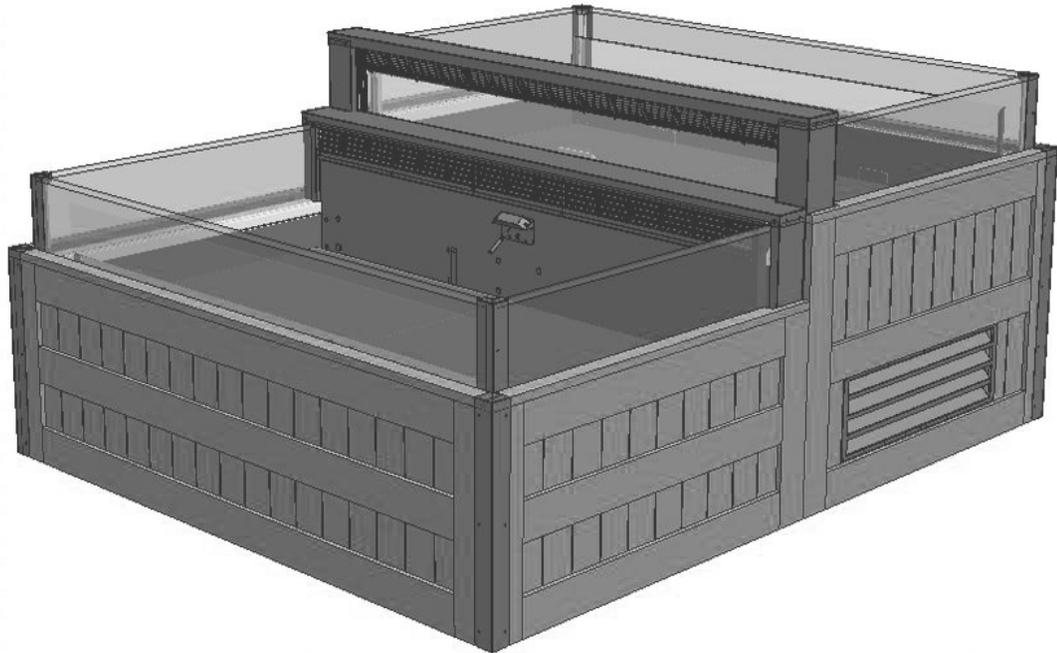


HUSSMANN®



DOE 2017
Energy Efficiency
Compliant

ISMGG2DA Medium Temperature Self-Contained Island Merchandisers



Installation & Operation Manual

IMPORTANT
Keep in store for
future reference!

P/N 3056464_C
October 2018

Spanish 3056465
French 3056466

ATTENTION

Merchandiser must operate for 24 hours
before loading product!

Regularly check merchandiser temperatures.

Do not break the cold chain. Keep products
in cooler before loading into merchandiser.

These merchandisers are designed
for pre-chilled products only.



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

12999 St. Charles Rock Road • Bridgeton, MO 63044-2483

U.S. & Canada 1-800-922-1919 • Mexico 1-800-890-2900

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TABLE OF CONTENTS

<p>ANSI Z535.5 DEFINITIONS vi</p> <p>INSTALLATION</p> <p>UL Listing 1-1</p> <p>Federal / State Regulation 1-1</p> <p>Husmann Product Control 1-1</p> <p>Shipping Damage 1-1</p> <p>Location 1-1</p> <p>Self Contained Location 1-2</p> <p>Model Description 1-3</p> <p>Unloading 1-3</p> <p>Exterior Loading 1-3</p> <p>Shipping Crate and Skid 1-3</p> <p>Merchandiser Leveling 1-6</p> <p>Serial Plate Location 1-6</p> <p>Sealing Merchandiser to Floor 1-6</p> <p>Self-Contained Refrigeration Equipment Start Up Check List 1-7</p> <p>ELECTRICAL / REFRIGERATION</p> <p>Merchandiser Electrical Data 2-1</p> <p>Field Wiring 2-1</p> <p>Electrical Connections 2-1</p> <p>Electrical Outlet 2-1</p> <p>Refrigeration (Self Contained Models) .. 2-1</p> <p>Condensing Unit Access 2-2</p> <p>Waste Outlet and Water Seal 2-4</p> <p>START UP / OPERATION</p> <p>Controller Operation 3-1</p> <p>Technical Data 3-2</p> <p>Connections 3-3</p> <p>LED 3-4</p> <p>KDEPLUS Buttons 3-5</p> <p>Setpoint: Setting and Edit Lock 3-6</p> <p>Display Probes Value 3-6</p> <p>Key-Activated Functions 3-6</p>	<p>Low temp to medium temperature set-point adjustment 3-6</p> <p>Typical Sensor Location 3-7</p> <p>Controls and Adjustments 3-8</p> <p>Start Up 3-8</p> <p>TEV Adjustment 3-8</p> <p>Load Limits 3-9</p> <p>Stocking 3-9</p> <p>MAINTENANCE</p> <p>Care and Cleaning 4-1</p> <p>Removing Scratches from Bumper 4-2</p> <p>Cleaning Under Fan Plenum 4-2</p> <p>Cleaning Stainless Steel Surfaces 4-3</p> <p>Cleaning Coils 4-3</p> <p>Cleaning Evaporation Pan 4-4</p> <p>Self-Contained Refrigeration Equipment Maintenance Check List 4-5</p> <p>SERVICE</p> <p>Replacing Fan Motors and Blades 5-1</p> <p>APPENDIX</p> <p>Replacement Parts List A-1</p> <p>Plan View A-2</p> <p>Cross Section and Refrigeration Data... A-3</p> <p>Electrical Data A-4</p> <p>Shipping Weights and Amps A-4</p> <p>Wiring Diagram A-5</p> <p>WARRANTY</p>
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REVISION HISTORY

REVISION C— Updated California Warning; Controller Operation Page 3-1; Controls and Adjustments, Page 3-8

REVISION B — Page 3-7 removed sensor wire color

ORIGINAL ISSUE — *MARCH 2018*

ANSI Z535.5 DEFINITIONS



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



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



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

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



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.

INSTALLATION

UL LISTING

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

FEDERAL / STATE REGULATION

These merchandisers at the time they are manufactured, meet all federal and state/provincial regulations. Proper installation is required to ensure these standards are maintained. Near the serial plate, each merchandiser carries a label identifying the environment for which the merchandiser was designed for use. For example:

ANSI/NSF-7 Type I – Display Refrigerator / Freezer

Intended for 75°F (24°C) / 55%RH Ambient Application

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

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

HUSSMANN PRODUCT CONTROL

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

SHIPPING DAMAGE

All equipment should be thoroughly examined for shipping damage before and during unloading. This equipment has been carefully inspected at our factory. Any claim for loss

or damage must be made to the carrier. The carrier will provide any necessary inspection reports and/or claim forms.

Apparent Loss or Damage

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

Concealed Loss or Damage

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

LOCATION

These merchandisers are designed for displaying products in air conditioned stores where temperature is maintained at or below the ANSI / NSF-7 specified level and relative humidity is maintained at or below 55%. Placing refrigerated merchandisers in direct sunlight, near hot tables or near other heat sources could impair their efficiency. Like other merchandisers, these merchandisers 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 merchandiser.

<p>Recommended operating ambient temperature is between 65°F (18°C) to 75°F (24°C). Maximum relative humidity is 55%.</p>
--

1-2 INSTALLATION

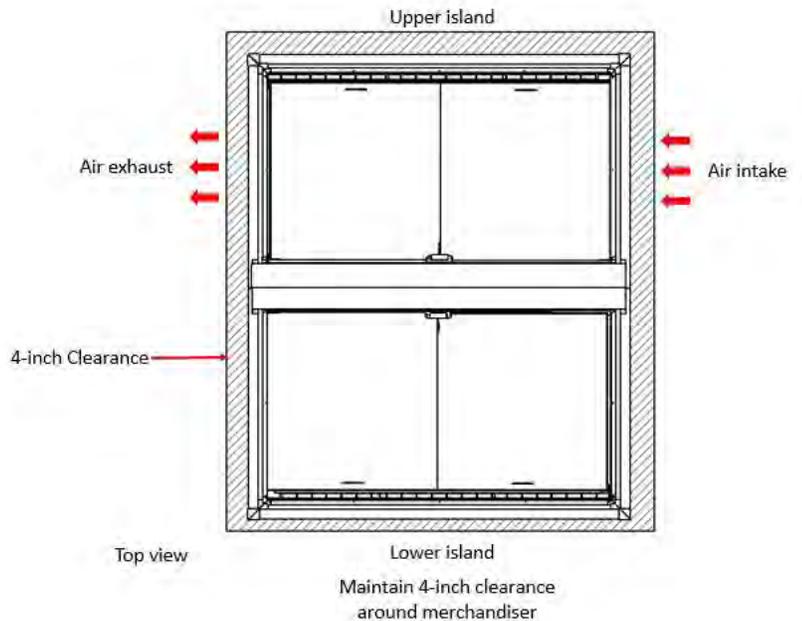
SELF CONTAINED (LOCATION)

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.

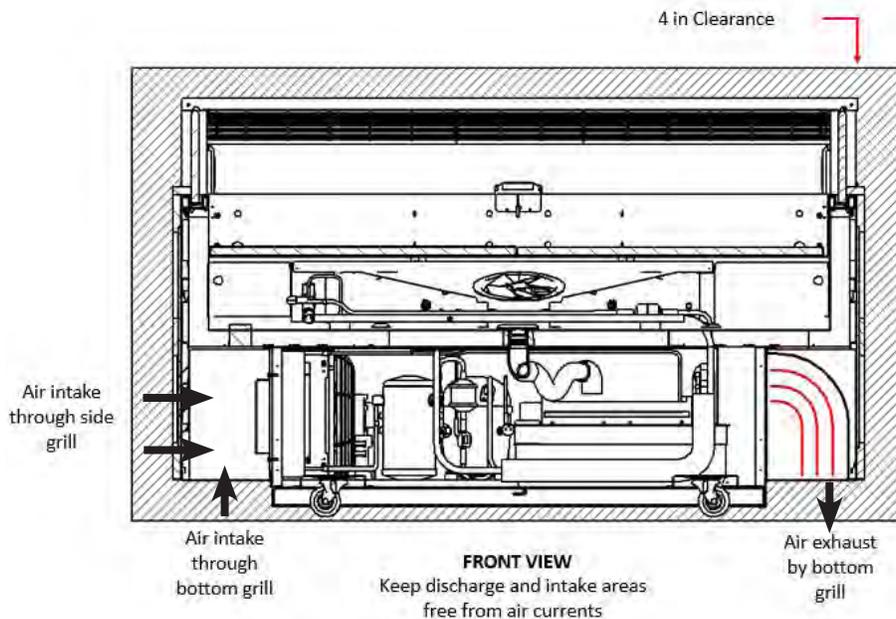
BE SURE TO POSITION SELF CONTAINED MERCHANDISERS PROPERLY.

