

HUSSMANN®/CHINO
MPC-ET(N)

Installation
& Operation
Manual

REV. 1122

MOBILE PRODUCE CASE

MOBILE PRODUCE CASE

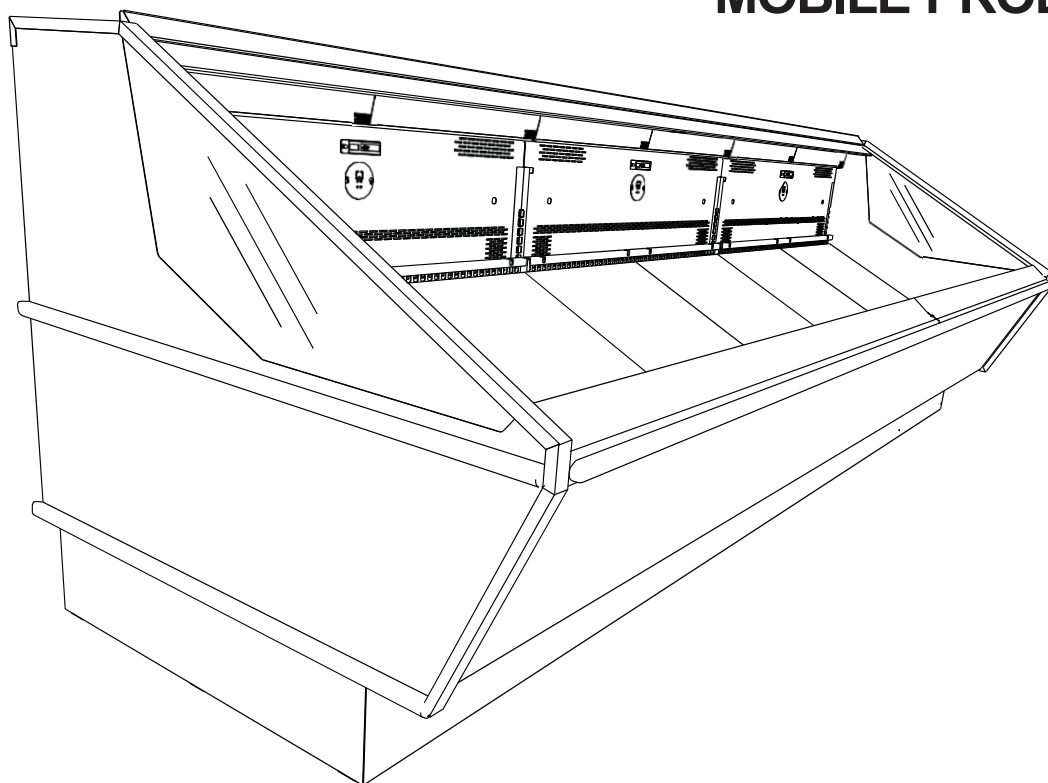


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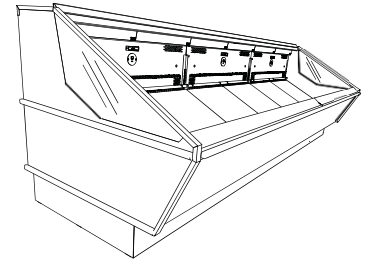
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General Information

Case Description:

This Booklet specifically covers the
Following models:

Mobile Produce MPC-ET(N)



Description: Mobile Produce Case model series are Multi-deck, spot merchandisers designed for non-critical temperature applications such as: Non Hazardous Produce. They are available in remote as well as self-contained models. Each self-contained model will have it's own condensing unit, factory installed beneath the display area of the case ready for operation when electrical service is connected.

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.

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.

Location/Store Conditions: The refrigerated merchandisers have been designed for use only in air conditioned stores where temperature and humidity are maintained either 75°F ambient and 55% RH . 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.

Shortages: Check your shipment for any possible shortages of material. 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 has 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.

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

HUSSMANN®/CHINO

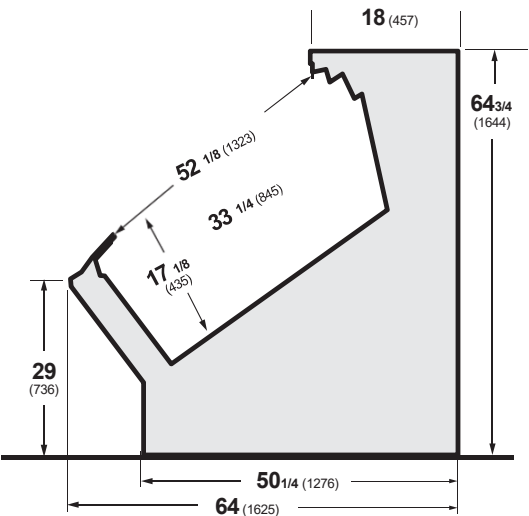
A publication of HUSSMANN® Chino
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(800) 395-9229



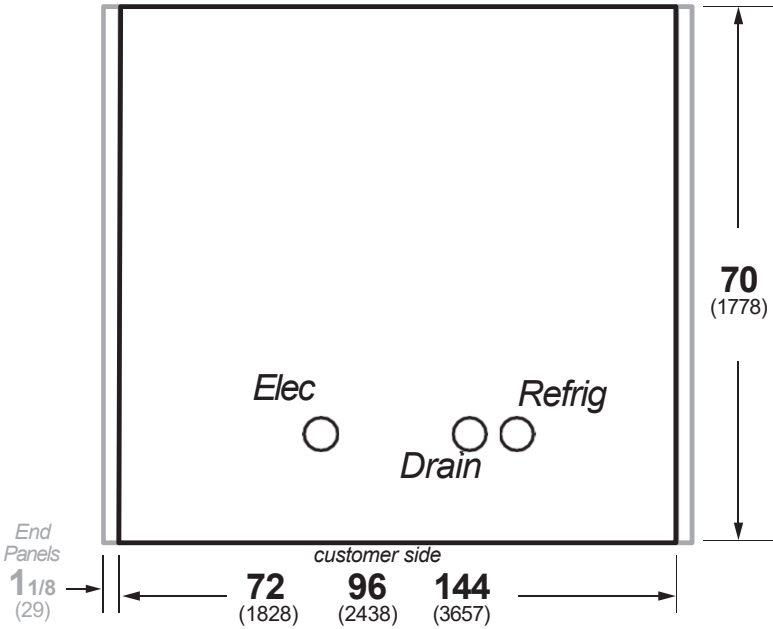
**ATTENTION
INSTALLER**

This equipment is to be installed
to comply with the applicable
NEC, Federal, State, and Local
Plumbing and Construction
Code having jurisdiction.

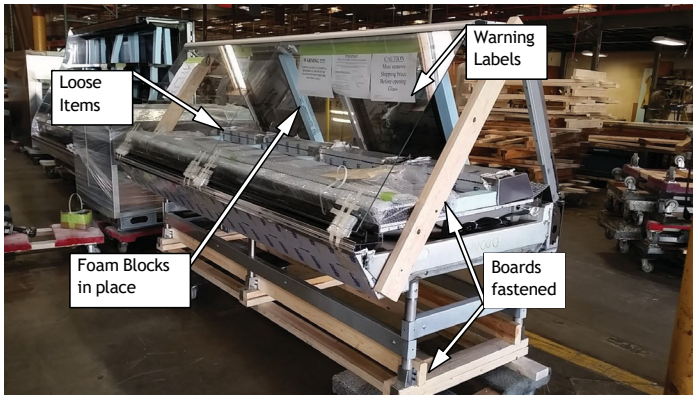
Case Sections



MPC-ET



Unloading



**Case is to arrive at store as was shipped form 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.

Installation

Location

The Mobile Produce Case display has been designed for use only in air conditioned stores where temperature and humidity are maintained either 75°F ambient and 55% RH.

When selecting the location for placement of this case, avoid the following conditions:

Excessive air movement

- Doors
- Air-conditioned vents
- Other air sources

Excessive heat

- Windows
- Sun
- Flood lamps 8 feet or less from the product
- Other heat sources

Never stand on the Mobile Produce Case deck for any reason. These surfaces are not steps and are not designed to support such loads.

Doing so will result in:

- Damage to case
- Serious injury to user

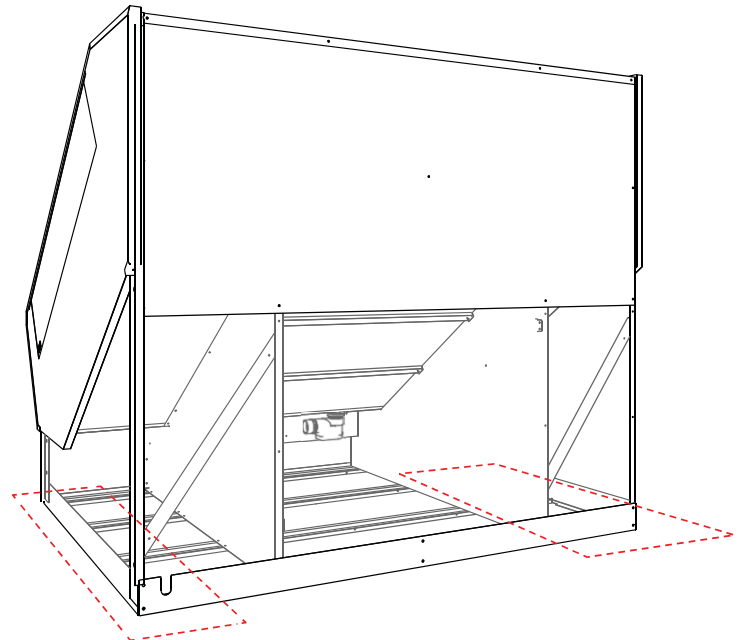
Skid Removal

Unstrap case from skid and place onto dollies using J-Bars.

