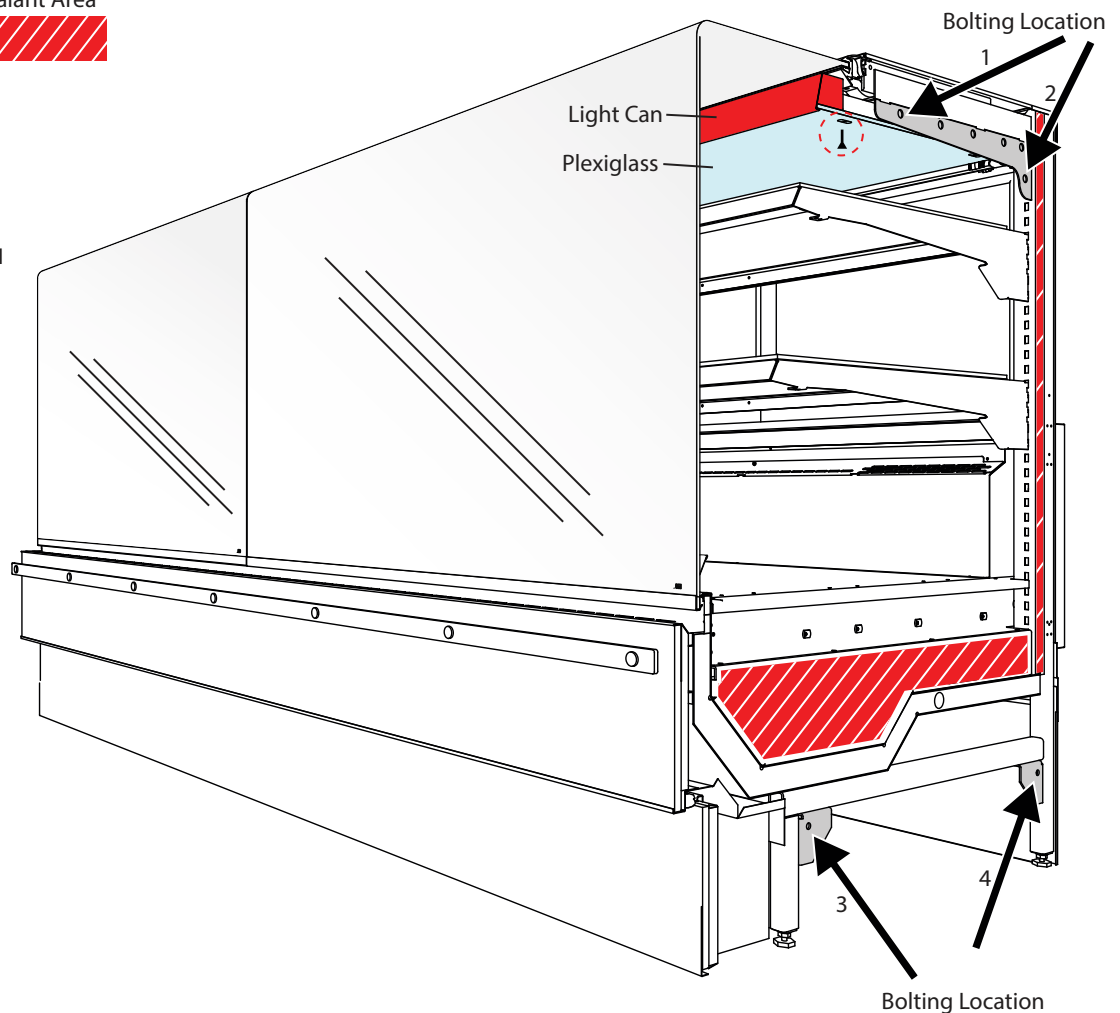
Prepare permanent positioning by marking floors with Chalk snap lines where cases are to be located. Chalk lines are to run along the base or legs of cases.



Joint Sealant Area



Follow these steps to access Bolt Loc #1  
Step 1 - Remove front light can.  
Step 2 - Unplug canopy lights.  
Step 3 - Remove screw to lower plex.



## Installation (Cont'd)

### Setting

STEP 1. Using case blueprints, measure off and mark on the floor the exact dimensions of where the cases will sit. Snap chalk line for front and back positions of base rail or pedestal. Mark the location of each joint front and back. Find the highest point throughout the lineup. **FLOORS ARE NORMALLY NOT LEVEL!** Determine the highest point of the floor; cases will be set off this point. All cases in the entire lineup must be brought up to the highest level of the case sitting at the highest point in the lineup.

STEP 2. Set first case over the highest part of the floor and adjust legs so that case is level.

STEP 3. Set second case within one foot (1') of the first case. Keep the supports along the length of the case and far end of case. Level case to the first using the instructions in step one.



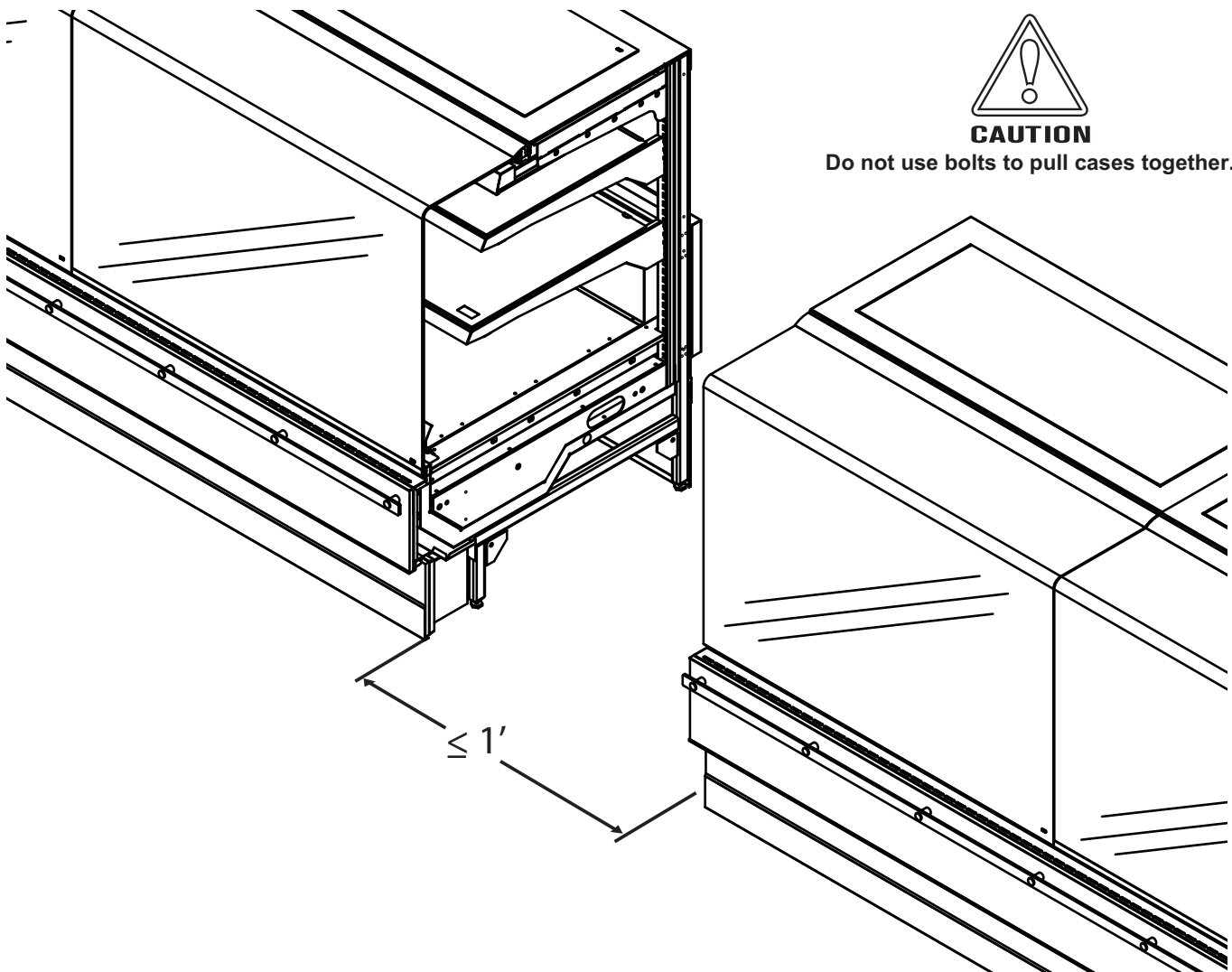
**ATTENTION  
INSTALLER**

**It is the contractor's responsibility to install case(s) according to local construction and health codes.**



**CAUTION**

**Do not use bolts to pull cases together.**



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## Installation (Cont'd)

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STEP 4. Apply liberal bead of case joint sealant (Silicone) to first case. Sealant area is shown in illustration. Apply heavy amount to cover entire shaded area. (pg10)

STEP 5. Slide second case up to first case snugly. Then level second case to the first case so glass front, bumper and top are flush.