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

Allow for a minimum 4 in. clearance from walls, merchandisers, and any other large objects near the merchandiser's vented base panels (for self contained models). Blocking or restricting air flow will adversely affect performance and may damage the refrigeration system.



⚠ WARNING
Do NOT stand or walk on top of merchandiser. Do not store flammable materials near the unit.



MODEL DESCRIPTION

The ISMGG2DA model is an island, spot display merchandiser. The case has one condensing unit, installed beneath the display area of the upper part of the case. This model is ready for operation when electrical service is connected.

The ISMGG2DA model is designed for medium temperature operation. It has upper central glass, and plexiglass on all four sides of the merchandiser.

UNLOADING

CAUTION

Do not walk or put heavy objects on case.
Do not place objects atop the unit.

Unloading from Trailer:

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

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

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

1. Do not drag the merchandiser out of the trailer. Use a Johnson bar (mule).
2. Use a forklift or dolly to remove the merchandiser from the trailer.

EXTERIOR LOADING

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

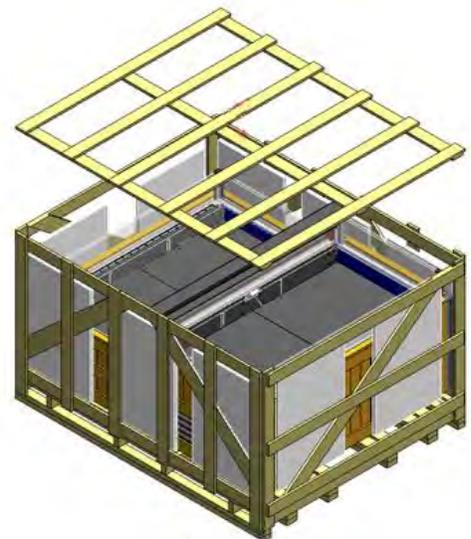
MERCHANDISERS ARE NOT STRUCTURALLY DESIGNED TO SUPPORT EXTERNAL LOADING such as the weight of a person. Do not place heavy objects on the merchandiser.

SHIPPING CRATE AND SKID

Each merchandiser is shipped inside a crate to protect the merchandiser and to make positioning the case easier.

To remove the shipping crate do the following:

1. Use a screwdriver or cordless drill to remove the screws attached to the top of the crate.

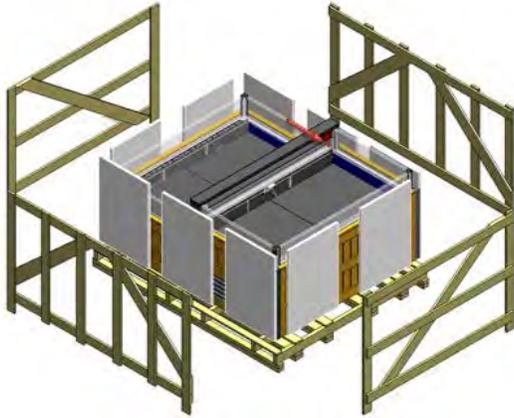


WARNING

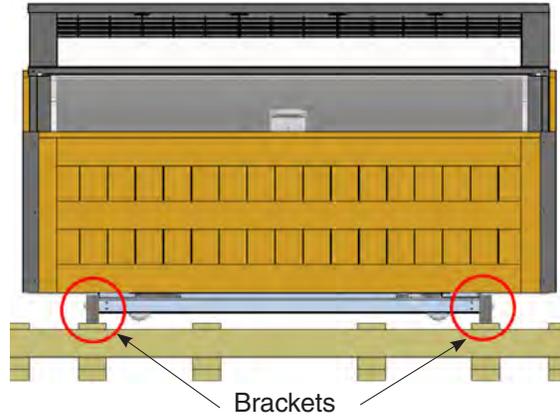
Do NOT remove shipping crate until the merchandiser is positioned for installation.

1-4 INSTALLATION

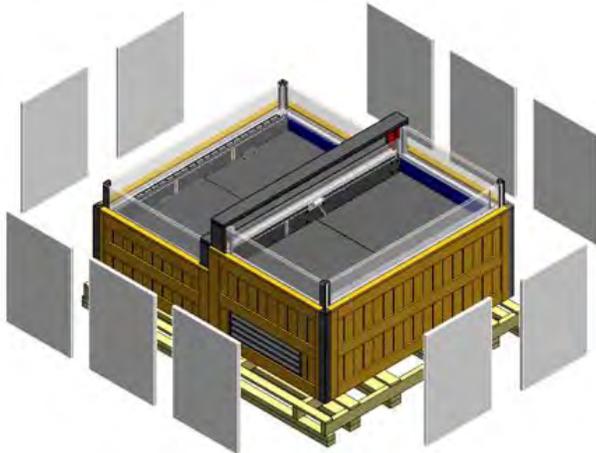
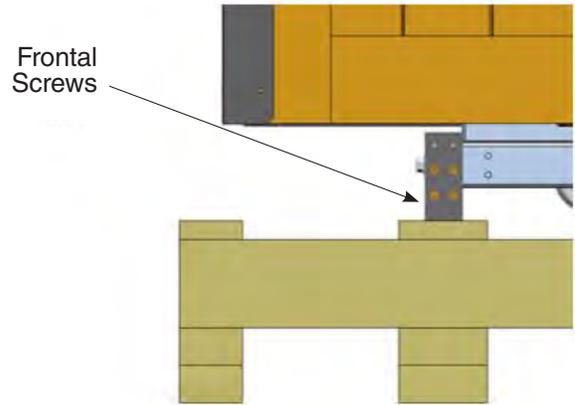
2. Use a cordless screwdriver to remove the screws attached at the sides, front and rear of the crate.



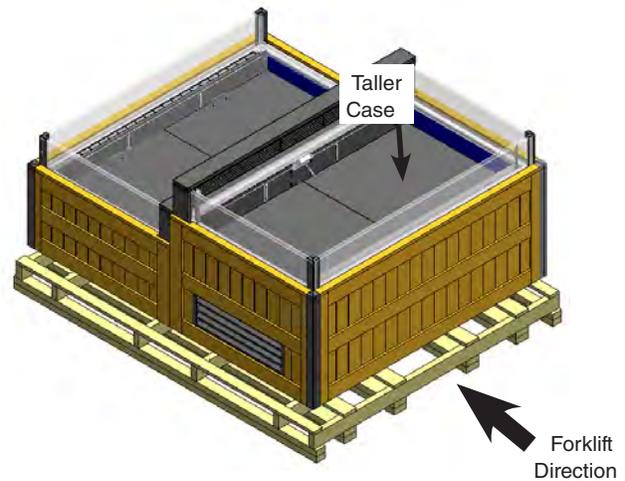
4. Remove the frontal screws from the skid-
crate brackets. (4 brackets total).



3. Remove the protector plastic bag, which
is covering the case. Carefully remove the
strapping wrapped around the case. Remove
white protectors around the case (10 pieces).



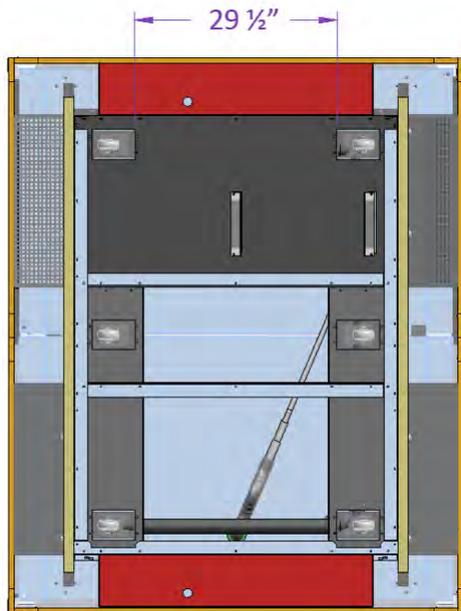
5. Identify the taller case. Remove the case
from the skid with a fork lift. Set the forks
below the taller case base, between rail base
and wood skid. Maximum fork opening is
29 ½ inches in order to avoid damaging the
casters.



The power cord is located below the frontal baffle, taller case, attached with cable ties.

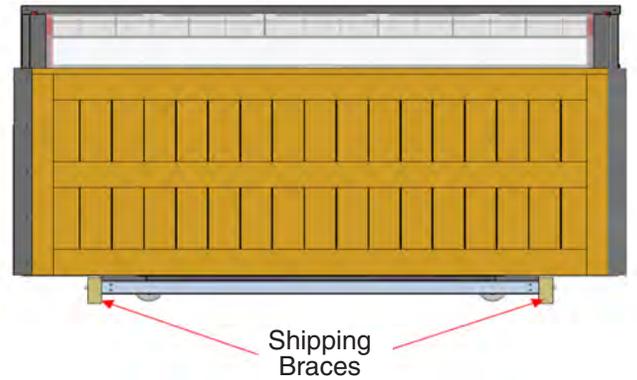
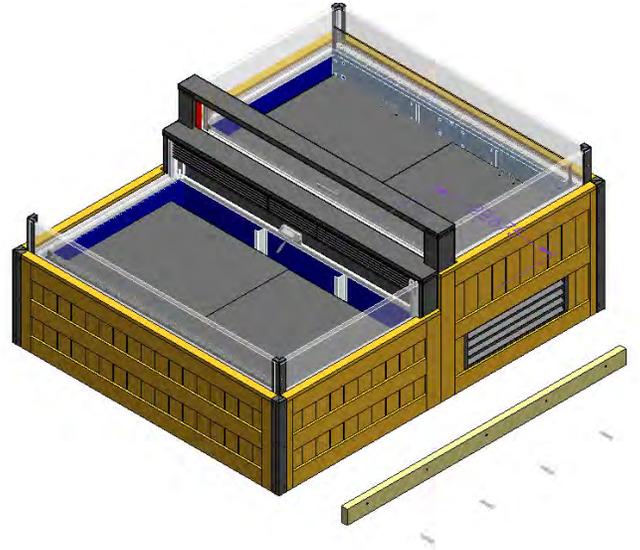


Power Cord



Maximum Forklift Opening is 29 1/2 inches

6. Lift case with forklift, and remove the screws from the shipping braces (both sides of the case) in order to set the case to its final location.



MERCHANDISER LEVELING

BE SURE TO POSITION MERCHANDISERS PROPERLY. Level the merchandiser by all four corners. Merchandiser(s) must be installed level to ensure proper operation of the refrigeration system, and to ensure proper drainage of defrost water.