MPC-ET Lifting and Transport Instructions

NOTE: The MPC-ET CANNOT be lifted with a forklift and should only use dollies for transportation.

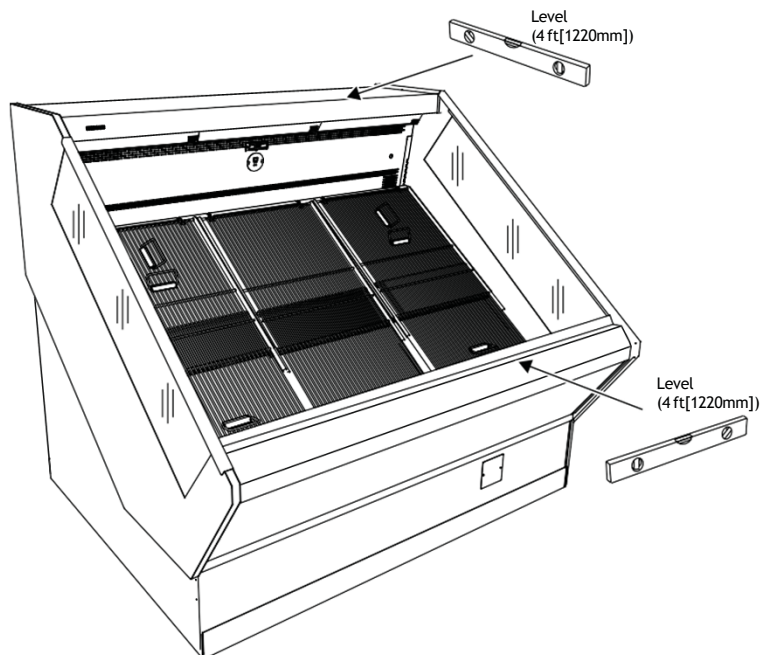
1. The MPC-ET merchandiser can be raised at one end underneath the base with a J-Bar to allow the placement of rollers or dollies.
2. Evenly support the entire base structure on rollers or dollies before attempting to move. Each corner and / or base leg including center structure depending on length of merchandiser must have its own dolly to properly support the case.



Installation Cont'd

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.

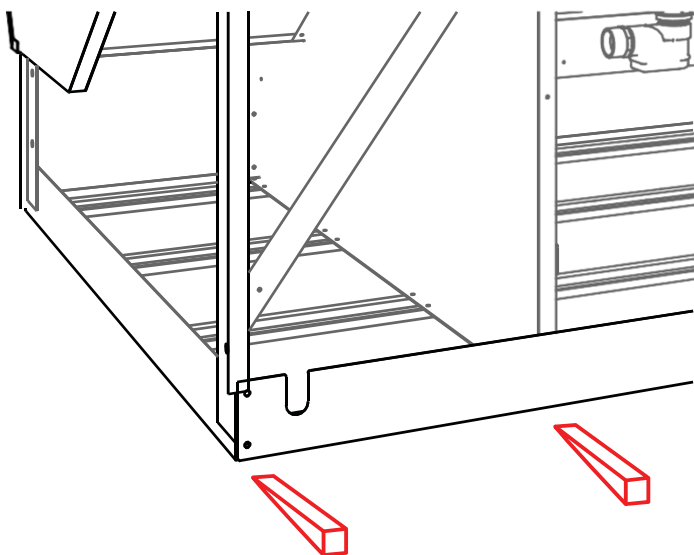


Shim Adjustment

Shim the base supports 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 mallet or hammer may be used to shim at each base support.

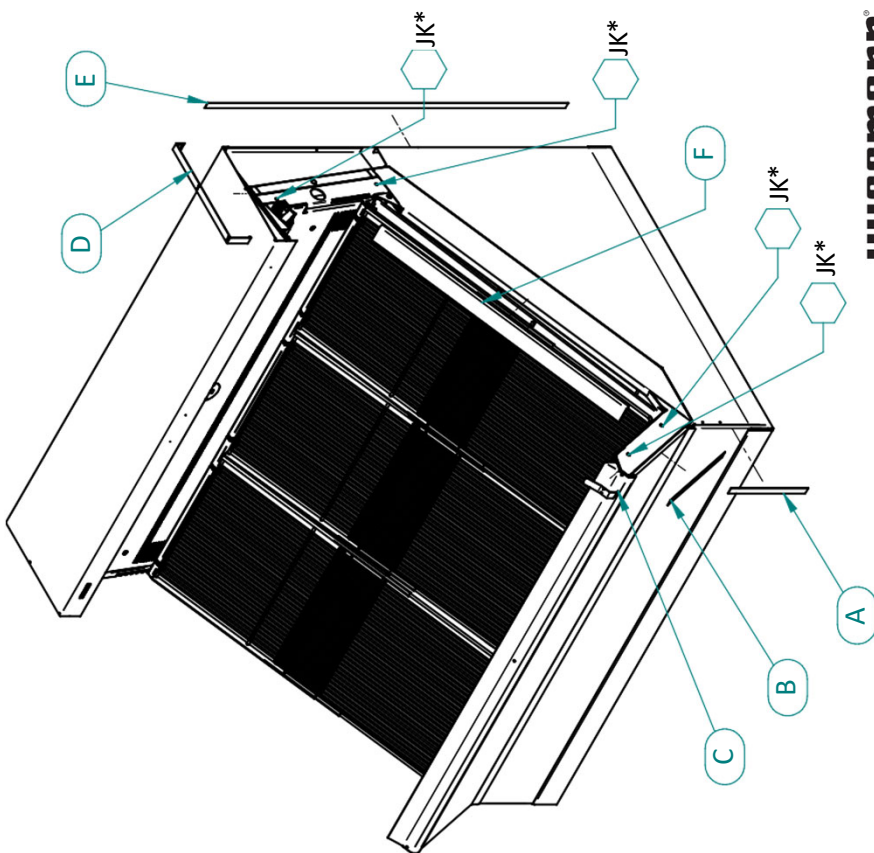


MPC-ET PACKLIST CHECKSHEET

INSPECTOR _____
SALES ORDER # _____
EXT COLOR _____
PINT FINISH SS / BLACK _____

***SEE INSTALLATION GUIDE**

INDICATES CASE BOLTING/ALIGNMENT POINT



HUSSMANN®

CHK	ITEM	PART #	QTY	GRAPHIC
<input type="checkbox"/>	TRIM MPC-ET-JNT FRNT LWR LEGS	3093239	1	A
<input type="checkbox"/>	TRIM MPC-ET-JNT FRNT UPR LEGS	3093240	1	B
<input type="checkbox"/>				
<input type="checkbox"/>	TRIM-MPC-ET-JNT-FRNT AIR	3093241	1	C
<input type="checkbox"/>				
<input type="checkbox"/>	TRIM-MPC-ET-JNT TOP-LEDGE	3093243	1	D
<input type="checkbox"/>				
<input type="checkbox"/>	TRIM MPC-ET-JNT REAR PNL	3093244	1	E
<input type="checkbox"/>				
<input type="checkbox"/>	TRIM MPC-ET BULK HEAD CAP BTM	3093245	1	F
<input type="checkbox"/>	TRIM G			G
<input type="checkbox"/>	TRIM H			H
<input type="checkbox"/>	ALIGNMENT PIN	0376408		J
<input type="checkbox"/>	ALIGNMENT TAB, PLEX	070778-PLX		K
<input type="checkbox"/>	NUT, 3/8 - 16	300-03-1370		L
<input type="checkbox"/>	WASHER, 5/16"	300-03-1315		M
<input type="checkbox"/>	BOLT, 3/8 - 16 X 1	300-03-0845		N
<input type="checkbox"/>	GASKET SEAL TAPE	225-01-0628		P
<input type="checkbox"/>	SEALANT, BUTYL TUBE	100-01-0121		Q
<input type="checkbox"/>	SHIM	375-01-3004-B		-
<input type="checkbox"/>		100-01-0051 (CLEAR)		
<input type="checkbox"/>		100-01-0063 (SILVER)		-
<input type="checkbox"/>		100-01-0065 (BLACK)		
<input type="checkbox"/>	SCREW, SELF TAP #8 X 1/2	300-03-0037		-
<input type="checkbox"/>	VHB DOUBLE-SIDED TAPE	175-01-0562		-
<input type="checkbox"/>	COUPLING, 2" PVC	225-01-0090	1	-
<input type="checkbox"/>	NIPPLE, 2" PVC	225-01-0577	1	-
<input type="checkbox"/>	ADAPTER, 1-1/2" PVC	225-01-1429	1	-
<input type="checkbox"/>	DRAIN TRAP, PVC	225-01-1552	1	-