STEP 6. To compress butyl at joint, use two Jurgenson wood clamps. Make sure case is level from front to back and side to side on inside bulkheads at joint.

STEP 7. Attach sections together using bolting locations.

## Installation (Cont'd)

### SHVSV Glass Adjustment

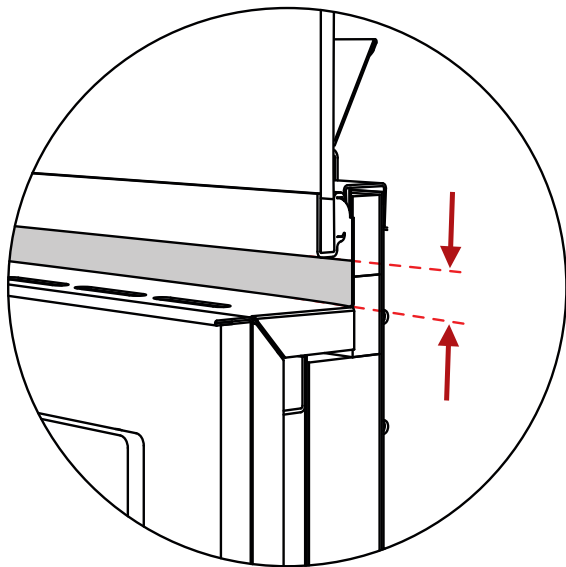
Follow these steps accordingly to properly and safely adjust the position of the front glass.

#### BEFORE ADJUSTING GLASS

- SET, LEVEL, AND BOLT TOGETHER ALL CASES.
- DOUBLE CHECK LEVELING FOR ALL CASES.
- DO NOT MOVE LINEUP DURING ADJUSTMENT.



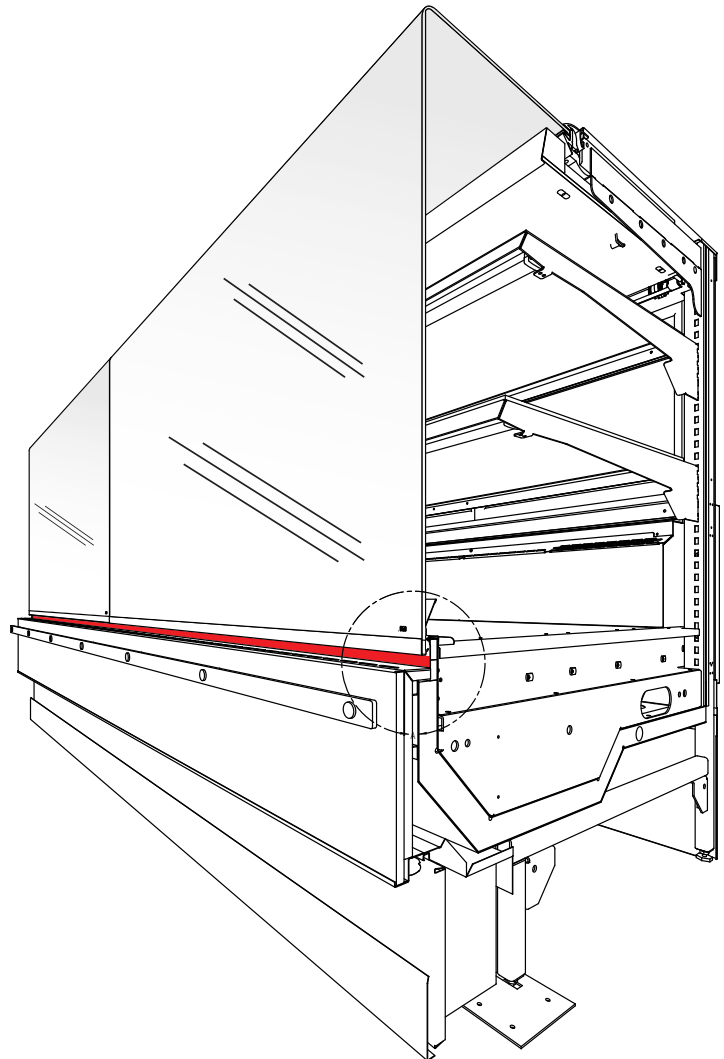
Glass can cause bodily damage. Check support hinges for periodic maintenance. Opening adjacent glass simultaneously could result in but not limited to glass breakage, damage to merchandiser, serious injury or death. To prevent injury, when glass is open, take adequate safety measures to protect shoppers.



Glass must be parallel to ledge when viewed from front. Glass height should be level with front ledge as demonstrated below.



Do NOT remove shipping braces until the merchandisers are properly anchored to the floor. Merchandisers are top heavy and could tip over causing serious injury. Merchandisers must be braced before removing the lag bolts.



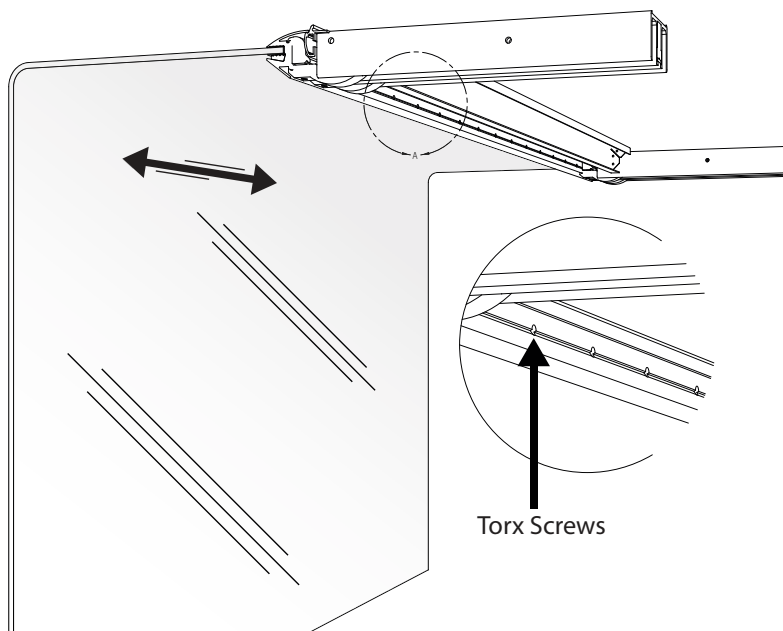
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## Installation (Cont'd)

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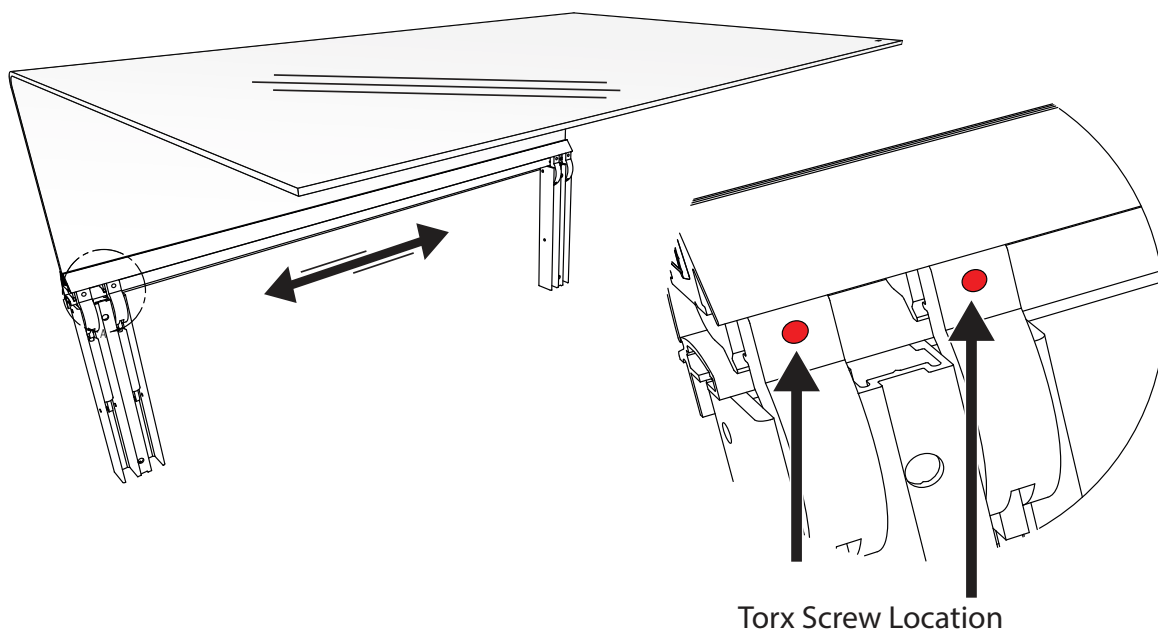
### SHVSV Glass Adjustment

Loosening Torx Screws behind underside of glass clamp will allow adjustments to glass from side to side. Post adjustments, tighten Torx Screws to secure glass in place.