SERIAL PLATE LOCATION

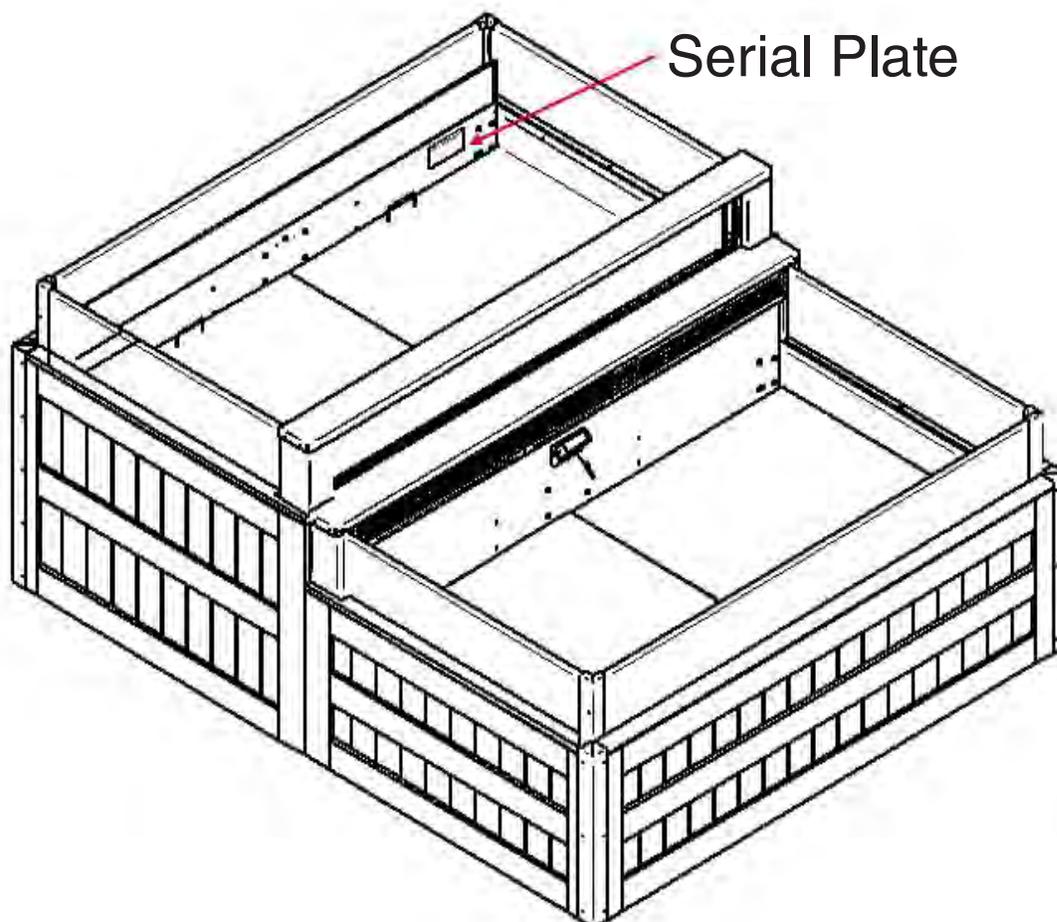
The serial plate is located on the inside of the merchandiser's display area.

NOTE: Impacts from shopping carts can cause wood to wear, cracks, chipping or peeling. To avoid these impacts, it is required to install a floor bumper (or alike) around the case or other type of protection to prevent damage to the wood.

SEALING MERCHANDISER TO FLOOR

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

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



Hussmann Self-Contained Refrigeration Equipment Start Up Check List

Please note that failure to follow this start-up document may void your factory warranty

Step	Startup Activity	Check
1	Locate, read and maintain install/operation manual in a safe place for future reference.	<input type="checkbox"/>
2	Examine unit. Confirm there is NO damage or concealed damage.	<input type="checkbox"/>
3	Level the unit, side to side and front to rear.	<input type="checkbox"/>
4	Remove all shipping brackets/compressor straps/bolts etc.	<input type="checkbox"/>
5	Unit must be run on a dedicated electrical circuit without the use of an extension cord.	<input type="checkbox"/>
6	Ensure that the proper electrical requirements for the equipment are supplied.	<input type="checkbox"/>
7	Verify field electrical connections are tight.	<input type="checkbox"/>
8	Verify all electrical wiring is secured and clear of any sharp edges or hot lines.	<input type="checkbox"/>
9	Verify the condensate drain line is properly trapped and pitched.	<input type="checkbox"/>
10	Verify all required clearances on the sides and back of unit.	<input type="checkbox"/>
11	Verify there are no air disturbances external to the unit. Heat and air registers, fans, and doors etc.	<input type="checkbox"/>
<p align="center">Advise owner/operator that merchandiser must operate at temperature for 24 hrs prior to loading with product.</p>		

Form HSCW01 Rev. 30MAY12 P/N 0525209_B

LEGAL DISCLAIMER:

Hussmann shall not be liable for any repair or replacements made without the written consent of Hussmann, or when the product is installed or operated in a manner contrary to the printed instructions covering installation and service which accompanied such product.

1-8 INSTALLATION

Notes:

ELECTRICAL / REFRIGERATION

MERCHANDISER ELECTRICAL DATA

Refer to the technical data sheets and merchandiser serial plate for electrical information.

FIELD WIRING

Field wiring must be sized for component amperes stamped on the serial plate. Actual ampere draw may be less than specified.

ELECTRICAL CONNECTIONS

ALWAYS CHECK THE SERIAL PLATE FOR COMPONENT AMPERES

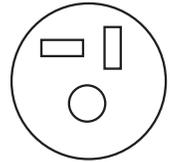
All wiring must be in compliance with NEC and local codes.

ELECTRICAL OUTLET:

Before the merchandiser is connected to any wall circuit, use a voltmeter to check that the outlet is at 100% of the rated voltage. The wall circuit must be dedicated for the merchandiser. Failure to do so voids the warranty. Do not use an extension cord. Never plug in more than one merchandiser per electrical circuit.

- Always use a dedicated circuit with the amperage stated on the unit.
- Plug into an outlet designed for the plug.
- Do not overload the circuit
- Do not use long or thin extension cords. Never use adapters.
- If in doubt, call an electrician.

This model has a factory-installed power cord attached at the electrical box.



NEMA 6-20P
Receptacle
ISMGG20A

REFRIGERATION (Self Contained Models)

This self contained model is equipped with its own condensing unit and control panel located beneath the display area. The correct type of refrigerant will be stamped on the serial plate. The refrigeration piping is leak tested. The unit is charged with refrigerant and shipped from the factory with all service valves open.

! WARNING

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

! WARNING

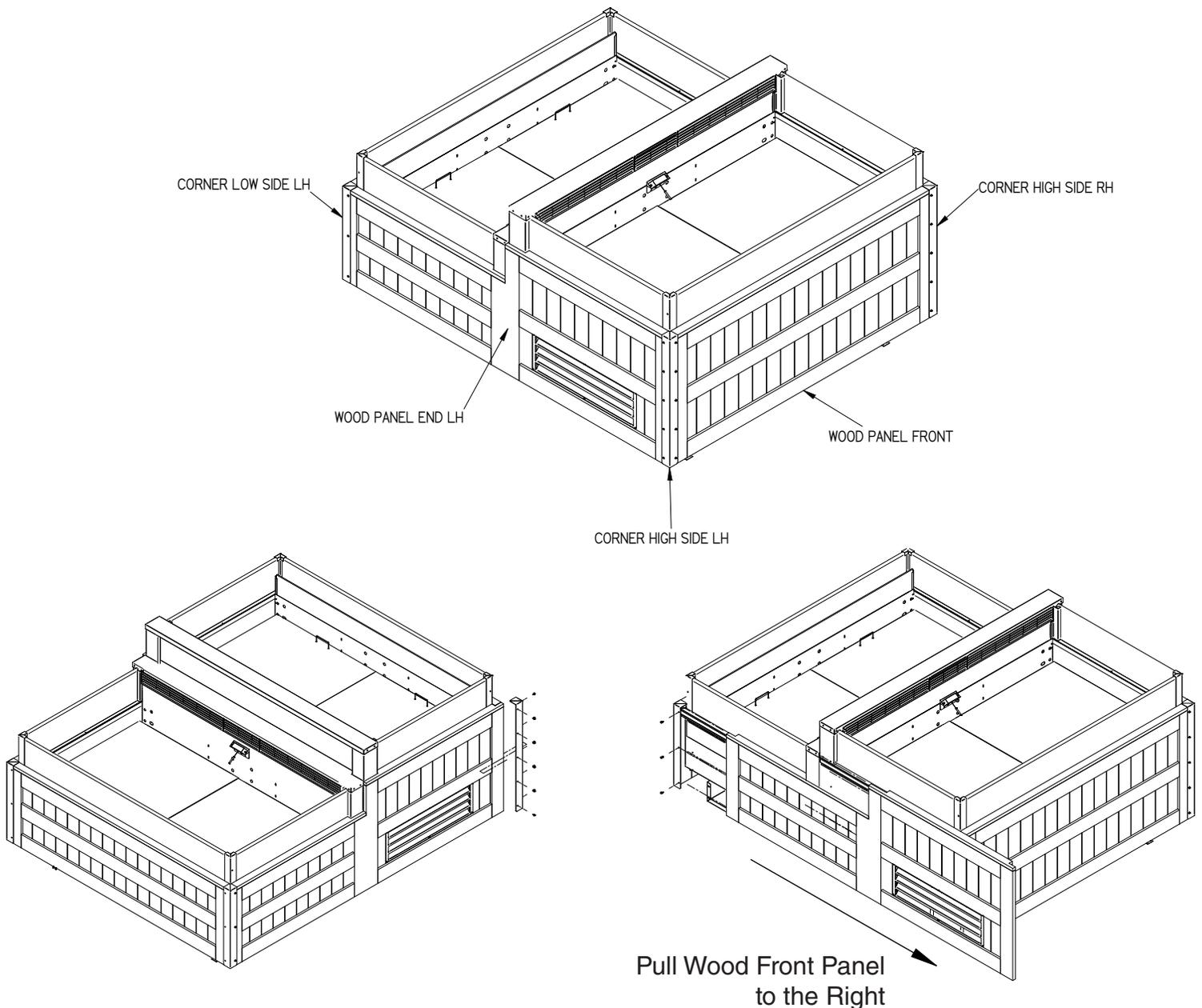
Refrigeration lines are under pressure. Refrigerant must be recovered before attempting any connection or repair.

CONDENSING UNIT ACCESS

To access the condensing unit and electrical box, it is necessary to remove the wood panel front and wood panel end (LH).