Installation Cont'd

Setting and Joining

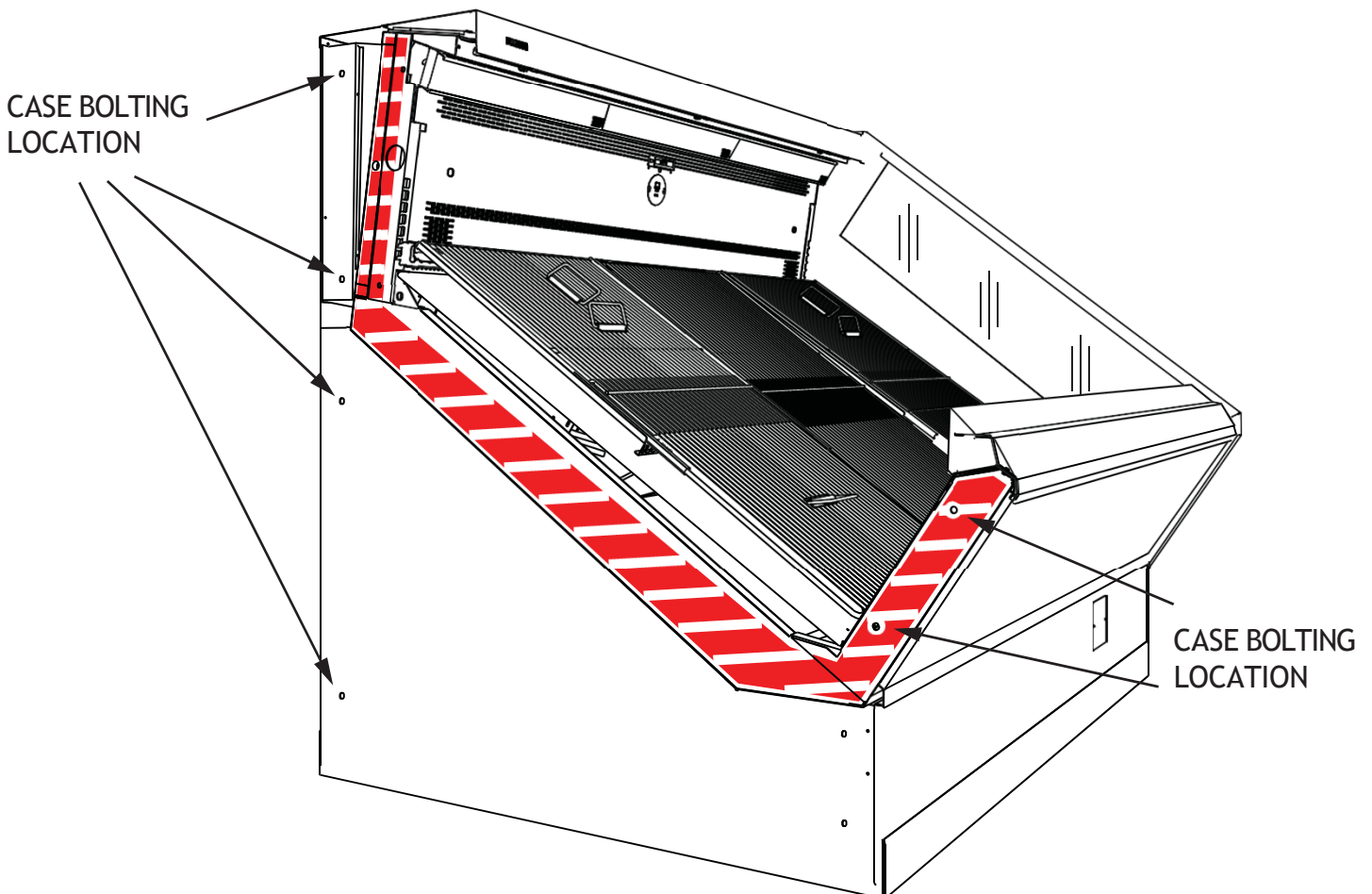
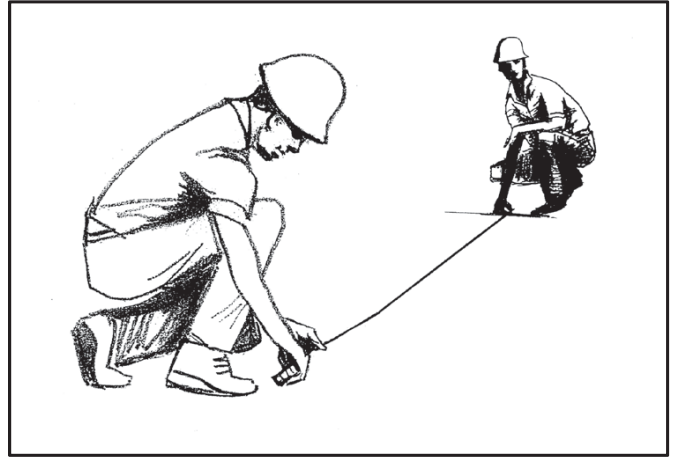
The sectional construction of these models enable them to be joined in line to give the effect of one continuous display.

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.



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.



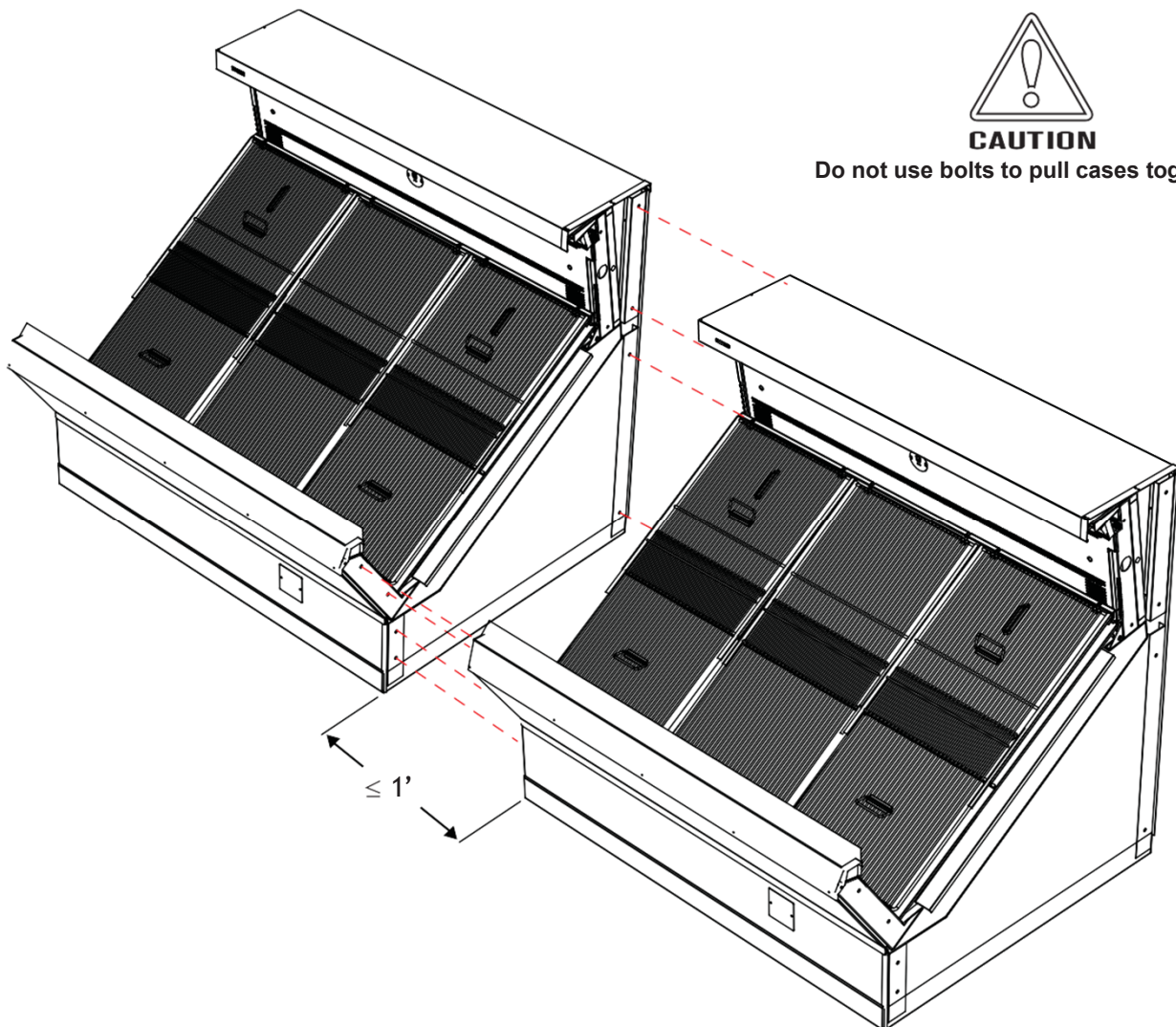
**ATTENTION
INSTALLER**

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.