### SHVSV Glass Clamp Adjustment

Loosening Torx Screws underneath the Pivot Arm will allow adjustments to Glass Clamp from side to side. Post adjustments, tighten Torx Screws to secure Glass Clamp in place.

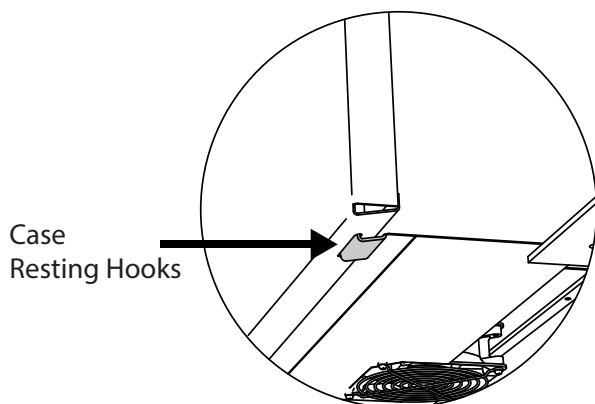
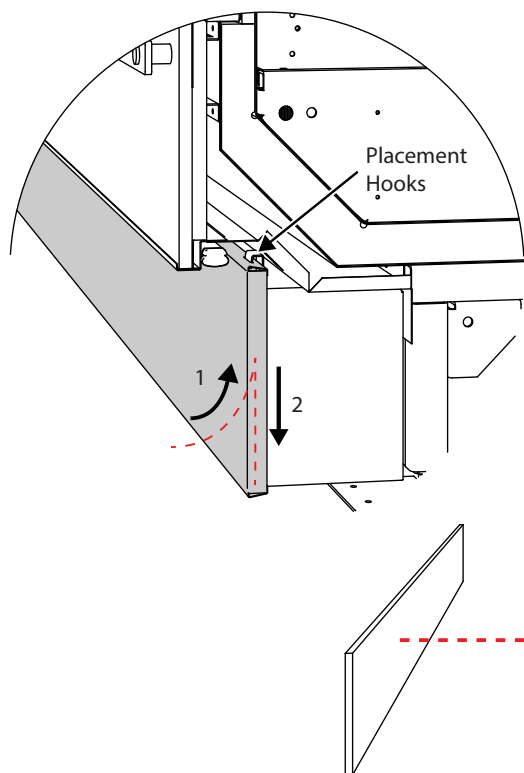


# Installation (Cont'd)

## Front Body Panel Install and Removal

No tools will be needed to install body panels.

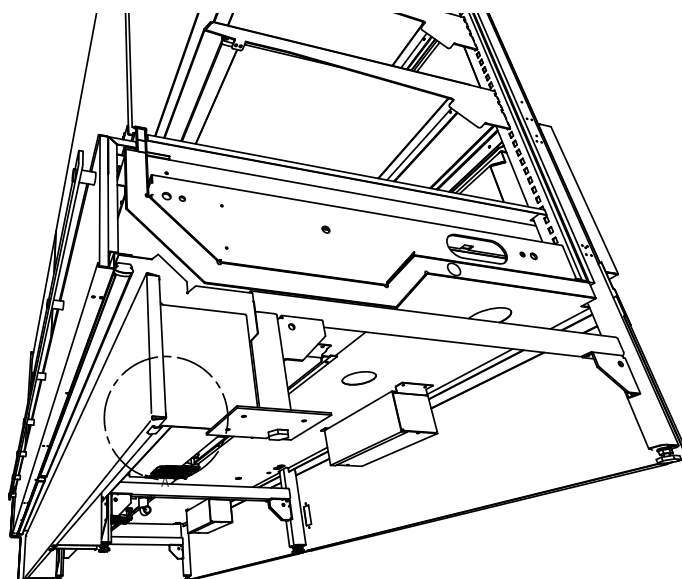
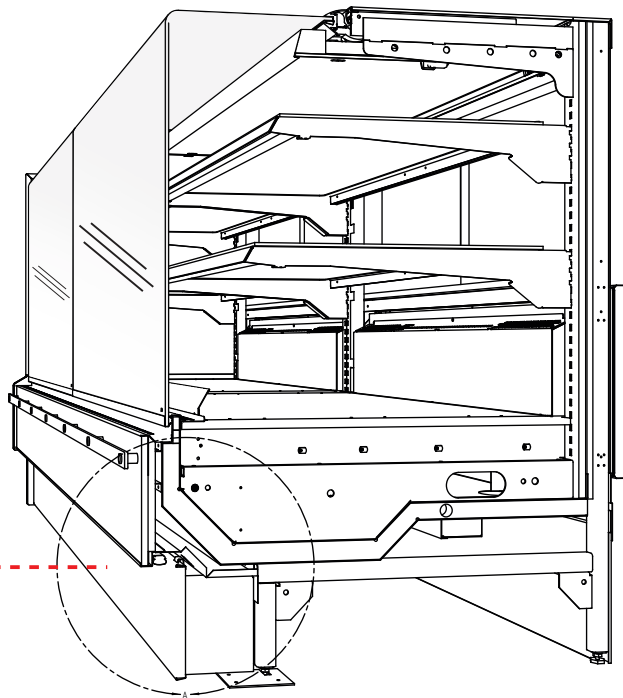
To begin bottom panel assembly, place the front panel along the front of the case and align top and bottom slots with placement hooks



## Fasten Rear Body Panel Install

- (1) Align placement hooks of case with slots on panel.
- (2) Slide top panel slots into placement hooks and lay flat against case onto bottom resting hooks.

To remove panel simply reverse install steps.



# Refrigeration

## Refrigerant

The correct type of refrigerant will be stamped on each merchandiser's serial plate. **The case refrigeration piping is pressurized with a nitrogen holding charge, leak tested and factory sealed.** Before making refrigeration hookups, depress universal line valve (Shraeder Valve) to ensure that coils have maintained pressure during shipment. If in the case pressure was not maintained, contact your Hussmann Service Tech for further assistance.



## CAUTION

Refrigeration lines are under pressure.  
Refrigerant must be recovered before  
attempting to make any connections.

## Refrigerant piping

The refrigerant line connections are at the right hand end of the case (as viewed from the front) beneath the display pans. The merchandiser will beforehand ensure an earlier cut hole through the pod to exit the merchandiser for the refrigeration lines. After connections have been made, make certain to seal this outlet thoroughly if not sealed at factory already. Seal both the inside and outside. We recommend using an expanding polyurethane foam insulation.

## Line Sizing

Refrigerant should be sized as shown on the refrigeration legend that is furnished for the store or according to the ASHRAE guidelines.

## Oil Traps

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



## ATTENTION INSTALLER

It is the contractor's responsibility to install  
case(s) according to local construction and  
health codes.



# Refrigeration Spec Sheets



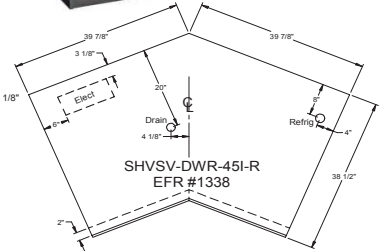
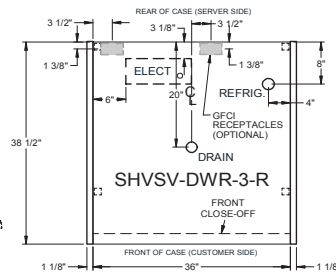
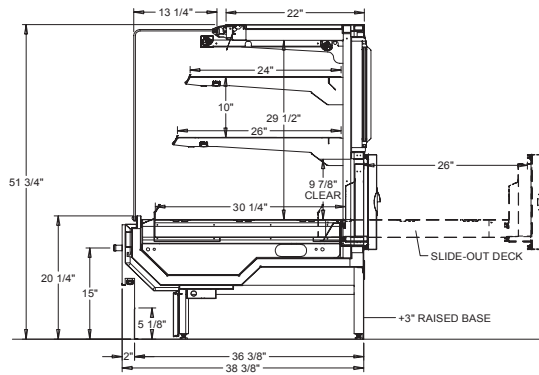
## BAKERY SERVICE VERTICAL GLASS WITH DRAWER

HUSSMANN - SHVSV-DWR (CHINO)

REVISION DATE 03/05/18



Hussmann refrigerated merchandisers configured for sale for use in the United States meet or surpass the requirements of the DOE 2017 energy efficiency standards.