To do this:

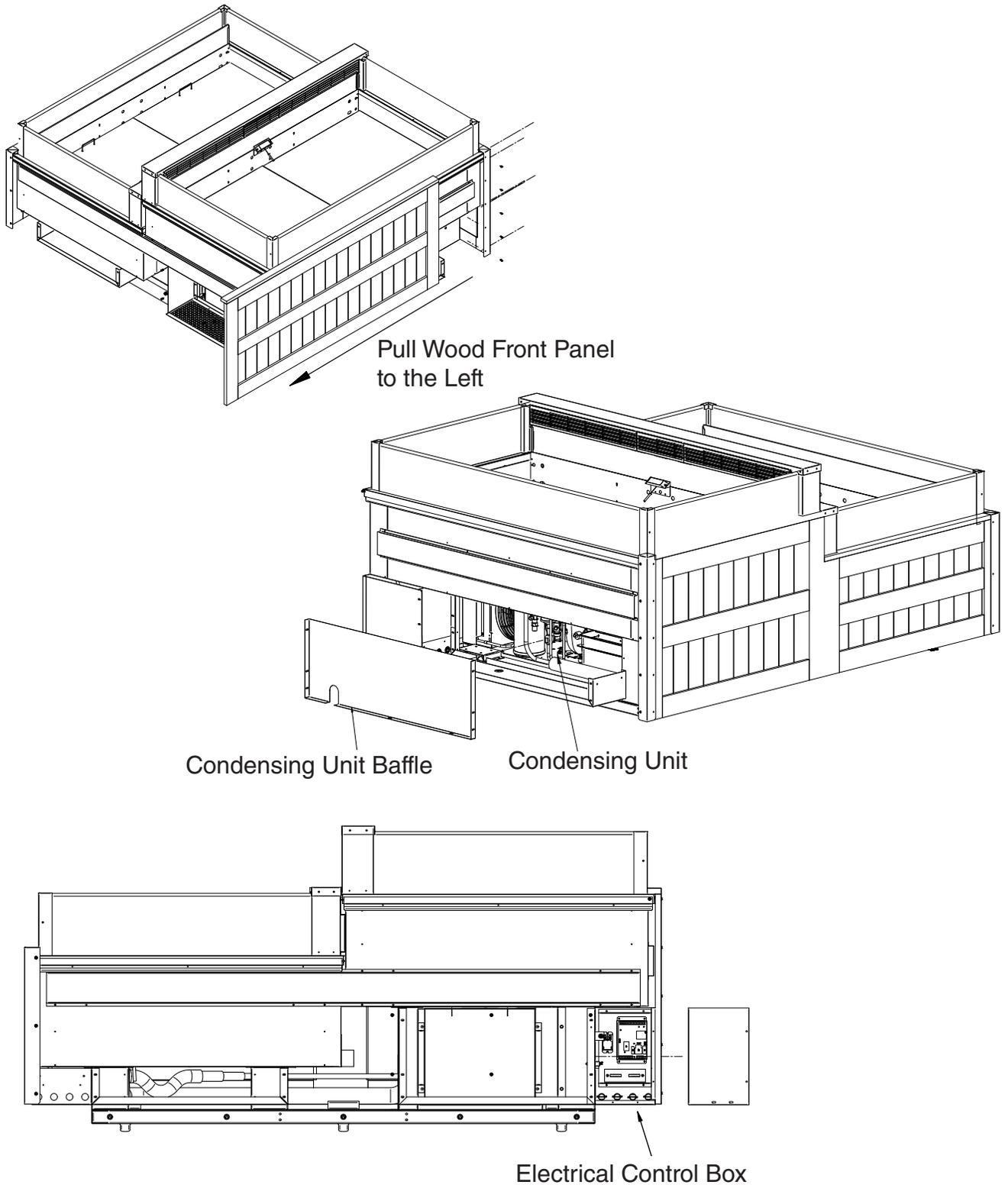
1. Using a screwdriver or cordless drill, remove all the screws from Corner High Side LH.
2. Remove screws from corner low side (LH), only the ones attached to wood panel end (LH).
3. Carefully pull the Wood Panel End LH to the right.



Remove screws from corner high side (RH), only the ones attached to wood panel front.

4. Carefully pull the wood panel front to the left.

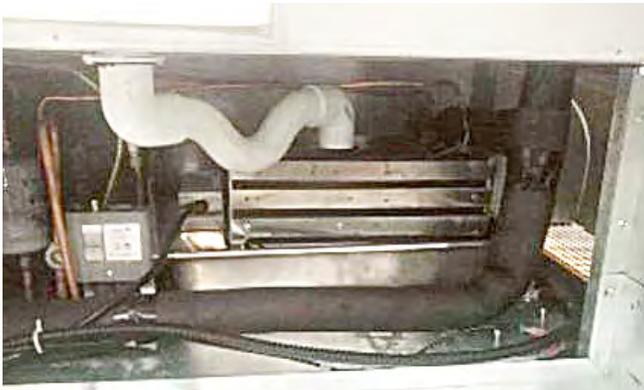
5. Remove screws on the condensing unit baffle. Remove the baffle to access the condensing unit.



WASTE OUTLET AND WATER SEAL

The condensate water outlet is located in the center of each case. The outlet has a factory installed, external water seal.

For self contained models, this water seal drains into the condensate evaporator pan located beneath the merchandiser.



NOTE: All lower base panels must be in place when the refrigerator is operating. If not, airflow from the condenser will be directed over the evaporation pan and defrost water in the pan may overflow.

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.

WARNING

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

CAUTION

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

START UP / OPERATION

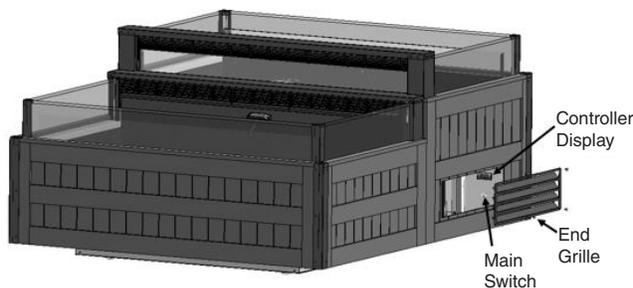
CONTROLLER OPERATION

The electronic controller is located in the cassette compartment. The controller comes factory set, and is ready for use. The front grille must be removed in order to access this control. When removing the grille for this operation or for condenser cleaning, care must be taken not to damage the display interface cable. It may be unplugged during this task.

1. Before inserting the power cord into a dedicated receptacle, complete the start-up sheet on page 1-7. Turn the power switch to the “off” position. The power switch is located just below the controller. Next, plug in the power cord and turn the power switch “on”. There is a 1-minute power-up delay.
 - a) The controller will illuminate
 - b) Interior lighting will illuminate
 - c) Evaporator fans will start

Controller Display / Main Switch Access

Use a screwdriver or cordless drill to remove the screws on the end grille. The controller display and main switch are on the right side.



2. The compressor cut-off is the setpoint and cut-in is the differential. The setpoint (cut-out) for the IMG20DA is 23°F. The differential (cut-in) is 20°F. A complete list of setpoints can be found on a separate document that shipped with the case. The document number is: P/N 3056058.
 - a. The setpoint is the adjustable pre-programmed temperature.
 - b. The differential is the non-adjustable pre-programmed temperature.
 - c. The control is designed to read and display a cabinet temperature not a product temperature.
3. The case is pre-programmed to achieve average shelf temperature of 38°F (recommended) for cut fruit and deli sandwiches. (Controller setpoint is 23°F). If it is needed to change the set point temperature, follow these steps:
 - a) To display the set point value, press “SET” to enter the “Machine status” Menu, then press “SET” again when the label is displayed.
 - b) The setpoint value appears on the display.
 - c) Change the setpoint value to the desired temperature.
 - d) Press “SET” again to select the change.
4. The average shelf temperature of 30°F is recommended for meat. (controller setpoint is 16.5°F).

TECHNICAL DATA

Classification:	electronic automatic control (not safety) device for incorporation
Mounting:	panel mounting
Type of action:	1.B
Pollution class:	2
Material class:	IIIa
Overvoltage category:	II
Nominal pulse voltage:	2500V
Temperature:	Use: -5 ... +55°C - Storage: -30 ... +85°C
Power supply:	SMPS 100-240Va ±10% 50/60 Hz
Power consumption:	5.5W max
Fire resistance category:	D
Software class:	A
RTC battery life:	In absence of external power, the clock battery will last 3 years.

INPUT CHARACTERISTICS

Measurement range:	NTC: -50.0°C ... +110°C; PTC: -55.0°C ... +150°C; PT1000: -60.0°C ... +150°C (on 3-digit display with +/- sign)
Accuracy:	±1.0° for temperatures below -30°C ±0.5° for temperatures between -30°C and +25°C ±1.0° for temperatures above +25°C
Resolution:	1 or 0.1°C
Buzzer:	NO
Analogue/Digital Inputs:	5 configurable NTC/PTC/PT1000/DI inputs 1 multi-function, voltage-free digital input (D.I.)

OUTPUT CHARACTERISTICS

Digital Outputs:	OUT1: 1 SPST relay: 2HP max 240V~ OUT2: 1 SPDT relay: 1HP max 250V~ OUT3: 1 SPDT relay: 8(4)A max 250V~ OUT4: 1 SPST relay: 8(4)A max 250V~
OC (Open Collector) Output:	OC: 1 multifunctional output: 12V _{DC} 20mA

MECHANICAL CHARACTERISTICS

Dimensions:	121x92 mm
Terminals:	faston and screw for wires with cross-section of 2.5mm ²
Connectors:	TTL for Unicard / Device Manager connection (via DMI)
Humidity:	Usage / Storage: 10...90% RH (non-condensing)