Installation (cont'd)

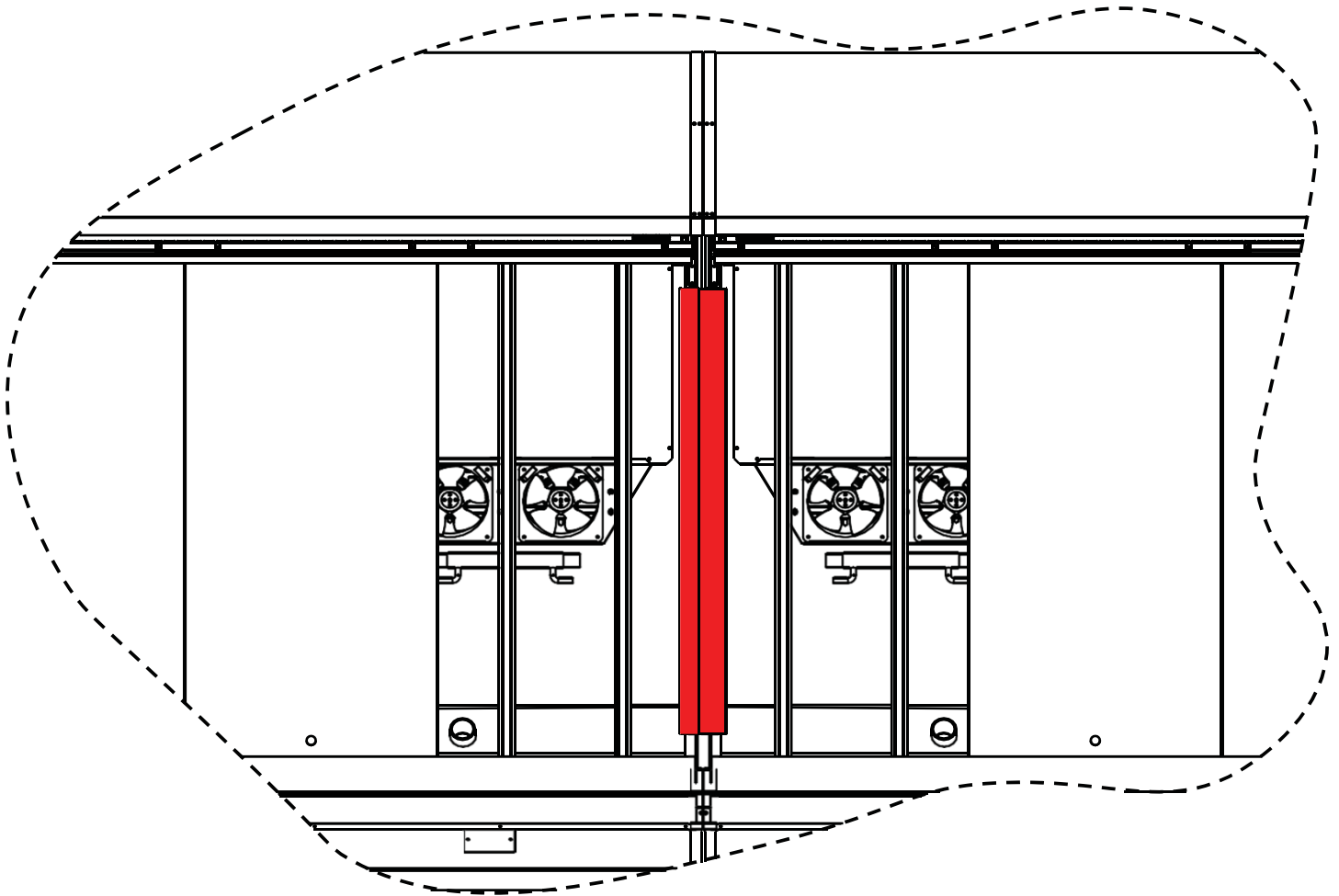
STEP 4. Apply liberal bead of case joint sealant (Silicone) to first case. Sealant area is shown in illustration. Apply heavy amount to cover entire shaded area. (pg10)

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.

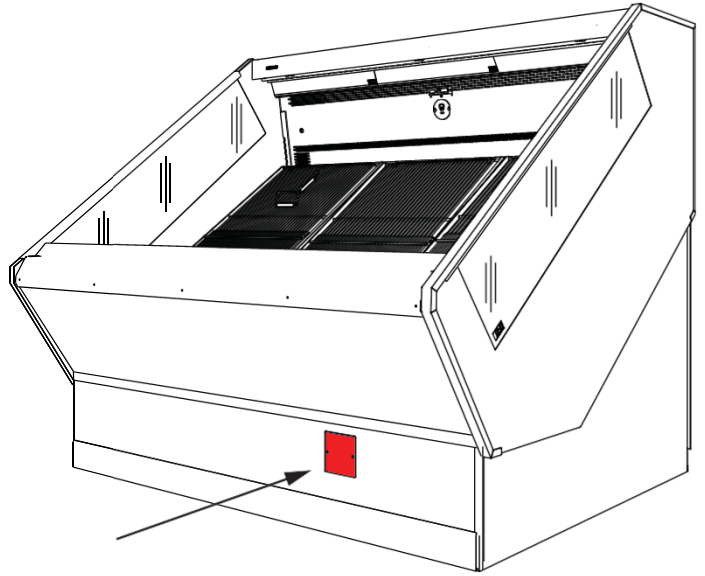
STEP 8. Apply bead of butyl to top of bulk heads and slide on stainless steel bulkhead cap as pictured below. Also apply silicone to seam between joints.



Installation (cont'd)

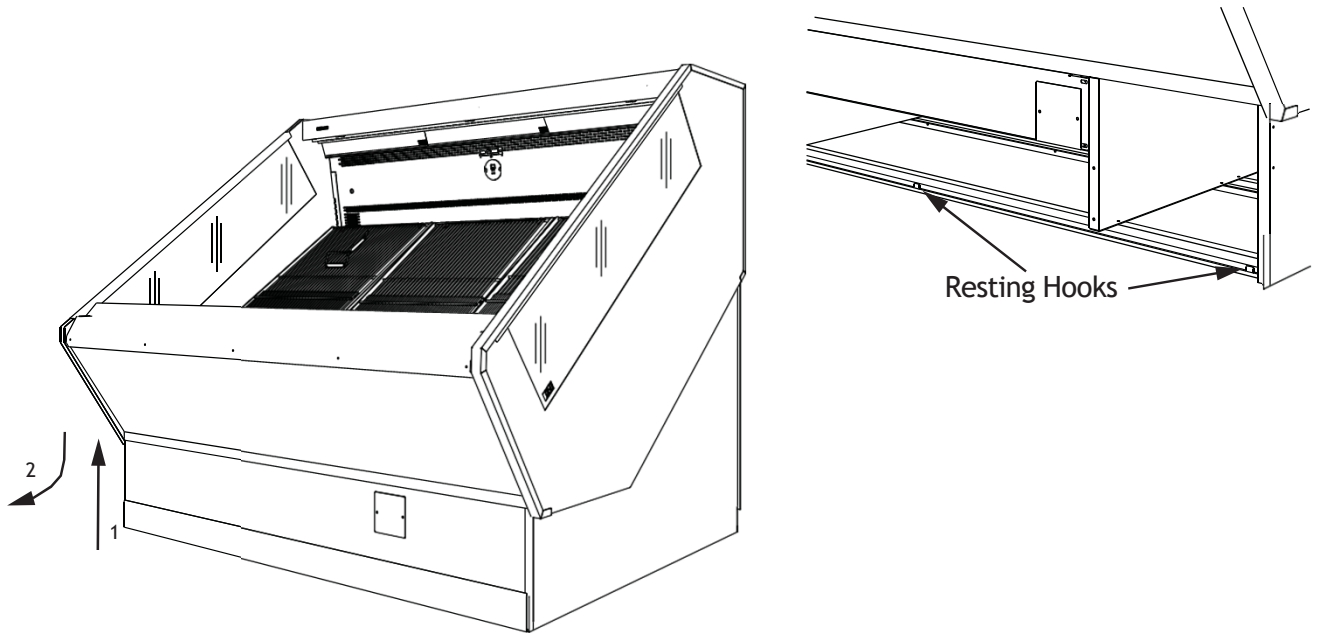
Front Body Panel Access

Located in the lower front body panel is an easily accessible access panel which can be detached by removing the fastened screws which hold the panel in place. Removing this access panel gains access to some of the merchandiser's electrical components as well as other components to operate the case.



Front Body Panel Removal

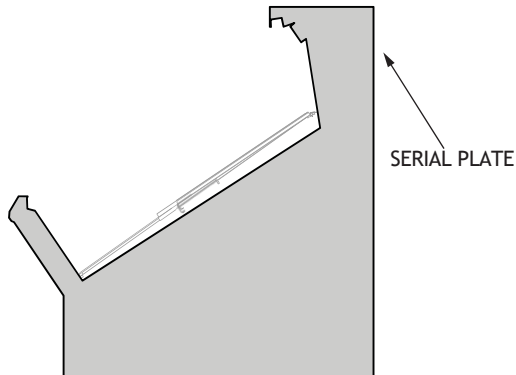
To further gain access to the entire lower base of the merchandiser remove the complete lower front body panel by lifting up from the resting hooks than away from the merchandiser.



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.

WARNING!

Do NOT apply thread sealer to ABS P-Trap.