\*DRAWER LOAD RATING: 30 LB/FT

### REFRIGERATION DATA:

CASE LENGTHS/ WEDGES	CASE USAGE	CAPACITY *** (BTU/HR/FT) (TOTAL FOR WEDGES)		TEMPERATURE (°F)			VELOCITY (FT/MIN)
		RATING CONDITION		EVAPORATOR		DISCHARGE AIR ** (°F)	
		NSF 7	AHRI 1200	NSF 7	AHRI 1200	NSF 7	
3' 4' 5' 6' 8' 10' 12'	BAKERY	450	450	20	20	24~26	250~300
45° IS	BAKERY	2900	2900	20	20	25~27	250~300

CASE LENGTHS	EST. REFG. CHRG. (LBS)	20°F GLYCOL 6° RISE	
		GPM	PSI
3'	0.3	0.5	1.2
4'	0.5	0.7	2.0
5'	0.7	0.9	3.0
6'	0.9	1.0	1.4
8'	1.1	1.4	1.5
10'	1.4	1.7	1.4
12'	1.6	2.0	1.2
45° IS	0.5	1.1	1.3

\*\*FRONT DISCHARGE AIR MEASURED INSIDE AIR CURTAIN HONEYCOMB

\*\*\*REFRIGERATION NOTES:

- 1) BTU'S DO NOT INCLUDE LIGHTS
- 2) ADD 10 BTU'S PER FOOT/PER SHELF ROW FOR OPTIONAL LED SHELF LIGHTS
- 3) AHRI 1200 RATING POINT FOR ENERGY CONSUMPTION COMPARISON ONLY
- 4) USE DEW POINT FOR HIGH GLIDE REFRIGERANTS. CARE SHOULD BE TAKEN TO USE THE DEW POINT IN P/T TABLES FOR MEASURING AND ADJUSTING SUPERHEAT. ADJUST EVAPORATOR PRESSURE AS NEEDED TO MAINTAIN THE DISCHARGE AIR TEMPERATURE SHOWN.
- 5) RATING CONDITION IS NSF TYPE I, 75°F/55% RH

### REFRIGERATION DATA CONTINUED:

ELEC. THERMOSTAT / AIR SENSOR SETTINGS			DEFROST TYPE	TIME (MIN)	DEFROST FREQUENCY (#/DAY)	TERM. TEMP (°F) COIL ONLY	DRIP TIME	DEFROST WATER (LBS/DAY/FT)
USAGE	CUT IN (°F)	CUT OUT (°F)						
BAKERY	26	23	OFF TIME	40	6	45	NA	0.75~1

END PANEL WIDTH KEY		
# OF END PNLS	END PNL WIDTH (IN.)	TOTAL ADDED LENGTH (IN.)
1	1.125	1.125
2	1.125	2.25

### ELECTRICAL DATA:

#### STANDARD FANS, HEATERS, LED LIGHTS (115 VOLT)

CASE LENGTH	EVAPORATOR FANS, 4.7" AXIAL FAN			AIRSWEEP FANS, 4.7" AXIAL FAN			CANOPY LIGHTS LED		OPTIONAL LED SHELF LIGHTS		MAX. LED LOAD (W/ ALL OPTIONS)		HEATERS		CONVENIENCE OUTLETS (OPTIONAL)		
	# OF EVAP FANS	AMPS	WATTS	# OF FANS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	# OUTLETS	VOLTS	AMPS
3'	3	0.12	14	2	0.08	9	0.24	27	0.20	23	0.44	50	0.87	100	1	115	15
4'	3	0.12	14	2	0.08	9	0.32	37	0.27	31	0.59	68	1.04	120	1	115	15
5'	4	0.16	19	2	0.08	9	0.41	47	0.34	39	0.75	86	1.09	125	1	115	15
6'	6	0.25	28	4	0.16	19	0.47	54	0.40	46	0.87	100	1.57	180	1	115	15
8'	6	0.25	28	4	0.16	19	0.65	74	0.54	62	1.18	136	2.09	240	1	115	15
10'	8	0.33	38	4	0.16	19	0.82	94	0.68	78	1.49	172	2.63	303	1	115	15
12'	9	0.37	42	6	0.25	28	0.97	112	0.81	93	1.78	204	3.13	360	2	115	30
45° IS	4	0.16	19	2	0.08	9	0.32	37	0.26	29	0.57	66	0.65	75	N/A	N/A	N/A

#### OPTIONAL HIGH OUTPUT LED LIGHTS (115 VOLT)

CASE LENGTH	CANOPY LIGHTS H.O. LED		OPTIONAL SHELF H.O. LED		MAX. H.O. LED LOAD	
	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS
3'	0.32	37	0.29	34	0.61	70
4'	0.41	47	0.35	41	0.76	88
5'	N/A	N/A	N/A	N/A	N/A	N/A
6'	0.64	73	0.59	67	1.22	141
8'	0.82	94	0.71	81	1.53	176
10'	N/A	N/A	N/A	N/A	N/A	N/A
12'	1.23	141	1.06	122	2.29	264
45° IS	N/A	N/A	N/A	N/A	N/A	N/A

#### DRAWERS

CASE LENGTH	NUMBER OF DRAWERS
3'	1
4'	1
5'	1
6'	2
8'	2
10'	2
12'	3
45° IS	2

# Electrical

## Merchandiser Electrical Data

Technical data sheets are shipped with this manual. The data sheets provide merchandiser electrical data. Refer to the technical data sheets and merchandiser serial plate for electrical information.

## Electrical Connections

All wiring must be in compliance with NEC and local codes. All electrical connections including both supply circuits are to be made in the electrical J-Box.

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

## Field Wiring

Field wiring must be sized for component amperes stamped on the serial plate (refer to pg 16 for location). Actual ampere draw may be less than specified.

## 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 wireway cover.



--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.

## 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 proper conductor wire only.

MERCHANDISER MUST BE GROUNDED

These are marker colors, wire may vary.

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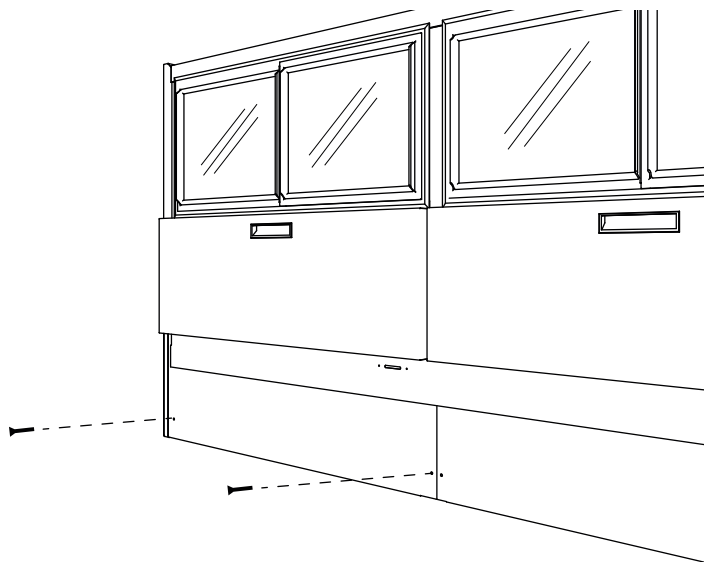
## Electrical Cont'd

---

### Remove Rear Raceway

The merchandisers electrical access is located at the rear of the case. Fasteners must be removed in order to gain access. See illustration below.

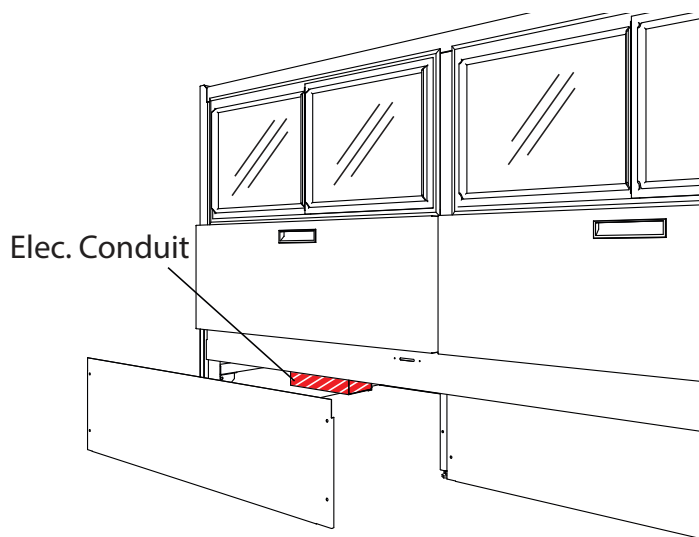
Remove rear raceway from rear of case.