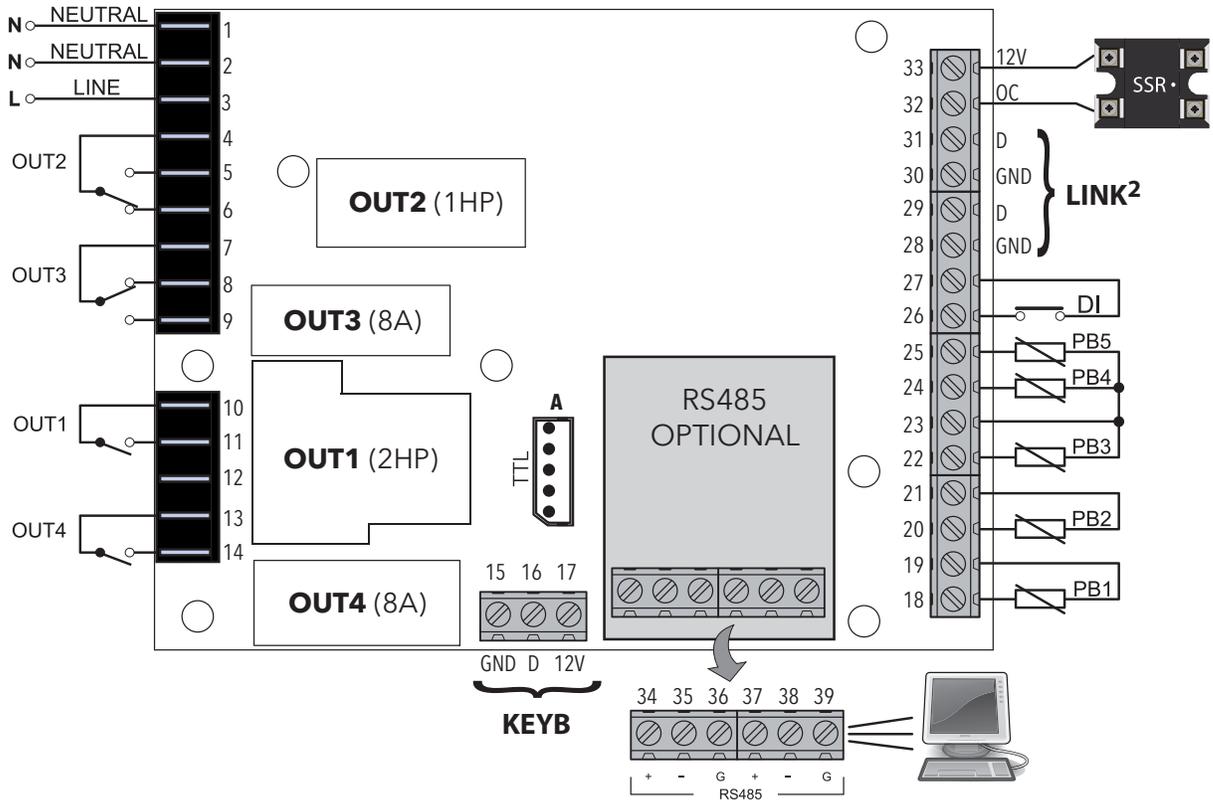
REGULATIONS

Electromagnetic compatibility:	The device complies with Directive 2004/108/EC
Safety:	The device complies with Directive 2006/95/EC
Food Safety:	The device complies with standard EN13485 as follows: <ul style="list-style-type: none"> • Suitable for storage. • Application: air. • Climate range A • measurement class 1 in the range from -25°C to 15°C (*) (* with Eliwell probes only)

NOTE: The technical specifications stated in this document regarding measurement (range, accuracy, resolution, etc.) refer to the instrument alone and not to any accessories provided, such as the probes. This means, for example, that the error introduced by the probe must be added to the error of the instrument.

CONNECTIONS

TERMINALS



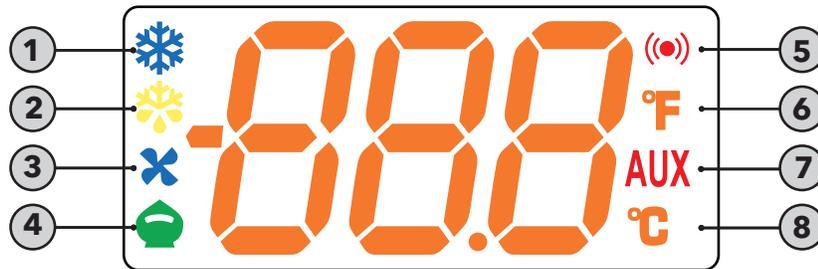
* **N.B.:** analogue inputs PB1...PB5 can also be configured as Digital Inputs DI.

TERMINALS		
1-2	NEUTRAL. These are power supply terminals.	15-16-17 Connection to KDEPlus or KDWPlus external keyboard or ECPlus echo module.
3	LINE. These are power supply terminals.	19-18 PB1 probe connection.
4	OUT2 Shared Terminal	21-20 PB2 probe connection.
5	N.O. OUT2	23-22 PB3 probe connection.
6	N.C. OUT2	23-24 PB4 probe connection.
7	OUT3 Shared Terminal	23-25 PB5 probe connection.
8	N.C. OUT3	27-26 Digital input (DI).
9	N.O. OUT3	28-29 LINK ² . Connection 1 - local area network.
10	OUT1 Shared Terminal	30-31 LINK ² . Connection 2 - local area network.
11	N.O. OUT1	32-33 Open Collector Output (OC).
12	Not Used	A TTL Unicard/DMI/Multi Function Key connection
13	OUT4 Shared Terminal	34-35-36 RS485. Connection 1 - Supervision Gateway.
14	N.O. OUT4	37-38-39 RS485. Connection 2 - Supervision Gateway.

LED

RTN400 family controllers will also function even if a keyboard has not been connected.

With **KDEPlus** or **KDWPlus** keyboards (which are the same and guarantee the same functions), the display will be as follows:



Meaning of LEDs:

No	Icon	LED	Operation	Meaning
1		Compressor	Permanently on	compressor on
			Blinking	Delay, protection or start-up blocked
			OFF	otherwise
2		Defrost	Permanently on	Defrost active
			Blinking	Activated manually or from Digital Input
			OFF	otherwise
3		Fans	Permanently on	Fans active
			OFF	otherwise
4		Reduced SET / Economy	Permanently on	Energy Saving active
			Blinking	Reduced setpoint active
			OFF	otherwise
5		Alarm	Permanently on	alarm active
			Blinking	Alarm acknowledged
			OFF	otherwise
6		°F readout	Permanently on	°F setting (dro = 1)
			OFF	otherwise
7		AUX	Permanently on	Aux output active and/or light on
			Blinking	Deep cooling on
			OFF	otherwise
8		°C readout	Permanently on	°C setting (dro = 0)
			OFF	otherwise

N.B.: When the instrument is powered on it performs a lamp test, during which time the display and LEDs will flash for several seconds to check that they all function correctly.

KDEPLUS BUTTONS

The **KDEPlus** keyboard has 4 keys, as shown in the illustration:



Each key has a different function depending on whether it is:

- Pressed and released
- Pressed for at least 5 seconds
- Pressed and held at start-up
- Pressed in combination with another key.

KEYS

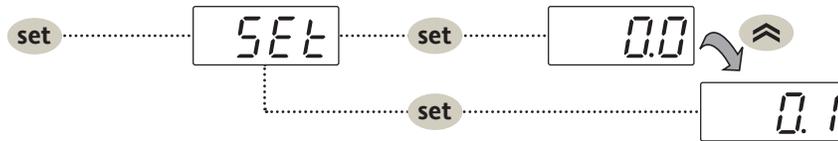
The following table summarizes the function of each key:

No	Key	Action		
		Pressed and released	Press for at least 5 secs	Start-up
1		<ul style="list-style-type: none"> • Scrolls through menu items • Decreases values 	Activates the Manual Defrost function (from outside menus).	---
2		<ul style="list-style-type: none"> • Scrolls through menu items • Decreases values 	Function can be configured by the user (from outside menus). (see parameter H32)	---
3		<ul style="list-style-type: none"> • Returns to the previous menu level • Confirms parameter value 	Activates the Stand-by function (from outside menus).	---
4		<ul style="list-style-type: none"> • Displays any alarms (if active) • Opens Machine Status menu • Confirms commands 	Opens the Programming Menu (User and Installer parameters)	When pressed during start-up it enables the user to select the application to be loaded.

SETPOINT: SETTING AND EDIT LOCK

To display the Setpoint value, press the **set** key to enter the "Machine Status" menu, then press the **set** key again when the "SEt" label is displayed.

The Setpoint value appears on the display. To change the Setpoint value, press the **UP** and **DOWN** keys within 15 seconds. Press **set** to confirm the modification.



It is possible to disable the keypad on this device.

The keypad can be locked by programming the "LOC" parameter appropriately.

With the keypad locked, you can still access the "Machine Status" menu by pressing **set** to display the Setpoint, but you cannot edit it. To disable the keypad lock, repeat the locking procedure.

DISPLAY PROBES VALUE

To display the value read by probes connected to the device, press the **set** key and enter the "Machine Status" menu, then press the key again when one of the probe-related labels "Pb1...Pb5" press the **set** key again. The value measured by the associated probe will appear on the display.

NOTE: The displayed value is read-only and cannot be modified.

KDEPLUS BUTTONS

The **KDEPlus** keyboard has 4 keys, as shown in the illustration:



KEY-ACTIVATED FUNCTIONS

All models have the **UP** key set to enable the "Manual Defrost" function.

The DOWN and ESC keys can also be set to activate any other function required by the user.