Spec Sheet

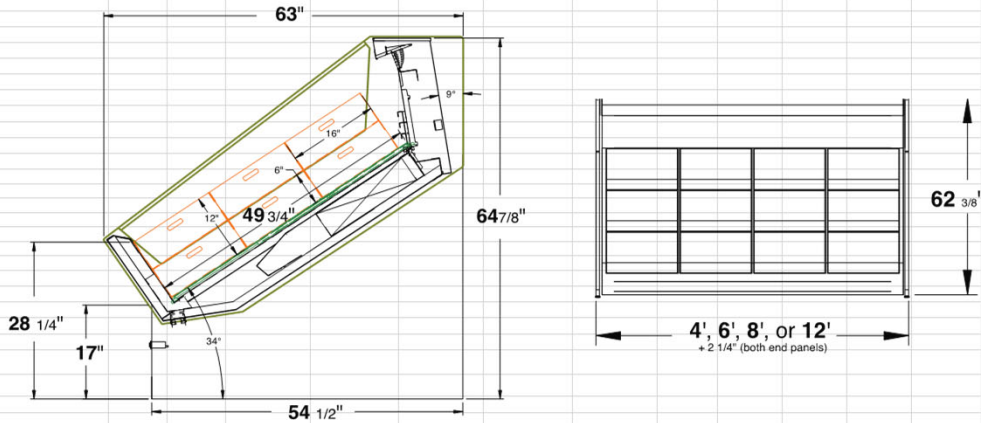


SELF-SERVICE PRODUCE EURO TABLE HUSSMANN - MPC-ET REMOTE (CHINO)

REVISION DATE 07/01/19



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



REFRIGERATION DATA:

CASE LENGTHS	CASE USAGE*	CAPACITY *** (BTU/HR/FT)		TEMPERATURE (°F)			DISCHARGE AIR VELOCITY (FT/MIN)
		RATING CONDITION		EVAPORATOR		DISCHARGE AIR	
		NSF 7	AHRI 1200	NSF 7	AHRI 1200	NSF 7	
4', 6', 8', 12'	DELI	1080	800	16	30	24~27	275~325
4', 6', 8', 12'	PRODUCE	800	800	30	30	38~41	275~325

CASE LENGTHS	EST. REFRIG. CHARGE (LB)	14°F GLYCOL 6° RISE	
		GPM	PSI
4'	1.0	1.5	4.2
6'	1.2	2.2	9.4
8'	1.6	2.9	5.0
12'	2.8	4.3	5.8

*FRONT DISCHARGE AIR MEASURED INSIDE AIR CURTAIN HONEYCOMB

**REFRIGERATION NOTES:

- 1) BTUS INCLUDE LIGHTS.
- 2) AHRI 1200 RATING POINT FOR ENERGY CONSUMPTION COMPARISON ONLY.
- 3) 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.
- 3) RATING CONDITION IS NSF TYPE I, 75°F/55% RH.

REFRIGERATION DATA CONTINUED:

CONTROLLER / AIR SENSOR SETTINGS			DEFROST TYPE	FAILSAFE TIME (MIN)	DEFROST FRE- QUENCY (#/DAY)	TERM. TEMP (°F) AIR	DRIP TIME (MIN)	DEFROST WATER (LBS/DAY/FT)
USAGE	CUT IN (°F)	CUT OUT (°F)						
DELI	27	24	OFF TIME	25	6	50	N/A	3.8
PRODUCE	41	38				50	N/A	TBD

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

4) DEFROST IS BASED ON TERMINATION TEMP, WHICH UNDER NORMAL CIRCUMSTANCES, IS SHORTER THAN FAILSAFE TIME.

ELECTRICAL DATA:

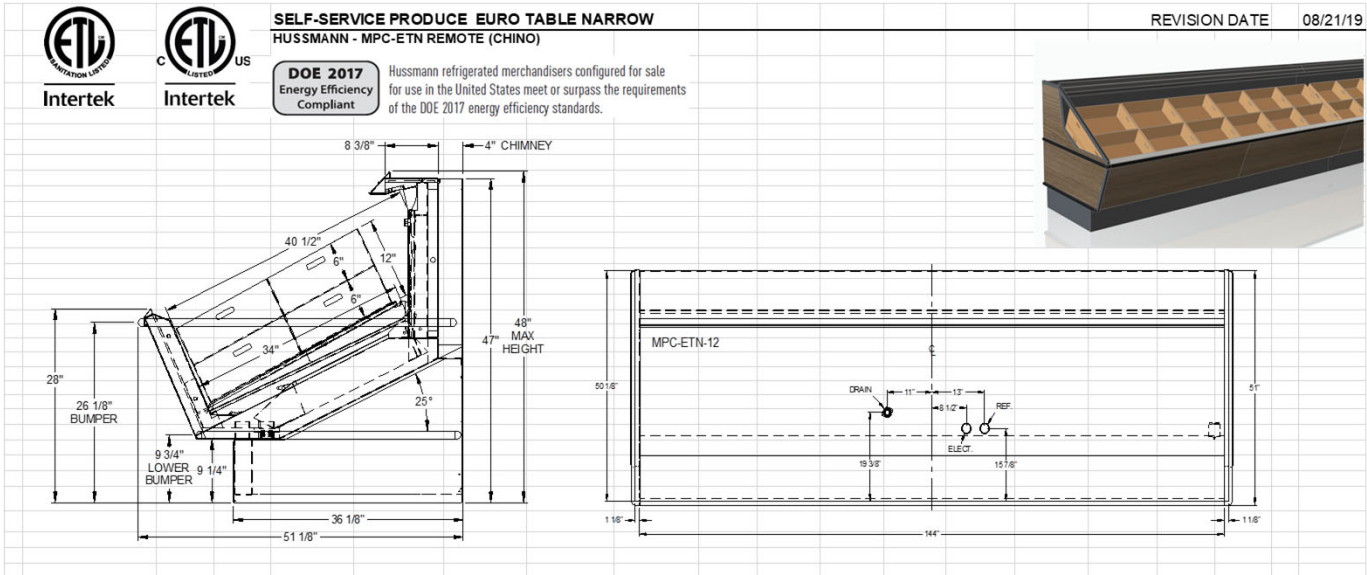
STANDARD FANS, HEATERS, LED LIGHTS (115 VOLT)

CASE LENGTH	EVAPORATOR FANS					OPTIONAL CANOPY LIGHTS LED		OPTIONAL LED NOSE LIGHTS		MAX. LED LOAD (W/ ALL OPTIONS)		ANTI-SWEAT HEATERS		CONVENIENCE OUTLETS (OPTIONAL)		
	# OF EVAP FANS	BLADE DIA. (IN.)	BLADE PITCH (°)	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	# OUTLETS	VOLTS	AMPS
4'	2	6.7	25	0.2	16	0.1	10	0.1	10	0.2	21	N/A	N/A	1	115	15
6'	4	6.7	20	0.5	32	0.1	15	0.1	15	0.3	31	N/A	N/A	1	115	15
8'	4	6.7	25	0.5	32	0.2	21	0.2	21	0.4	41	N/A	N/A	1	115	15
12'	6	6.7	25	0.7	48	0.3	31	0.3	31	0.5	62	N/A	N/A	2	115	30

OPTIONAL HIGH OUTPUT LED LIGHTS (115 VOLT)

CASE LENGTH	CANOPY LIGHTS H.O. LED OPTIONAL		OPTIONAL NOSE H.O. LED		MAX. H.O. LED LOAD	
	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS
4'	0.1	15	0.1	10	0.2	26
6'	0.2	26	0.1	15	0.4	41
8'	0.3	30	0.2	21	0.4	51
12'	0.4	46	0.3	31	0.7	77

Spec Sheet



REFRIGERATION DATA:

CASE LENGTHS	CASE USAGE	CAPACITY ** (BTU/HR/FT)		TEMPERATURE (°F)			VELOCITY (FT/MIN)
		RATING CONDITION		EVAPORATOR		DISCHARGE AIR *	
		NSF 7	AHRI 1200	NSF 7	AHRI 1200	NSF 7	
4' 6' 8' 12'	PRODUCE	940	740	20	30	31~33	275~325

CASE LENGTHS	EST. REFG. CHRGS. 404A (LBS)	20°F GLYCOL 6° RISE	
		GPM	PSI
4'	1.0	1.3	3.6
6'	1.4	1.9	8.0
8'	1.7	2.5	2.4
12'	2.3	3.7	7.4

*FRONT DISCHARGE AIR MEASURED INSIDE AIR CURTAIN HONEYCOMB

**REFRIGERATION NOTES:

- 1) CAPACITY FOR REFERENCE ONLY.
- 2) AHRI 1200 RATING POINT FOR ENERGY CONSUMPTION COMPARISON ONLY.
- 3) 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.
- 4) RATING CONDITION IS NSF TYPE I, 75°F/55% RH.

REFRIGERATION DATA CONTINUED:

CONTROLLER / AIR SENSOR SETTINGS			DEFROST TYPE	FAILSAFE TIME (MIN)	DEFROST FREQUENCY (#/DAY)	TERM. TEMP (°F) AIR	DRIP TIME (MIN)	DEFROST WATER (LBS/DAY/FT)
USAGE	CUT IN (°F)	CUT OUT (°F)						
PRODUCE	32	28	OFF TIME	30	6	50	N/A	4.2

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					OPTIONAL CANOPY LIGHTS LED		OPTIONAL LED NOSE LIGHTS		MAX. LED LOAD (W/ ALL OPTIONS)		ANTI-SWEAT HEATERS		CONVENIENCE OUTLETS (OPTIONAL)		
	# OF EVAP FANS	BLADE DIA. (IN.)	BLADE PITCH (°)	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS	# OUTLETS	VOLTS	AMPS
4'	2	6.7	20	0.2	16	0.1	10	0.1	10	0.2	21	N/A	N/A	N/A	N/A	N/A
6'	4	6.7	15	0.5	32	0.1	15	0.1	15	0.3	30	N/A	N/A	N/A	N/A	N/A
8'	4	6.7	20	0.5	32	0.2	21	0.2	21	0.4	41	N/A	N/A	N/A	N/A	N/A
12'	6	6.7	25	0.7	48	0.3	31	0.3	31	0.5	62	N/A	N/A	N/A	N/A	N/A

OPTIONAL HIGH OUTPUT LED LIGHTS (115 VOLT)