### Electrical Conduit (Electrical Box)

The merchandisers electrical conduit can be found inside the compartment at the rear. Removing the raceway will gain access to the electrical components inside the J-Box allowing any maintenance necessary.

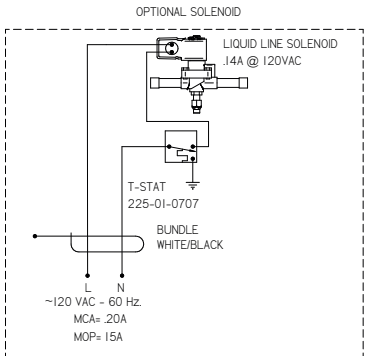
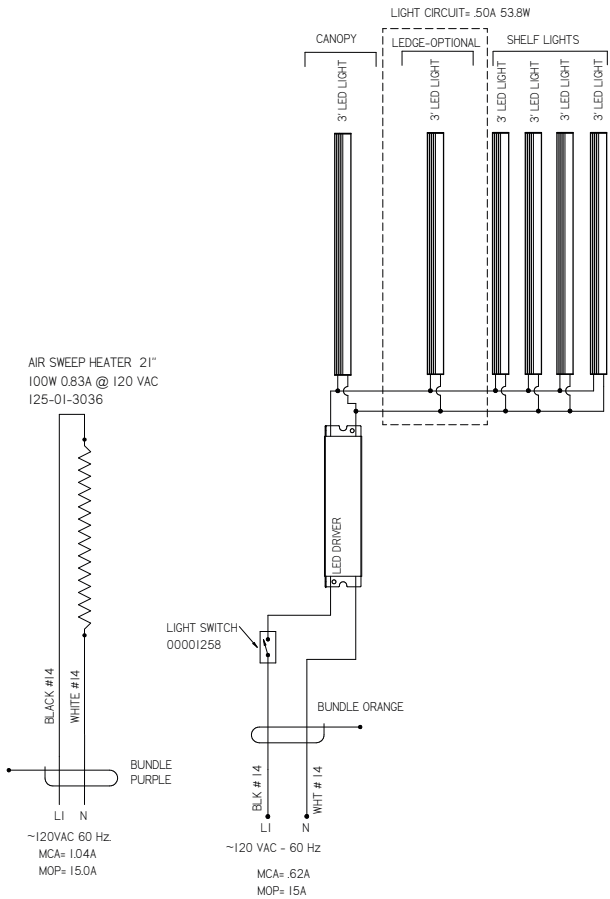
### Electrical Conduit Location



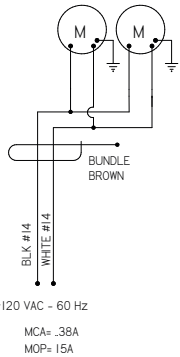
# Electrical Wiring Diagram

CIRCUIT #1		
LOADING		
120V		
L1	2.2	

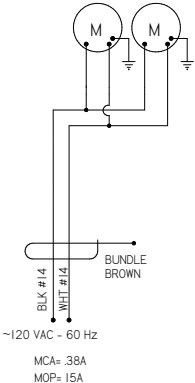
REVISION HISTORY						
REV	EDN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-CAP-0010804	2017/12/01	RELEASED TO PRODUCTION	CB	CB	CB



AIR SWEEP FAN MOTOR  
(2) 0522287  
4.4W .15A @ 120VAC



EVAP FAN MOTOR  
(2) 0522287EF  
4.4W .15A @ 120VAC



NOTES:  
CASE MUST BE GROUNDED  
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A	
DATE DRAWN - 12-1-17	
DRAWN BY - CRAIG BOOREY	ECN-CAP-0010804
REVIEWED BY - CRAIG BOOREY	REF -
APPROVED BY - CRAIG BOOREY	SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ARE:	
DECIMALS .XX ±.03 .XXX ±.010	
ANGLES ± 2°	



THIRD  
ANGLE  
PROJECTION

**HUSSMANN**  
DIAGRAM-SHVSV-DW  
R-3-R

3050647

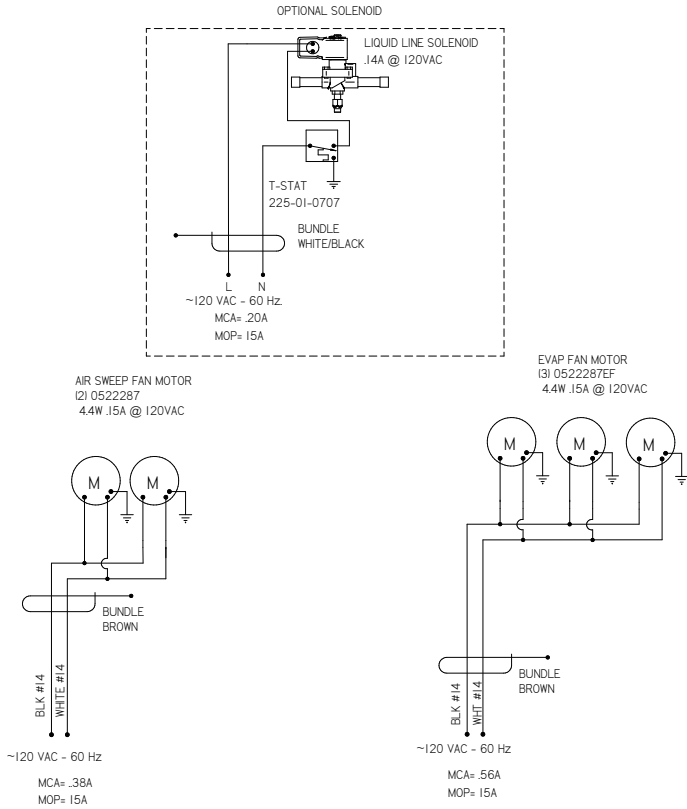
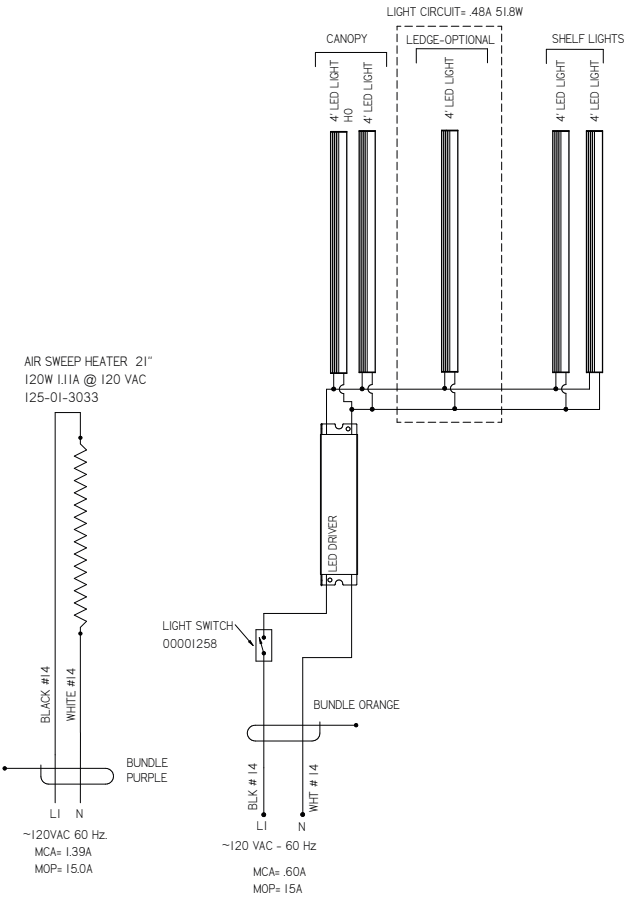
A

HUSSMANN.DWG - 11 SHEET SIZE D


Electrical Wiring Diagram (Cont'd)

CIRCUIT #1	
LOADING	
120V	
L1 2.5	

REVISION HISTORY						
REV	EDN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY	APPR BY
A	ECN-CAP-0011184	2018/01/19	RELEASED TO PRODUCTION	CB	CB	CB



NOTES:  
CASE MUST BE GROUNDED  
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A		
DATE DRAWN - 1-19-18		
DRAWN BY - CRAIG BOOREY		ECN-CAP-0011184
REVIEWED BY - CRAIG BOOREY		REF -
APPROVED BY - CRAIG BOOREY		SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES.		
TOLERANCES ARE:		
DECIMALS .XX ±.03, .XXX ±.010		
ANGLES ± 2°		
		THIRD ANGLE PROJECTION