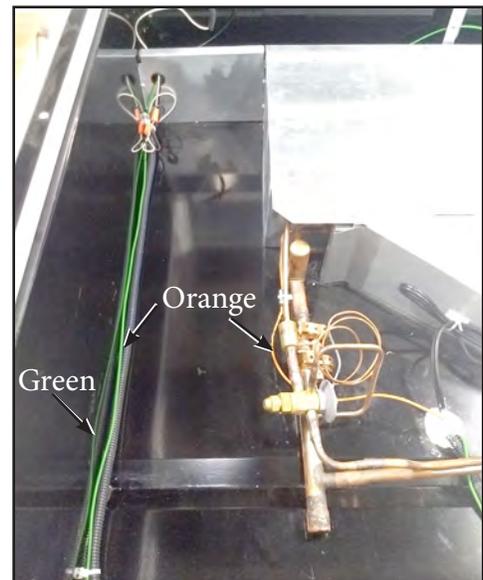
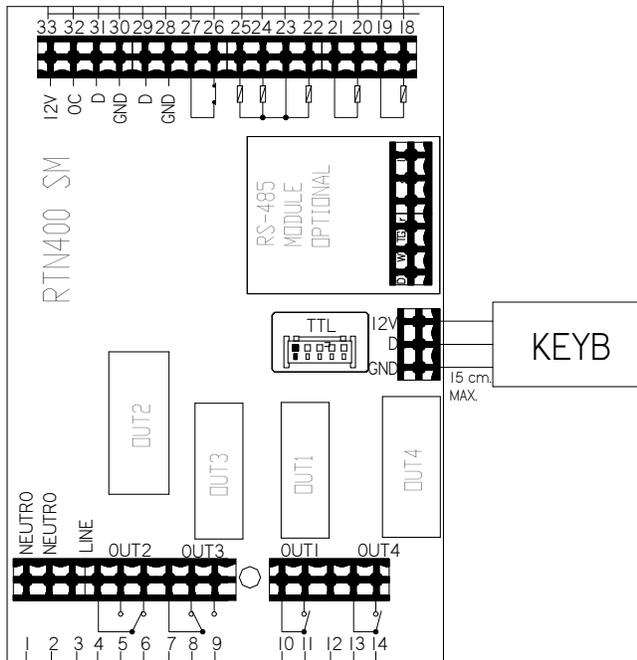
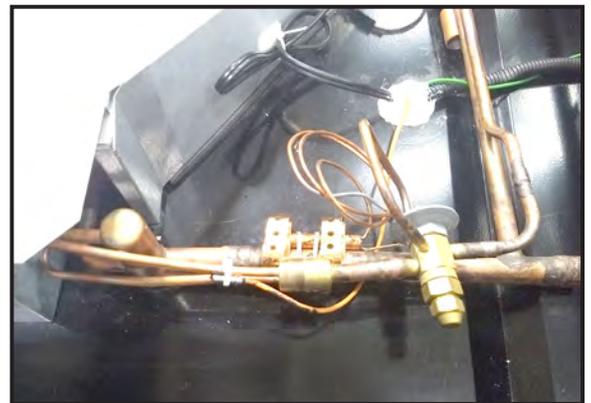
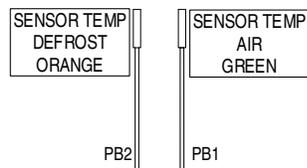
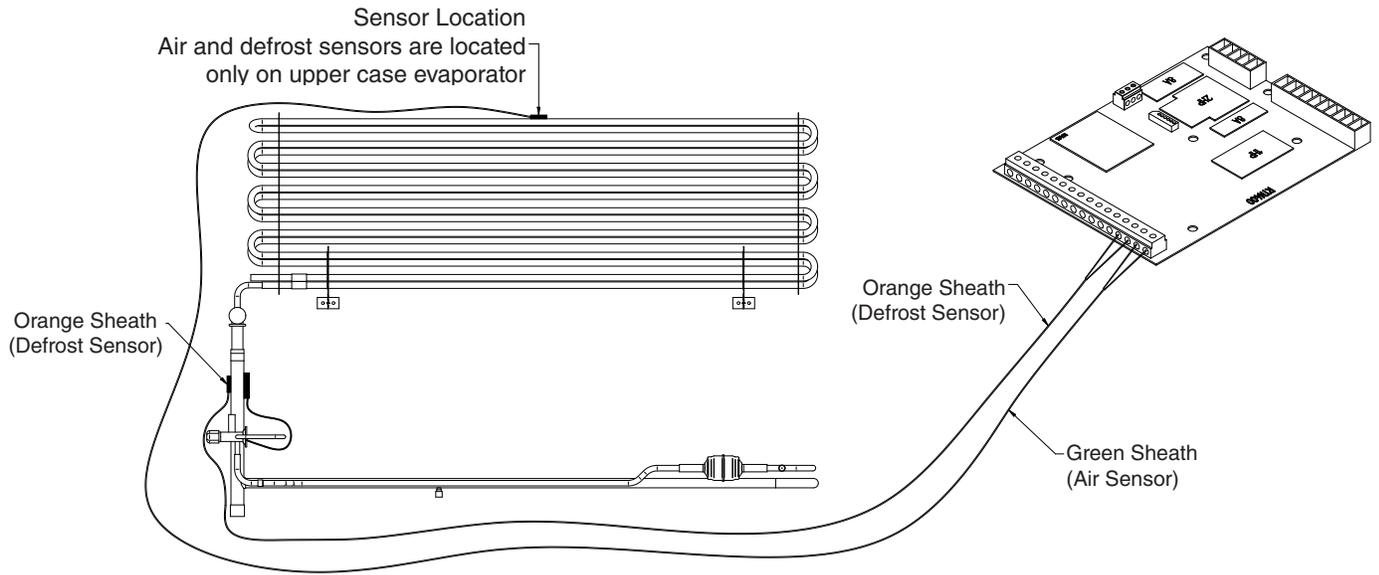
The parameters for configuring the two keys are:

- **H11** = DOWN key configuration
- **H33** = ESC key configuration

The values that can be set apply to both keys and the functions that can be activated are:

H32/H33 value	Function to enable
0	disabled
1	defrost
2	reduced set
3	Light
4	Energy saving
5	AUX
6	Stand-by
7	Deep cooling cycle
8	Start/end defrost

SENSOR LOCATION



CONTROLS and ADJUSTMENTS						
Refrigeration Controls			Defrost Controls			
Model	Product Application	Discharge Air Temperature	Defrost Frequency (per day)	Type of Defrost	Temp. Termination	Failsafe Time (Minutes)
ISMGG2DA Self Contained	Medium Temp. (product application)	23° F	2	Off Time	48° F	50

1. The Controller controls refrigeration temperature. This is factory installed in the control panel. Adjust this control to maintain the discharge air temperature shown. Measure discharge air temperatures at the center of the discharge louver.

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

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

2. The case is pre-programmed to achieve average shelf temperature of 38°F (recommended) for cut fruit and deli sandwiches.

(Controller setpoint is 23°F). If it is needed to change the set point temperature, follow these steps:

- To display the set point value, press “SET” to enter the “Machine status” Menu, then press “SET” again when the label is displayed.
- The setpoint value appears on the display.
- Change the setpoint value to the desired temperature.
- Press “SET” again to select the change.

3. The average shelf temperature of 30°F is recommended for meat. (controller setpoint is 16.5°F).

START UP

Follow the start up procedures as detailed in Section 3 of this manual. Each self contained merchandiser has its own evaporator coil and a pre-set thermostatic expansion valve (TEV). The TEV has been factory set at design conditions to provide the recommended performance.

TEV Adjustment

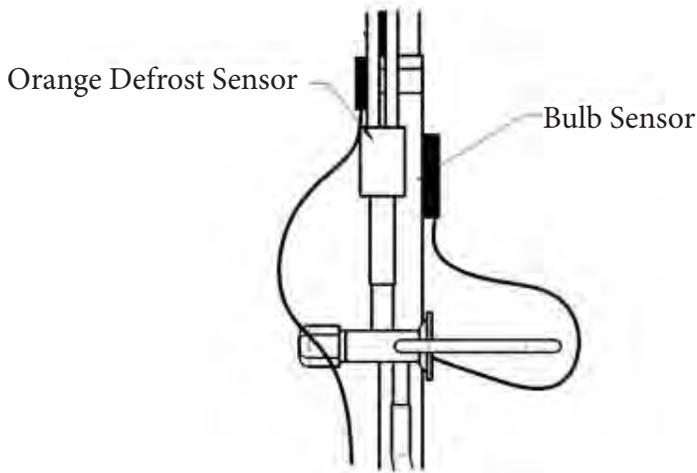
Expansion valves may be adjusted to fully feed the evaporator. Before attempting to adjust valves, make sure the evaporator is clear or only lightly covered with frost, and the merchandiser is within 10°F of its expected operating temperature.

Adjust the valve as Follows:

- Attach a probe to the suction line near the expansion valve bulb.
- Obtain a pressure reading from the factory installed Schraeder valve. Convert the pressure reading to a saturated temperature for the refrigerant.

Temperature (b) minus Temperature (a) is the superheat. The valve should be adjusted so that the greatest difference between the two temperatures is 3°F to 5° F.

Make adjustments of no more than $\frac{1}{2}$ turn of the valve stem at a time and wait for at least 15 minutes before rechecking the probe temperature and making further adjustments.



LOAD LIMITS

Each merchandiser has a load limit decal. Shelf life of perishables will be short if load limit is violated.

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

DO NOT BLOCK AIR LOUVERS.



STOCKING

Product should NOT be placed inside the merchandisers until merchandisers are at proper operating temperature.

Allow merchandiser 24 hours to operate before loading product.

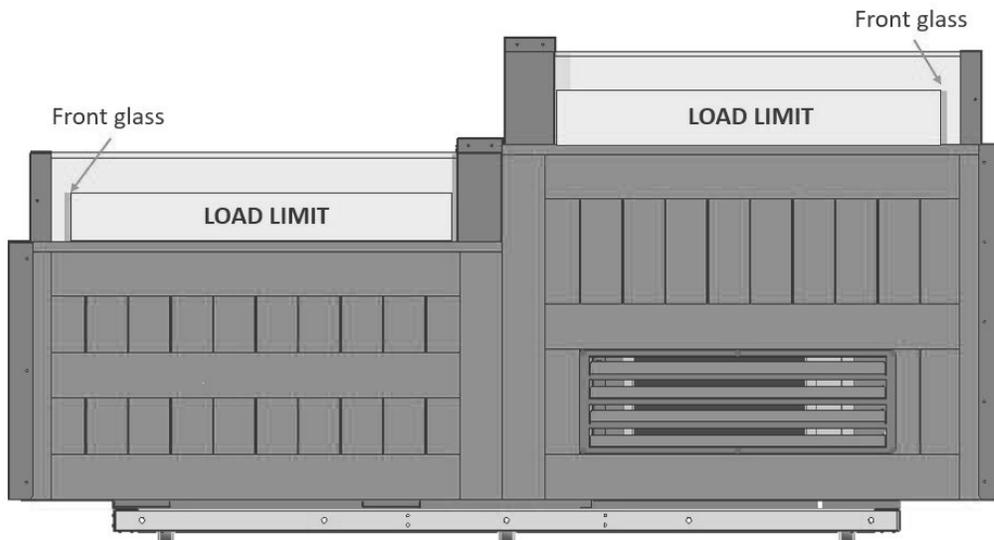
Proper rotation of product during stocking is necessary to prevent product loss. Always bring the oldest product to the top and set the newest to the bottom.

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.

Do not allow product to be placed outside of the designated load limits in the illustration.

⚠ WARNING

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



3-10 STARTUP / OPERATION

NOTES:

MAINTENANCE

CARE AND CLEANING

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

Exterior Surfaces

The exterior surfaces must be cleaned with a mild detergent and warm water to protect and maintain their attractive finish. **NEVER USE ABRASIVE 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. Self contained models empty into a limited capacity evaporation pan, which will overflow if excess water is used in cleaning.

Do NOT Use:

- Abrasive cleansers and scouring pads, as these will mar the finish.
- Coarse paper towels on coated glass.
- Ammonia-based cleaners on acrylic parts.
- Solvent, oil or acidic based cleaners on any interior surfaces.
- Do not use high pressure water hoses.

Do:

- Remove the product and all loose debris to avoid clogging the waste outlet.
- Store product in a refrigerated area such as a cooler. Remove only as much product as can be taken to the cooler in a timely manner.
- **Disconnect electrical power before cleaning.**
- Thoroughly clean all surfaces with soap and hot water. **DO NOT USE STEAM OR HIGH WATER PRESSURE HOSES TO WASH THE INTERIOR. THESE WILL DESTROY THE MERCHANDISERS' SEALING CAUSING LEAKS AND POOR PERFORMANCE.**
- Lift hinged 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.
- Do NOT flood merchandiser with water. **NEVER INTRODUCE WATER FASTER THAN THE WASTE OUTLET CAN REMOVE IT.**

SELF CONTAINED MODELS EMPTY INTO AN EVAPORATION PAN THAT WILL OVERFLOW IF TOO MUCH WATER IS INTRODUCED DURING CLEANING.