CASE LENGTH	CANOPY LIGHTS H.O. LED OPTIONAL		OPTIONAL NOSE LED		MAX. H.O. LED LOAD	
	AMPS	WATTS	AMPS	WATTS	AMPS	WATTS
4'	0.1	15	0.1	10	0.2	26
6'	N/A	N/A	N/A	N/A	N/A	N/A
8'	0.3	30	0.2	21	0.4	51
12'	0.4	46	0.3	31	0.7	77

Electrical

Wiring Color Code

STANDARD CASE WIRE COLOR CODE CODIGO DE COLORES DE LOS ALAMBRES PARA LAS VITRINAS ESTANDAR CODE COULER POUR FILS DE BOITIER NORMALISE		
COLOR DESCRIPTION	DESCRIPCION	DESCRIPTION
GROUND	TIERRA MASA	MASSE
ANTI-SWEAT	ANTICONDENSACION	ANTI-SUITEMENT
LIGHTS	LUCES	ECLAIRAGE
RECEPTACLES	ENCHUFES	PRISE DE COURANT
T-STAT/SOLENOID 230VAC	TERMOSTATO/SOLENOIDE (230VAC)	SOUPAPE A SOLENOID (230 VAC)
T-STAT/SOLENOID 115VAC	TERMOSTATO/SOLENOIDE (115VAC)	SOUPAPE A SOLENOID (115 VAC)
T-STAT/SOLENOID 24VAC	TERMOSTATO/SOLENOIDE (24VAC)	SOUPAPE A SOLENOID (24 VAC)
FAN MOTORS	VENTILADORES	VENTILATEUR
BLUE CONDENSING UNIT	UNIDAD DE CONDENSACION	UNITE DE CONDENSATION

USE COPPER CONDUCTORS ONLY
UTILISEZ LES CONDUCTEURS DE CUIVRE SEULEMENT
UTILICE LOS CONDUCTORES DE COBRE SOLAMENTE
430-01-0338 R101003

CASE MUST BE GROUNDED

NOTE: Refer to label affixed to case to determine the actual configuration as checked in the "TYPE INSTALLED" boxes.

Field Wiring and Serial Plate Amperage

Field Wiring must be sized for component amperes printed 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 refrigeration thermostats. Case amperes are listed on the wiring diagram, but always check the serial plate.



BEFORE SERVICING

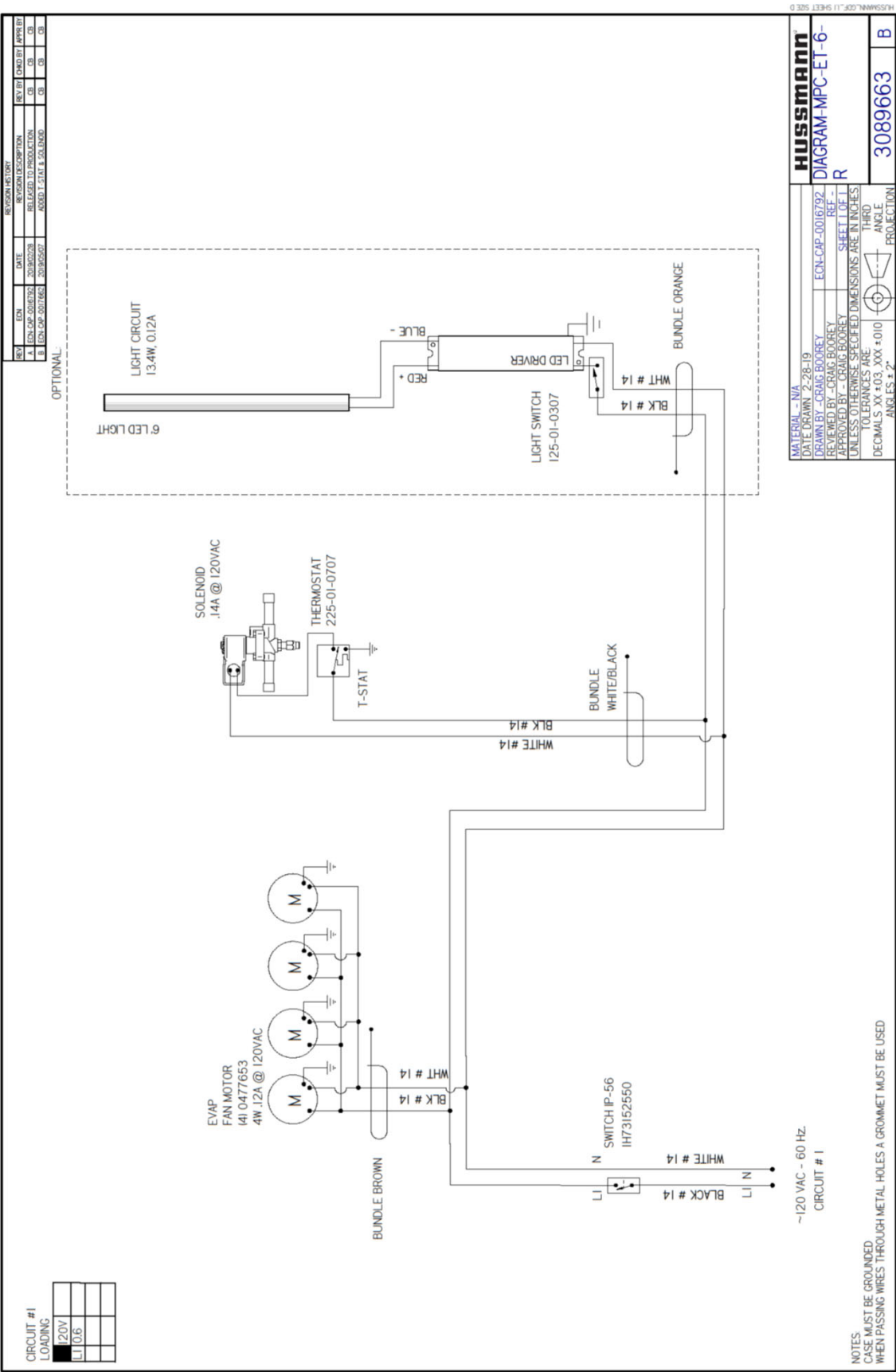
**ALWAYS DISCONNECT ELECTRICAL
POWER AT THE MAIN DISCONNECT
WHEN SERVICING OR REPLACING ANY
ELECTRICAL COMPONENT.**

**This includes (but not limited to) Fans, Heaters
Thermostats, and Lights.**

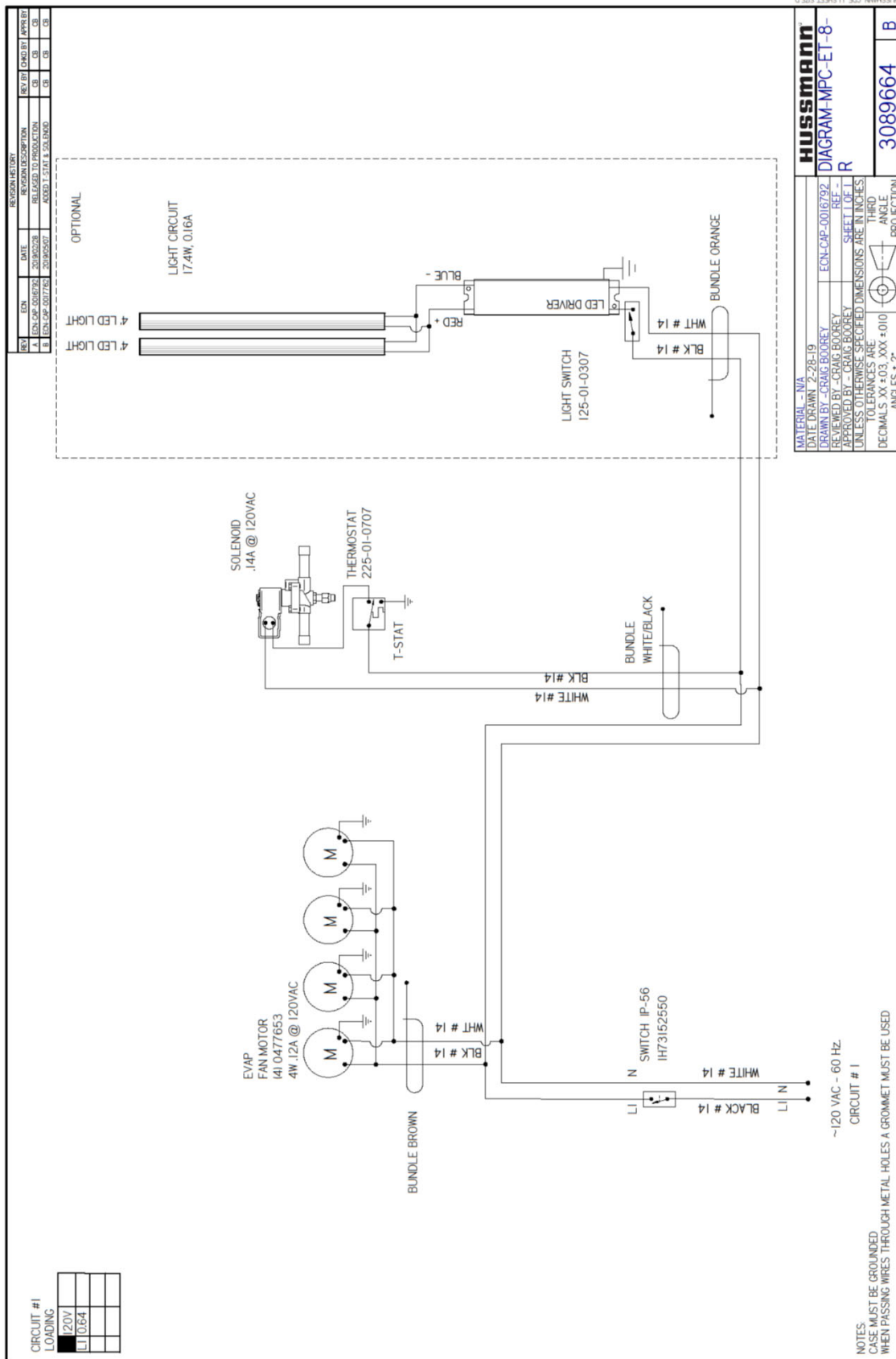
Wiring Diagram Index

MPC-ET-6-R W/KILL SWITCH	6'	3089663		2/28/2019
MPC-ET-8-R W/KILL SWITCH	8'	3089664		2/28/2019
MPC-ET-12-R W/KILL SWITCH	12'	3091085		3/15/2019
MPC-ET-8-R	8'	3133698		9/29/2020
MPC-ET-12-R	12'	3133697		9/29/2020
MPC-ETN-12-R	12'	3105497		8/26/2019