<b>HUSSMANN</b>	
DIAGRAM-SHVSV-DW	
R-4-R	
3053992	A

HUSSMANN\_LOF-11 SHEET SIZE D

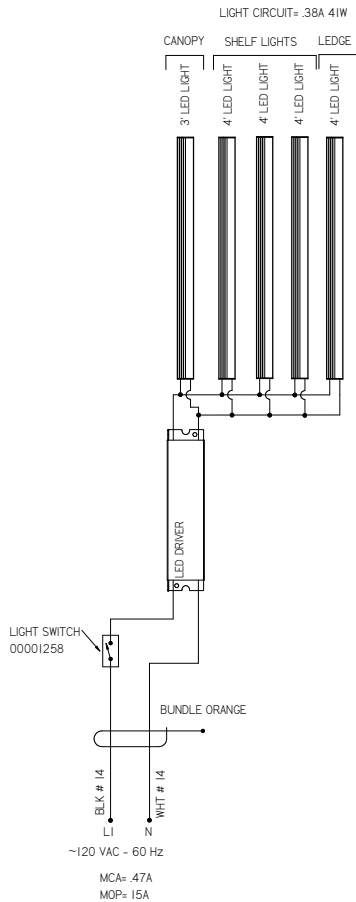
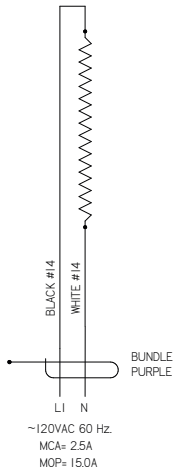
# Electrical Wiring Diagram (Cont'd)

CIRCUIT #1  
LOADING

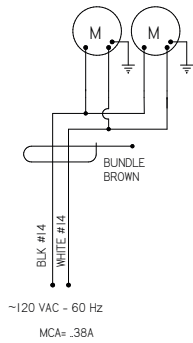
120V	
L1 4.3	

REVISION HISTORY					
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A	ECN-CAP-0009956	2017/10/11	RELEASED TO PRODUCTION	CB	CB
B	ECN-CAP-0011189	2018/02/07	REMOVED FAN SWITCH ADDED LEDGE LIGHT	CB	CB

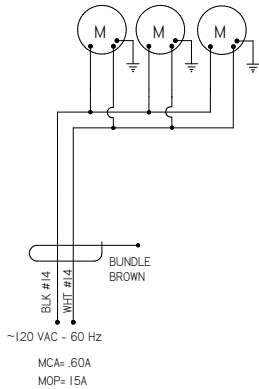
AIR SWEEP HEATER 91"  
240W 2.1A @ 120 VAC  
I21125-01-3031



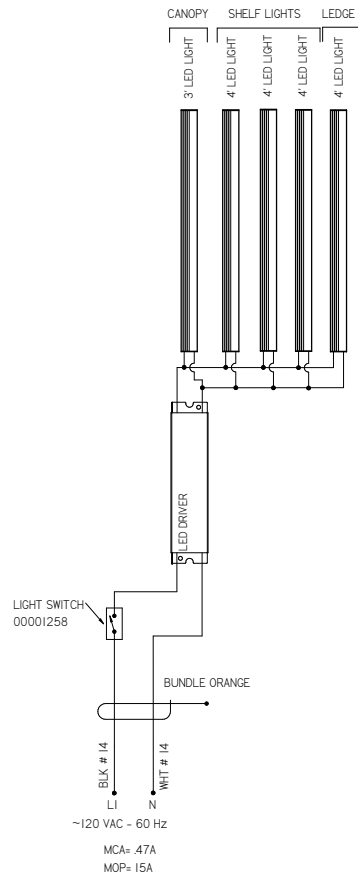
AIR SWEEP FAN MOTOR  
I21 0522287  
4.4W .15A @ 120VAC



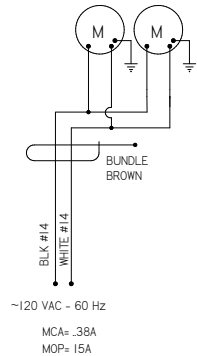
EVAP FAN MOTOR  
I31 0522287EF  
4.4W .15A @ 120VAC



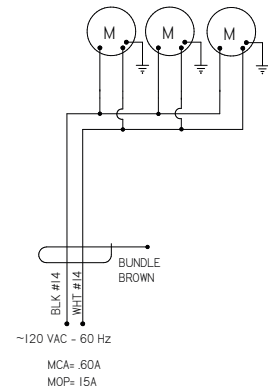
LIGHT CIRCUIT= .38A 41W



AIR SWEEP FAN MOTOR  
I21 0522287  
4.4W .15A @ 120VAC



EVAP FAN MOTOR  
I31 0522287EF  
4.4W .15A @ 120VAC



NOTES:  
CASE MUST BE GROUNDED  
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A	
DATE DRAWN - 10-11-17	
DRAWN BY - CRAIG BOOREY	ECN-CAP-0009956
REVIEWED BY - CRAIG BOOREY	REF -
APPROVED BY - CRAIG BOOREY	SHEET 1 OF 1
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ARE:	
DECIMALS .XX ±.03, .XXX ±.010	THIRD ANGLE PROJECTION
ANGLES ± 2°	

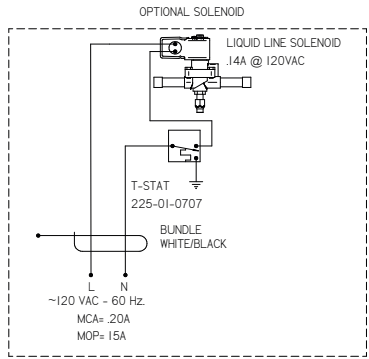
<b>HUSSMANN</b>	
DIAGRAM-SHVSVDW	
R-8R	
3046855	B

HUSSMANN.GPJ-11 SHEET SIZE D

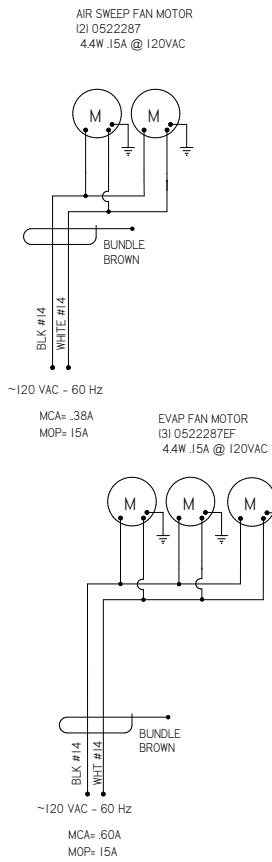
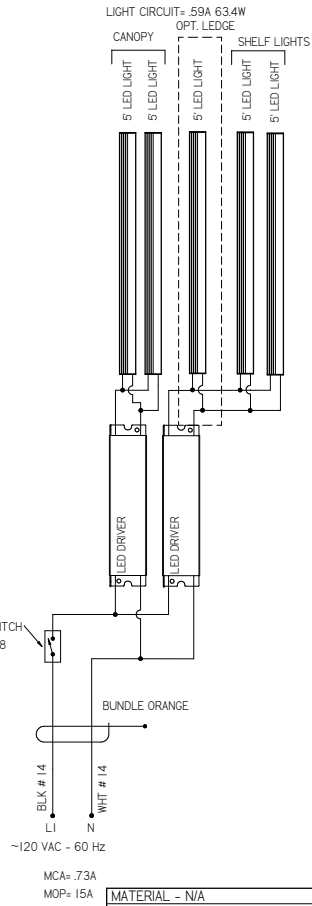
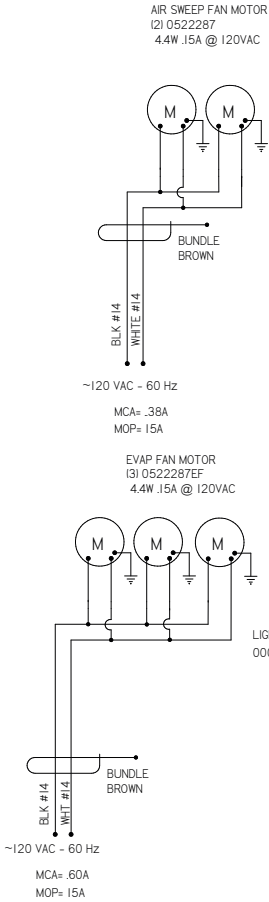
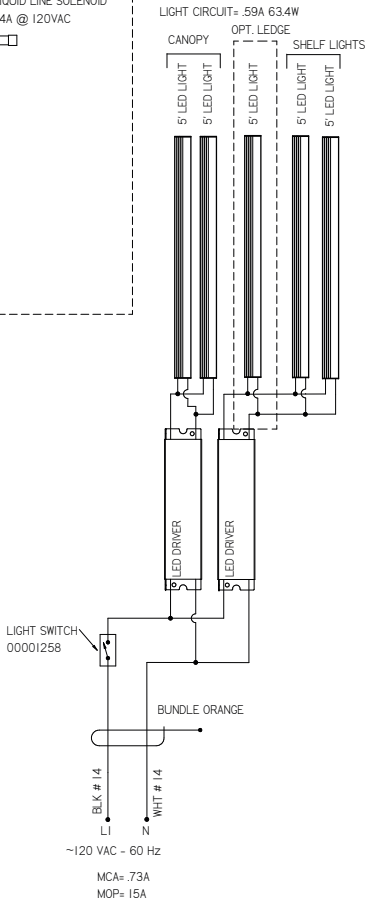
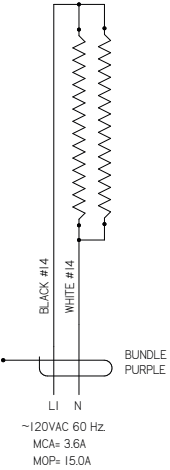
# Electrical Wiring Diagram (Cont'd)