- Allow merchandisers to dry before resuming operation.
- After cleaning is completed, turn on power to the merchandiser.

 **WARNING**

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

 **WARNING**

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

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, to warm before applying hot water.

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.

CLEANING UNDER FAN PLENUM

To facilitate cleaning, the fan plenum is hinged.

After cleaning be sure the plenum is properly lowered into position OR PRODUCT LOSS WILL RESULT due to improper refrigeration.

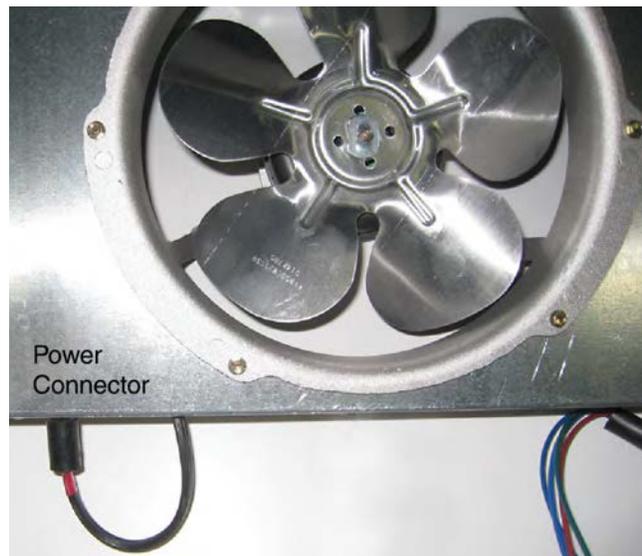
WARNING

— 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.

WARNING

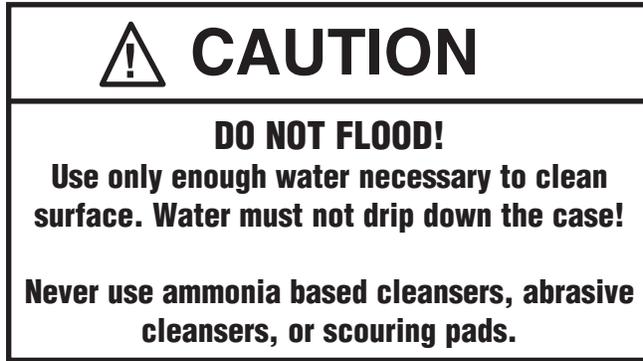
SHUT FANS OFF DURING CLEANING PROCESS.



CLEANING DISCHARGE AIR LOUVERS

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

1. Using a flat object such as a screw driver, compress the honeycomb and remove it from its retainer.
2. Clean and dry the air louvers.
3. After cleaning, replace in reverse order. Damaged louvers must be replaced.



CLEANING STAINLESS STEEL SURFACES

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

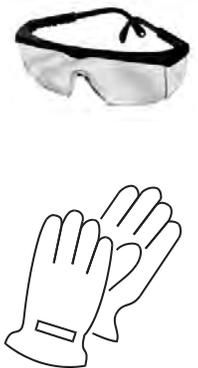
Use alkaline chlorinated or non-chlorine containing cleaners such as window cleaners and mild detergents. Do not use cleaners containing salts as this may cause pitting and rusting of the stainless steel finish. Do not use bleach.

CLEANING COILS

Condenser coils should be cleaned at least once per month. Additional cleaning may be needed depending on the operational environment. A dirty condenser blocks normal airflow through the coils.

Airflow blockage increases energy consumption and reduces the merchandiser's ability to maintain operating temperature.

To clean the coils, use a vacuum cleaner with a wand attachment and a soft (non-metallic) brush to remove dirt and debris. Do not bend coil fins. Always wear gloves and protective eye wear when cleaning near sharp coil fins and dust particles.



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 adjustments as necessary. To maintain product integrity, move all product to a cooler until the unit has returned to normal operating temperatures.



CAUTION

Evaporation Pan is Hot!

and poses risk of bodily injury – Always Wear gloves and protective eye wear when servicing. Turn off evaporation pan heater, and allow pan to cool.

CLEANING EVAPORATION PAN

(SELF CONTAINED ONLY)

The condensate water outlet for self contained models empties into a limited capacity evaporation pan.

Debris or dirt accumulation inside the condensate evaporation pan or on the heater coil will reduce the pan's evaporation capacity and cause premature heater failure. The evaporation pan waste water will overflow and spill onto the floor if the heater is not properly operating.

Remove accumulated debris from the evaporation pan. Wipe down heater coil with a cloth and warm water. Be sure to remove any dirt, debris or liquids from the heater coil.

Water introduced during cleaning will cause the evaporation pan to overflow.



PRECAUTION CLEANING PRECAUTIONS

When Cleaning:

- Do not use high pressure water hoses
- Do not introduce water faster than waste outlet can drain
- NEVER INTRODUCE WATER ON SELF CONTAINED UNIT WITH AN EVAPORATION PAN
- NEVER USE A CLEANING OR SANITIZING SOLUTION THAT HAS OIL BASE (these will dissolve the butyl sealants) or an AMMONIA BASE (this will corrode the copper components of the merchandiser)
- TO PRESERVE THE ATTRACTIVE FINISH:
 - Use a water and a mild detergent for the exterior only
 - Do NOT use a chlorinated cleaner on any surface
 - Do NOT use abrasives or steel wool scouring pads (these will mar the finish)

Self-Contained Refrigeration Equipment Maintenance Check List

***** Warranty does not cover issues caused by improper installation or lack of basic preventative maintenance. *****	
Record starting date	
Store Name and Number	
Store Address	
Unit Model Number	
Unit Serial Number	
Contractor/Technician	

	Technician		Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
	Quarterly	Semi-Annually								
PM activity-For visual inspection items, denote "ok or complete" in the column to right when PM has been performed. For measured data requested, record data requested in the appropriate column to the right)										
Check in with store manager, record any complaints or issues they have with unit.	X									
Look unit over for any damage, vibrations or abnormal noise.	X									
Verify unit is level side to side and front to rear.	X									
Confirm refrigerant lines properly are secured and not touching or rubbing other lines, wires or frame work.	X									
Verify fan motors and motor mounts are tight.	X									
Confirm fan blade/s are tight and not rubbing or hitting.	X									
Make sure all electrical connections, factory and field, are tight.	X									
Verify electrical connections at lamps are they secure and dry.	X									
Check for and replace any frayed or chaffed wiring.	X									
Check all electrical wiring make sure it is secured and not on any sharp edges or hot lines.	X									
Check for air disturbances external to the unit. Heat and air registers, fans, and doors etc.	X									
Check for water leaks.	X									
Clean evaporator coil/s and fan blade/s. Do not use an acid base cleaner. Rinse off any cleaner residue.		X								
Clean discharge air honeycombs or grilles. Do not use an acid base cleaner. Rinse off any cleaner residue.		X								
Clean condenser coil/s and fan blade/s. Do not use an acid base Cleaner. Rinse off any cleaner residue.		X								
Clean condensate drain pan and drain line.		X								
Verify condensate drain lines are clear and functioning.		X								
Record voltage reading at unit with unit off?		X								
Verify condenser and evaporator fans are working.	X									
Record condenser air inlet temperature	X									
Record condenser air outlet temperature	X									
Is condenser air inlet or air exhaust restricted or recirculating?	X									
Verify there are no visual oil or refrigerant leaks.	X									
Record voltage reading with unit running.		X								
Record compressor amp draw.		X								
Record defrost heater voltage and amp draw.		X								
Record anti-sweat heater voltage and amp draw.		X								
Record case product temperature.	X									
Record unit discharge air temperature.	X									
Record unit return air temperature.	X									
Record ambient conditions around unit (wet Bulb temperature and dry bulb temperature).	X									
Check product loading, do not load beyond the units load limits.	X									
Verify clearances on sides/back of unit.	X									
Check unit controller for proper operation. See controller or 1/0 Manual for proper controller operation.		X								
Confirm door switches function.	X									
Verify unit doors and lids work and are sealed correctly.	X									
Verify that all the panels, shields and covers are in place.	X									

Technician Notes:

4-6 MAINTENANCE

NOTES:

SERVICE

REPLACING FAN MOTORS AND BLADES

Should it ever be necessary to service or replace the fan motors or blades be certain that the fan blades are reinstalled correctly. **THE BLADES MUST BE INSTALLED WITH RAISED EMBOSSED (PART NUMBER ON PLASTIC BLADES) POSITIONED AS INDICATED ON THE PARTS LIST.**

For access to these fans:

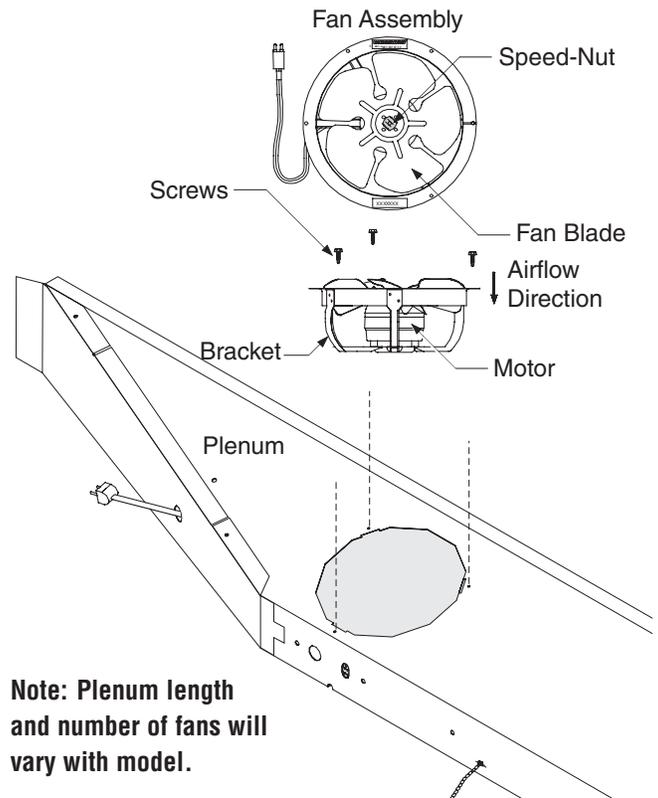
1. Remove product and place in a refrigerated area. Turn off power to the merchandiser.
2. Remove bottom display pans.
3. **Disconnect fan from wiring harness.**
4. Remove fan blade.
5. Lift fan plenum and remove screws holding bottom of motor to fan basket.
6. Replace fan motor and blade.
7. Lower fan plenum.
8. Reconnect fan to wiring harness.
9. Turn on power.
10. Verify that motor is working and blade is turning in the correct direction.

! 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.