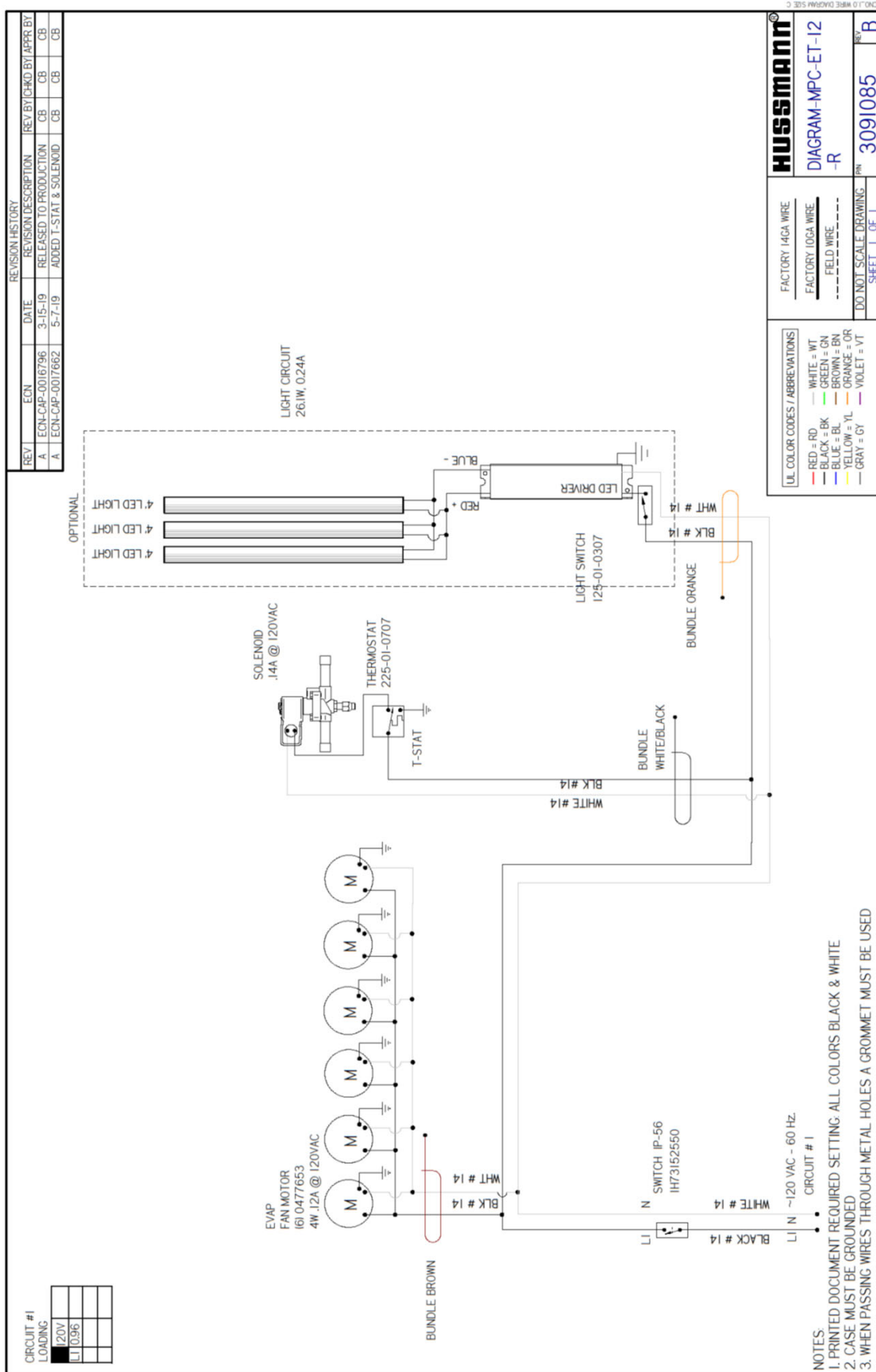
Wiring Diagram



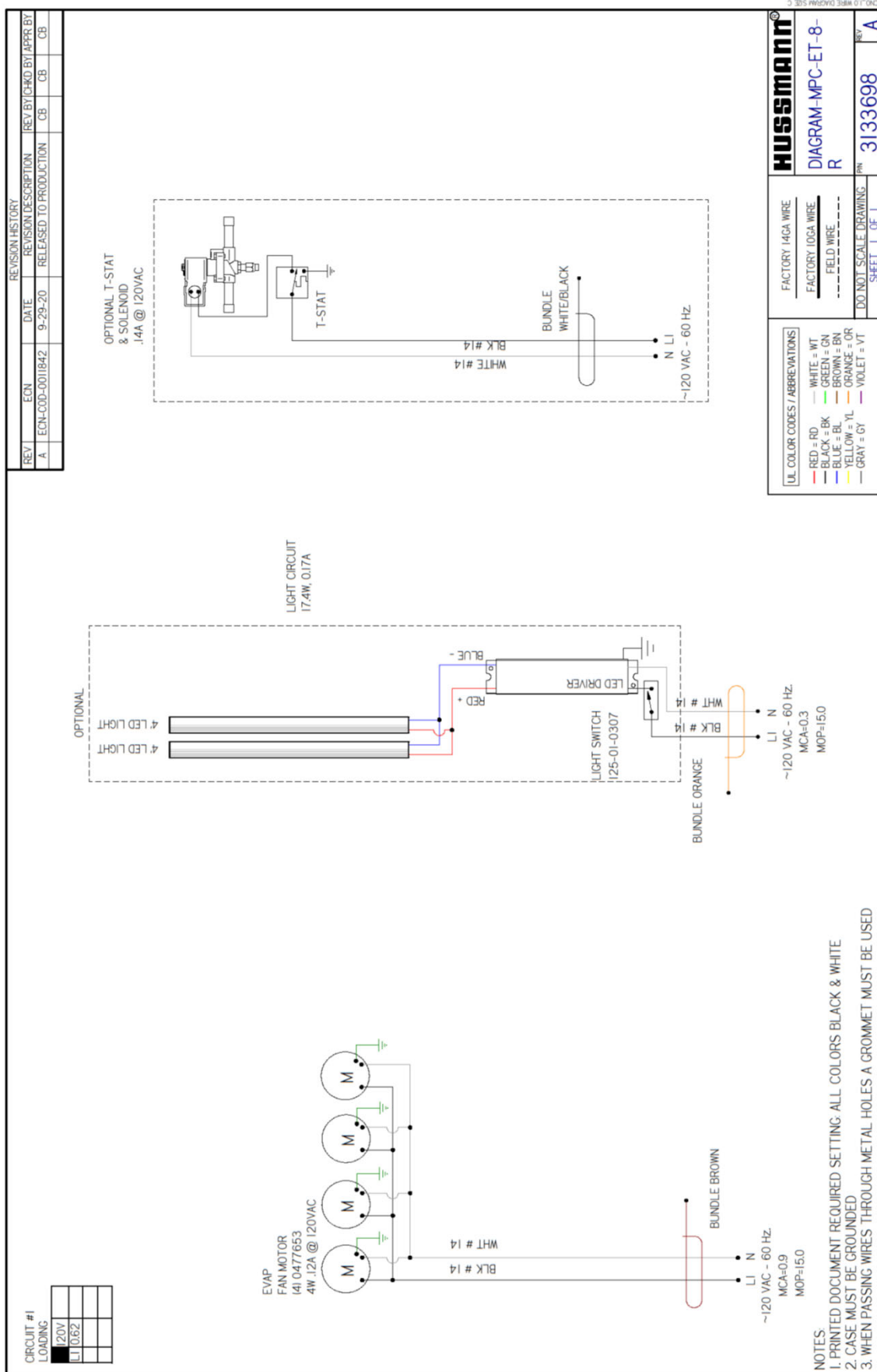
Wiring Diagram



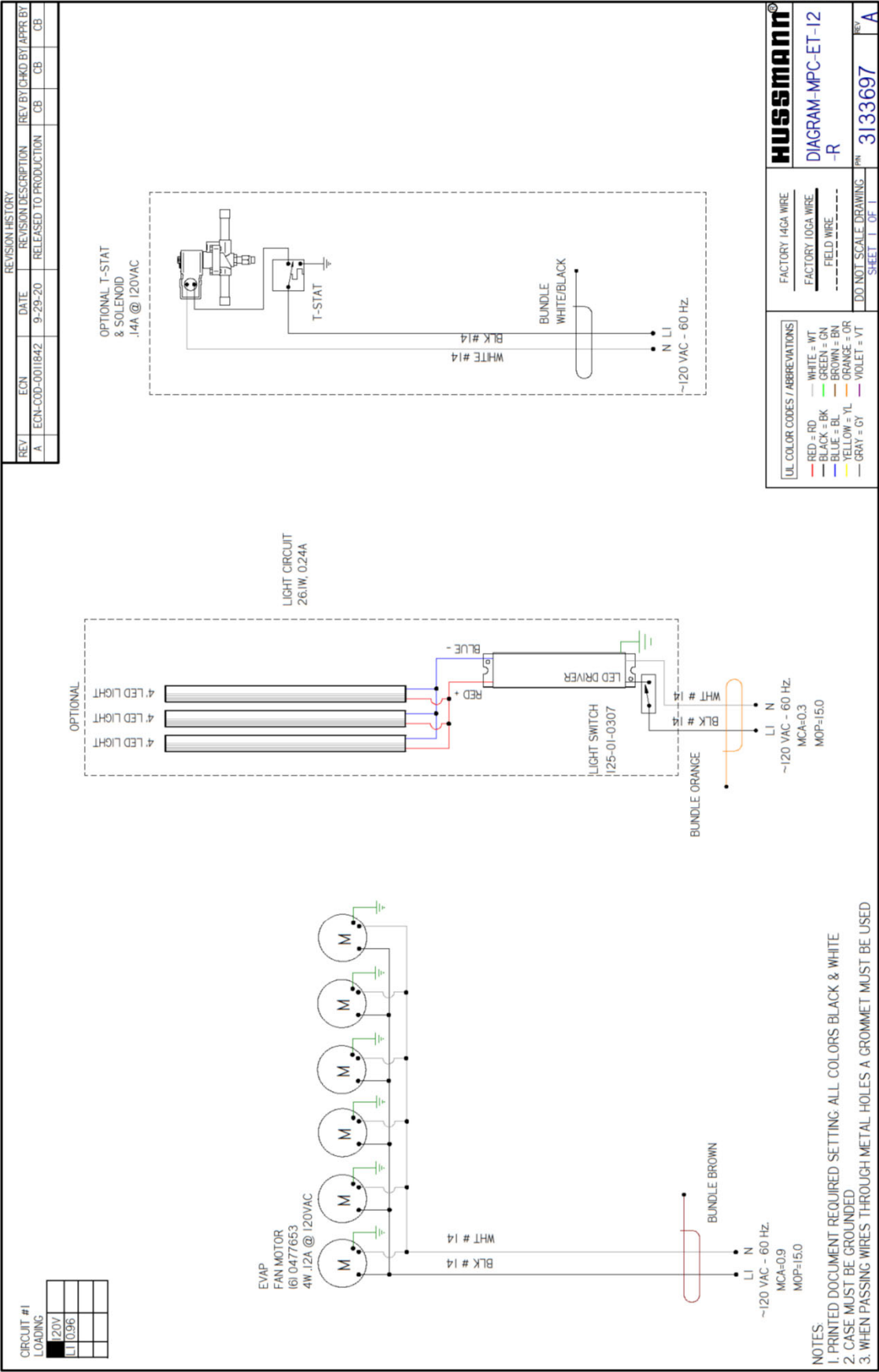
Wiring Diagram



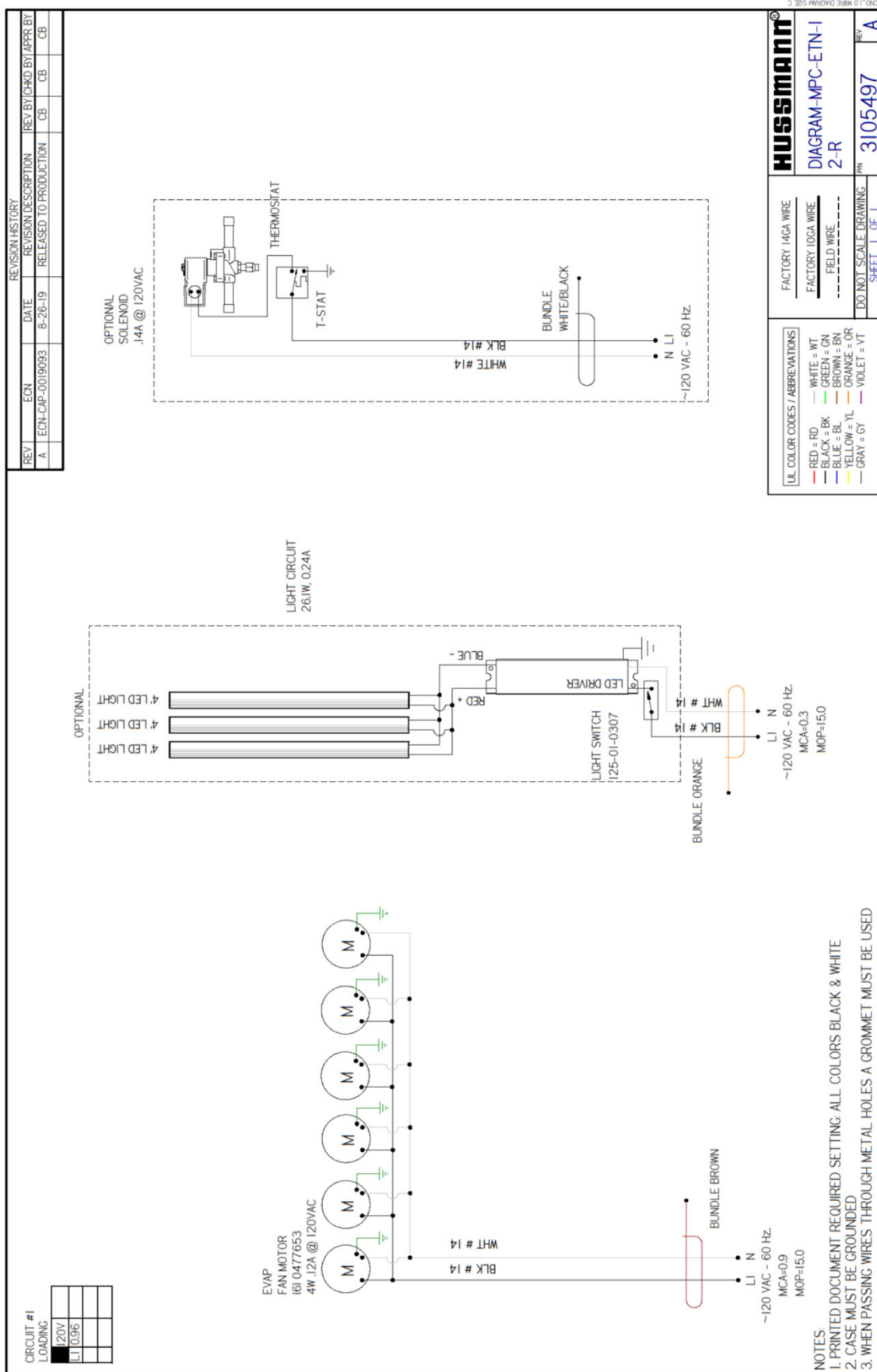
Wiring Diagram



Wiring Diagram



Wiring Diagram



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.

Load Limit

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

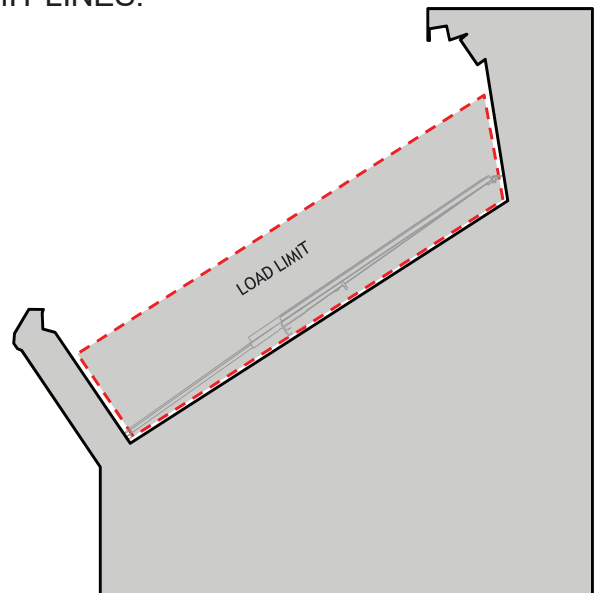
AT NO TIME SHOULD THE MERCHANDISER BE STOCKED BEYOND THE LOAD LIMITS INDICATED.

LOAD LIMIT



Load Limit Line

DO NOT LOAD PAST THE FOLLOWING LOAD LIMIT LINES.



Maintenance

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.

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.

Maintenance Cont'd

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
Case temperature is too warm.	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.
Case temperature is too cold.	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.
Condensation on glass.	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
Water has pooled under case.	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.
Case is not draining properly.	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.
Frost or ice on evaporator coil.	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.
Lights do not come on.	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.

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HUSSmann®

**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