CIRCUIT #1  
LOADING

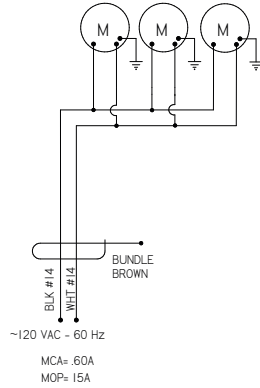
120V	
L1 5.7	



AIR SWEEP HEATER  
180W 1.7A @ 120 VAC  
125-01-3032  
123W 1.1A @ 120 vac  
125-01-3034



EVAP FAN MOTOR  
(3) 0522287EF  
4.4W .15A @ 120VAC



NOTES:  
CASE MUST BE GROUNDED  
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A	
DATE DRAWN - 1-22-18	ECN-CAP-0011184
DRAWN BY - CRAIG BOOREY	REF -
REVIEWED BY - CRAIG BOOREY	SHEET 1 OF 1
APPROVED BY - CRAIG BOOREY	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:	THIRD ANGLE PROJECTION
DECIMALS .XX ±.03, .XXX ±.010	
ANGLES ± 2°	

<b>HUSSMANN</b>	
DIAGRAM-SHVSV-DW	
R-10-R	
3053993	A

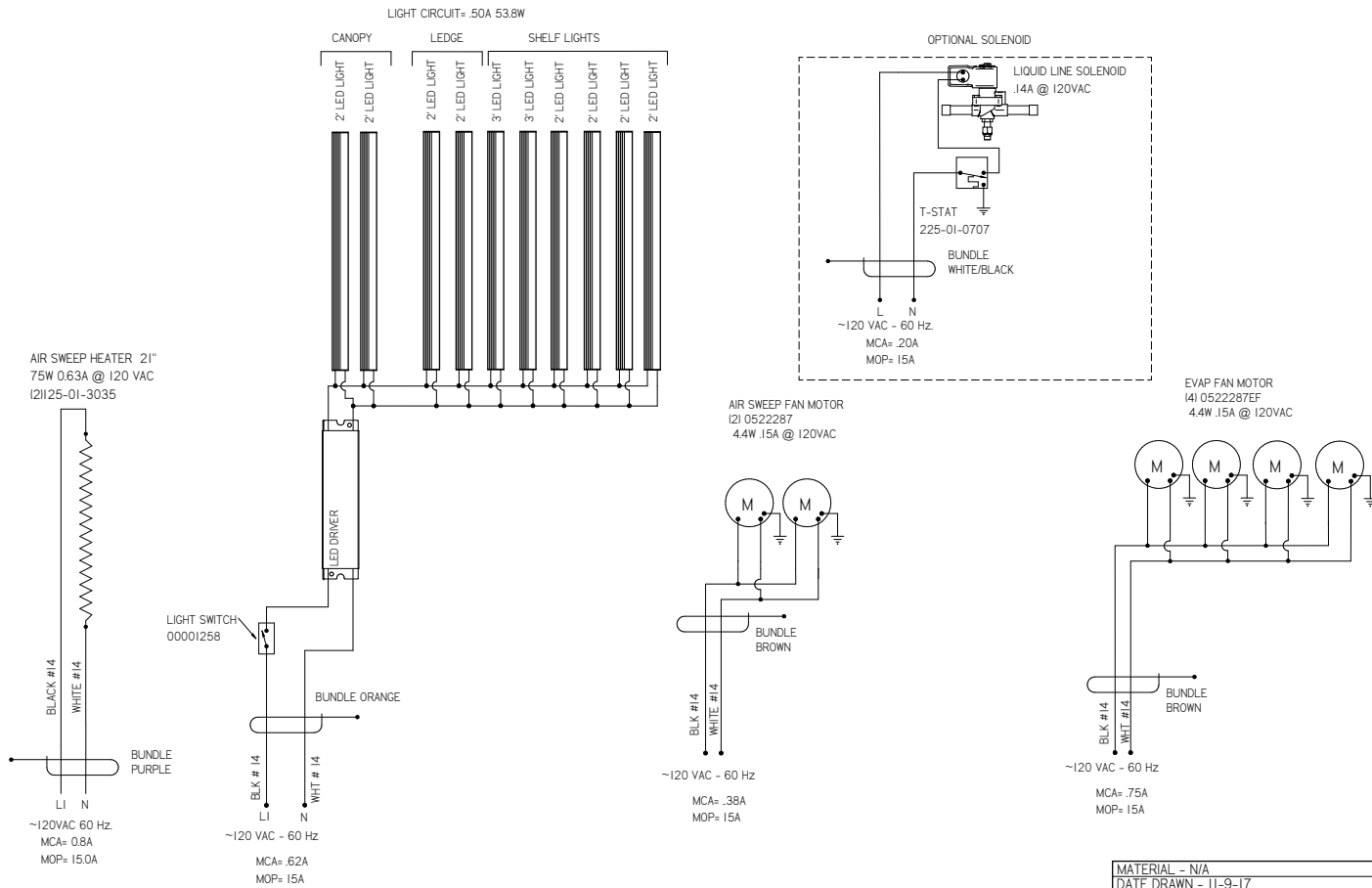
HUSSMANN\_G0F-11 SHEET SIZE D

# Electrical Wiring Diagram (Cont'd)

CIRCUIT #1  
LOADING

120V	
LI 2.2	

REVISION HISTORY					
REV	ECN	DATE	REVISION DESCRIPTION	REV BY	CHKD BY
A	EDN-CAP-0009961	2017/11/09	RELEASED TO PRODUCTION	CB	CB



NOTES:  
CASE MUST BE GROUNDED  
WHEN PASSING WIRES THROUGH METAL HOLES A GROMMET MUST BE USED

MATERIAL - N/A	
DATE DRAWN - 11-9-17	ECN-CAP-0009961
DRAWN BY - CRAIG BOOREY	REF -
REVIEWED BY - CRAIG BOOREY	SHEET 1 OF 1
APPROVED BY - CRAIG BOOREY	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE: DECIMALS .XX ±.03, .XXX ±.010 ANGLES ± 2°	THIRD ANGLE PROJECTION

<b>HUSSMANN</b>	
DIAGRAM-SHVSVDW	
R-45I-R	
3048925	A

HUSSMANN\_QDF-LI SHEET SIZE D



# User Information

## Start Up

See the merchandisers Data Sheet Set for refrigerant settings and defrost requirements. Bring merchandisers down to the operating temperatures listed on the Data Sheet.



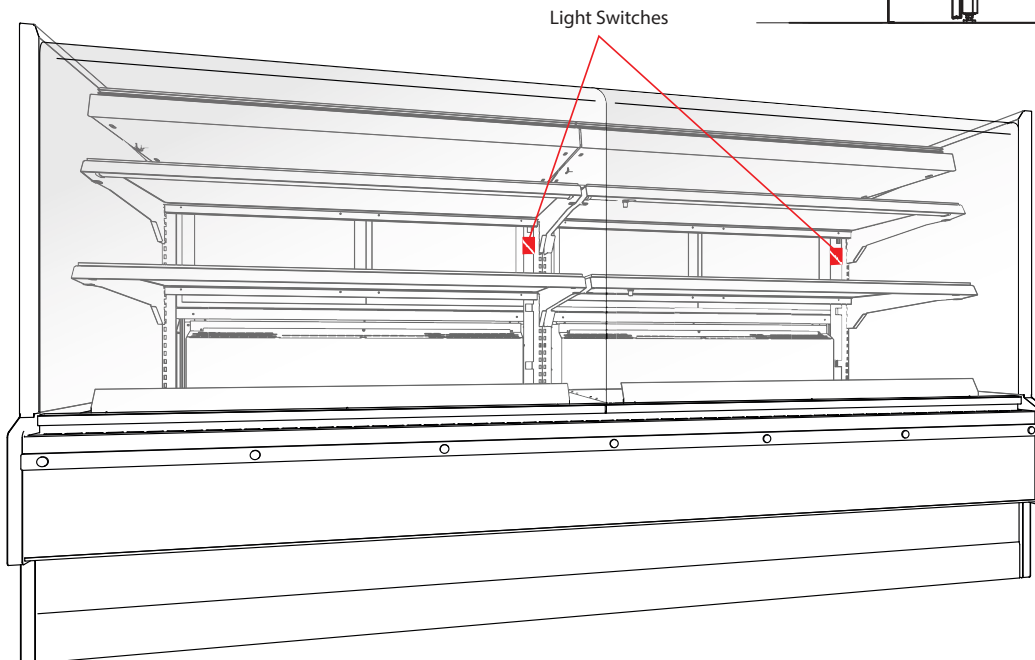
## WARNING

--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.

## Case Switches

Light switches for the merchandiser are located inside the case near the rear arm structures. (See illustration below)



## Load Limit

Each Merchandiser has a load limit. Shelf life of perishables will shorten if load limit is violated.

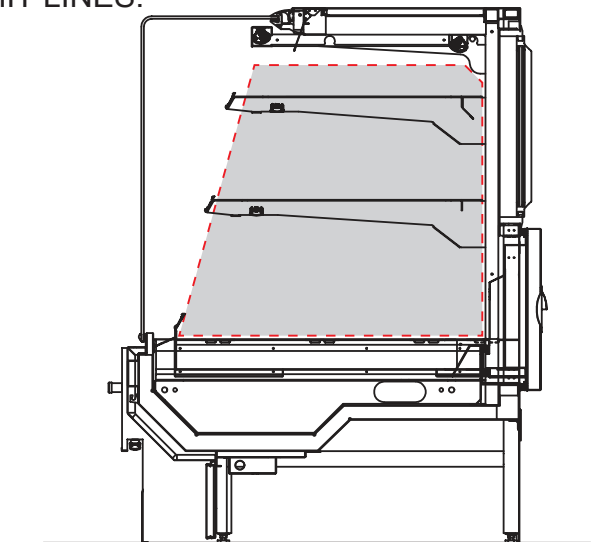
**AT NO TIME SHOULD THE MERCHANDISER BE STOCKED BEYOND THE LOAD LIMITS INDICATED.**

LOAD LIMIT



## Load Limit Line

DO NOT LOAD PAST THE FOLLOWING LOAD LIMIT LINES.



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# Maintenance

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## Case Cleaning

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



# WARNING

TO PREVENT INJURY ALWAYS SHUT OFF  
POWER DURING CLEANING PROCESS.

## Exterior Surfaces

The exterior surfaces must be cleaned with a mild detergent without chloride and warm water to protect and maintain their attractive finish. **NEVER USE ABRASIVE CLEANSERS OR SCOURING PADS.**

## Cleaning Bumpers

Clean bumpers with household spray cleaners.

## Cleaning Under Merchandiser

Remove lower body panels. Use a vacuum with a long wand attachment to remove accumulated dust and debris from under the merchandiser.

## Cleaning Stainless Steel Surfaces

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

**Use 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.

## Interior Surfaces

The interior surfaces may be cleaned with most domestic detergents, ammonia based cleaners and sanitizing solutions that do not contain chloride with no harm to the surface.

## 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.

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 proper adjustments as necessary. To maintain product integrity, if not done so already, move all product to a cooler until the merchandiser has returned to normal operating temperatures.

## Do Not Use:

- Abrasive cleaners and scouring pads, as these will damage the finish.
- A hose on lighted shelves or submerge lighted shelves in water.
- Solvent, oil or acidic based cleaners on any interior surfaces.
- A hose on LED Lights or any other electrical component.

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## Maintenance Cont'd

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### Do:

- Remove the product and all loose debris to avoid clogging the waste outlet.
- Store product in a refrigerated area such as a cooler during the cleaning process. Remove only as much product as can be taken to the cooler in a timely manner.
- **First turn off refrigeration, then disconnect electrical power to merchandiser.**
- Thoroughly clean all surfaces with soap and hot water. Do not use steam or high pressure water hoses to wash the interior. These will destroy the merchandisers' sealing causing leaks and poor performance.
- Avoid 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 drain.
- Allow merchandiser to completely dry before resuming operation.
- LED lights are magnetized to each shelf and can be removed easily for any shelf cleaning.
- After cleaning has been completed, remember to restore power back to merchandiser.



## WARNING

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

# Troubleshooting

Problem	Possible Cause	Possible Solution
<b>Case temperature is too warm.</b>	Ambient conditions may be affecting the case operation.	Check case position in store. Is the case located near an open door, window, electric fan or air conditioning vent that may cause air currents? Case must be located minimum 15 Ft away from doors or windows. Cases are designed to operate at 55% Relative humidity and a temperature of 75°F.
	Discharge air temp is out of spec.	Check evaporator fan operation. Check electrical connections and input voltage.
		Fans are installed backwards. Check airflow direction.
		Fan blades are installed incorrectly. Make sure fan blades have correct pitch and are per specification.
		Check to see that fan plenum is installed correctly. It should not have any gaps.
		Check suction pressure and insure that it meets factory specifications.
	Case is in defrost.	Check defrost settings. See Technical Specifications section.
	Product load may be over its limits blocking airflow.	Redistribute product so it does not exceed load level. There is a sticker on the inside of the case indicating what the maximum load line is.
	Coil is freezing over.	Return air is blocked, make sure debris is not blocking the intake section.
		Coil close-offs are not installed. Inspect coil to make sure these parts are on the case.
	Condensing coil or evaporator coil is clogged or dirty.	Clean coil.
<b>Case temperature is too cold.</b>	The t-stat temp is set too low.	Check settings. See Technical Specifications section.
	Ambient conditions may be affecting the case operation.	Check case position in store. Is the case located near an open door, window, electric fan or air conditioning vent that may cause air currents? Case must be located minimum 15 Ft away from doors or windows. Cases are designed to operate at 55% Relative humidity and a temperature of 75°F.
<b>Condensation on glass.</b>	Ambient conditions may be affecting the case operation.	Check case position in store. Is the case located near an open door, window, electric fan or air conditioning vent that may cause air currents? Case must be located minimum 15 Ft away from doors or windows. Cases are designed to operate at 55% Relative humidity and a temperature of 75°F.
	Inadequate air circulation.	Check if air sweep fans are functioning, check electrical connections.
	There is not enough heat provided in the airflow.	Check if air sweep heater is functioning, check electrical connections.
	There are glass gaps on the side of the case.	See glass adjustment section.
	Glass is not completely shut.	Close glass correctly.

## Troubleshooting Cont'd

Problem	Possible Cause	Possible Solution
<b>Water has pooled under case.</b>	Case drain is clogged.	Clear drain.
	PVC drains under case may have a leak.	Repair as needed.
	Case tub has unsealed opening.	Seal as needed.
	If the case is in a line-up, case to case joint is missing or unsealed.	Install case to case joint and seal as needed.
	Evaporator pan is overflowing (if applicable).	Check electrical connection to evaporator pan. Check float assembly, it should move freely up and down the support stem. Clear any debris.
<b>Case is not draining properly.</b>	Case is not level.	Level the case.
	Drain screen is plugged.	Clean drain screen and remove any debris.
	Drain or P-trap is clogged.	Clear any debris.
<b>Frost or ice on evaporator coil.</b>	Evaporator fans are not functioning.	Check electrical connections.
	Defrost clock is not functioning.	Case should be serviced by a qualified service technician.
	Coil is freezing over.	Return air is blocked, make sure debris is not blocking the intake section.
		Coil close-offs are not installed. Inspect coil to make sure these parts are on the case.
<b>Lights do not come on.</b>	Ballast/light socket wiring.	Check electrical connections. See Electrical Section and check wiring diagram.
	Ballast needs to be replaced.	Case should be serviced by a qualified service technician. See Electrical Section.
	Lamp socket needs to be replaced.	Case should be serviced by a qualified service technician.
	Lamp needs to be replaced.	See Maintenance Section.
	Light Switch needs to be replaced.	Case should be serviced by a qualified service technician.



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.

A decorative border made of a repeating blue geometric pattern, resembling interlocking squares or a lattice, surrounds the entire page content.

# **HUSSmann<sup>®</sup>**

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

Hussmann Warranty / Technical Assistance  
(800) 592-2060