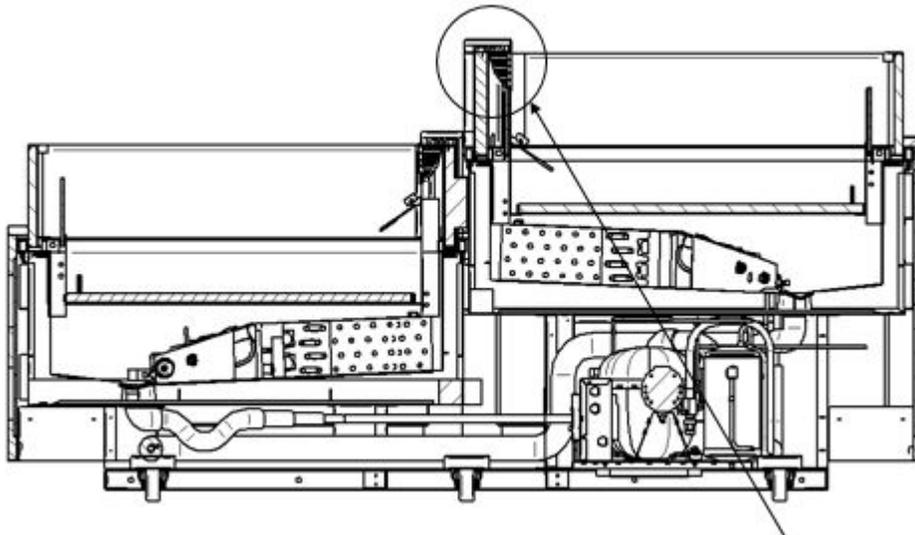
11. Close air gaps under fan plenum. Warmer air moving into refrigerated air reduces effective cooling. If the plenum does not rest against the case bottom without gaps, apply foam tape to the bottom of the fan plenum to reduce improper air movement. Use silicone sealant to close other gaps.
12. Reinstall display pans. Bring merchandiser to operating temperature before restocking.



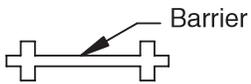
! WARNING

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

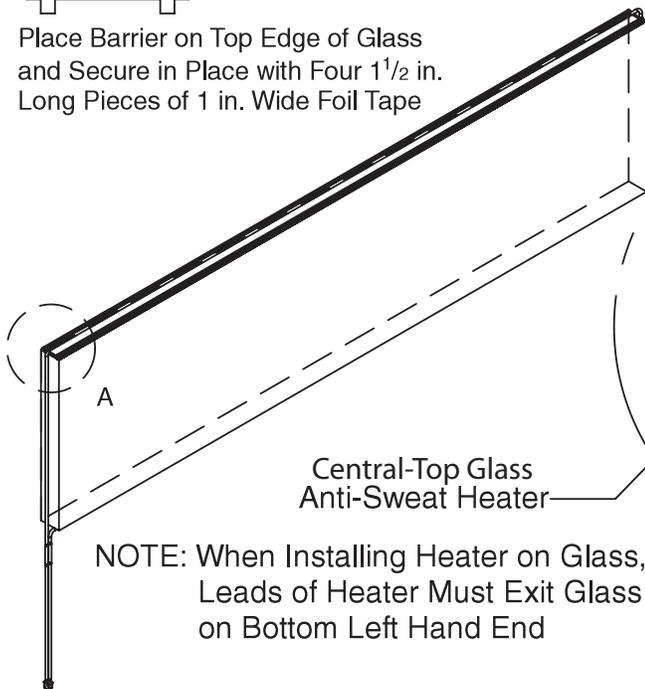
REPLACING ISMGG2DA Anti-Sweat Heater



Assembly Central - Top Glass and Anti-Sweat Heater

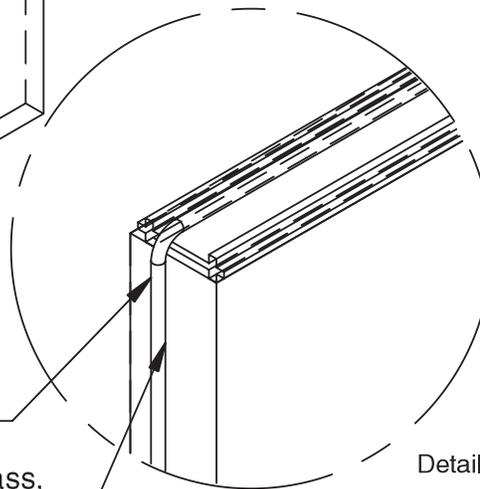


Barrier
Place Barrier on Top Edge of Glass and Secure in Place with Four 1 1/2 in. Long Pieces of 1 in. Wide Foil Tape



Central-Top Glass
Anti-Sweat Heater

NOTE: When Installing Heater on Glass, Leads of Heater Must Exit Glass on Bottom Left Hand End



Detail A

Install Heater with 1 in. Foil Tape 88 in.

Replacement Parts list

Model**Standard Parts**

ISMGG2DA

Description	Part Number	
Telescopic Wire Display Shelf (Black)	0520980	X
Drain Cover	0462289	X
Thermometer (solar)	05S521	X
Flue Glass (Interior)	29S861	X
Central-Top Glass	29S859	X
End Plexiglass	3044590	X
Front & Back Plexiglass	3044579	X
Plastic Discharge Louver (Black)	0472601	X
Wood Panel Front Upper Case (Zanzibar)	3047801	X
Wood Panel Front Lower Case (Zanzibar)	3047802	X
Wood Panel End RH(Zanzibar)	3055945	X
Wood Panel End LH Louver (Zanzibar)	3055946	X

Refrigeration

Condensing Unit FJAF-0100-CAV-020	1H35476500	X
Sight Glass	225010075	X
High Pressure Switch	E314467	X
Tray Assy Ultra Low	3047266	X
Evaporator Coil Assy (TEV,Distributor,Drier,Ht X'chr.)	0514787	X
Evaporator Coil	0500343	X
Distributor	0468538	X
Drier (C-03E124)	0501739	X
TXV (Sporlan FBSE-1/4C)	0514214	X
Evaporator Fan Motor Assy (230V,4W,7" dia) Motor ,Blade & Basket	0478746	X

Heaters & Harnesses

Anit-Sweat Heater Discharge Air 230V,2.8w, 123"	0514216	X
Fan Harness	19S750	X
Hi-Humidity Condensate Pan (100W,230V)	0538248	X
Main Harness	3048150	X
Electrical Box Harness	3043415	X

Sheel Metal Replacement Parts Painted

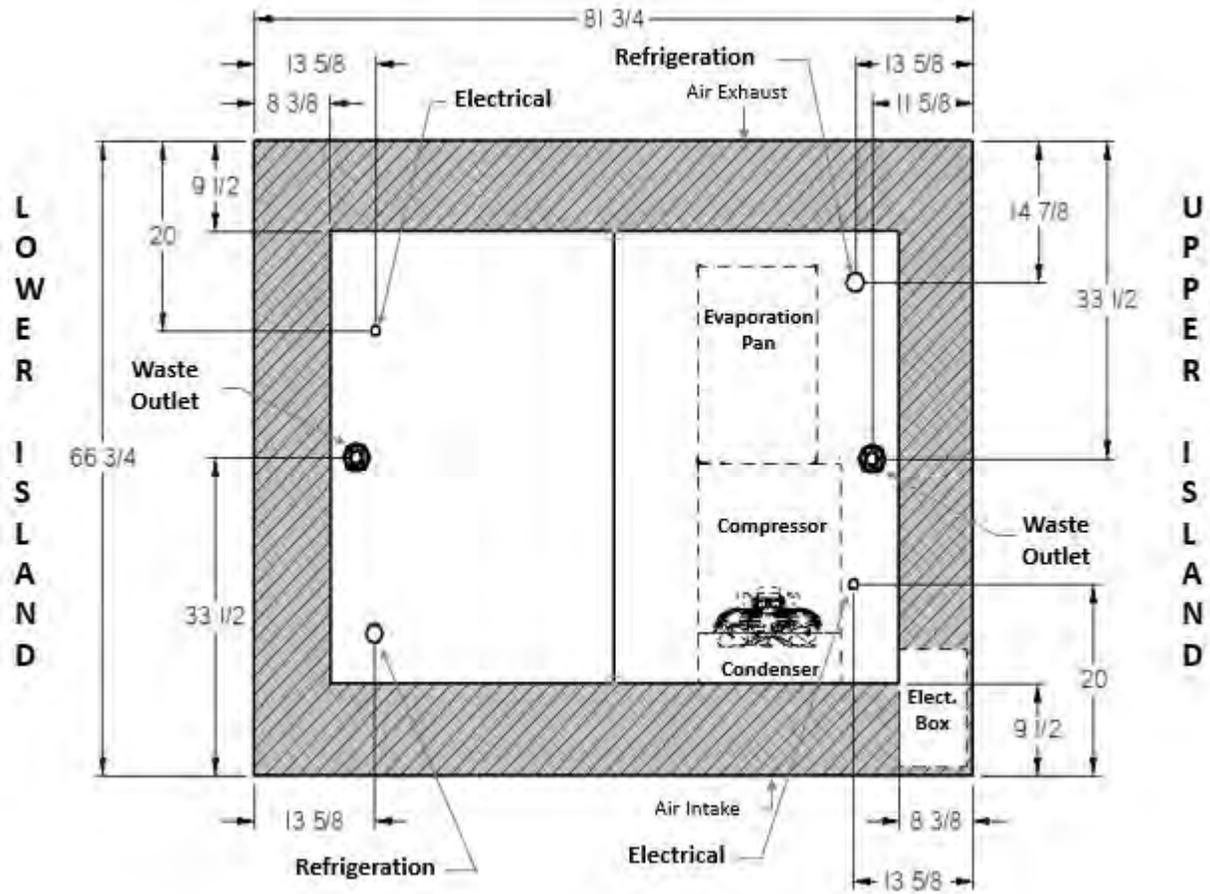
Corner for Wood, High Side	3055921	X
Corner for Wood, Low Side	3055924	X
Cover Top High Side	3047409	X
End Cover High Side	3047392	X
Cover Top Low Side	3047408	X
End Cover Low Side	3047390	X
End Grill (Side Louver)	3055925	X
Display Pan	140420	X
Bracket Thermometer	0531402	X
Corner for Plexiglass RH	3056544	X
Corner for Plexiglass LH	3056545	X
Support Int Corner for Plexiglass	3047463	X
Return Air Grill	3056546	X

All these part numbers below are painted assemblies (standard color is Black)

Controller / Electrical Parts

Sensor NTC 4 mts Green	3023554	X
Sensor NTC 4 mts Orange	3031571	X
Control Eliwell RTN400	3023537	X
Control Display KDE	3023552	X
Display cable 5 mts	3023553	X
Compressor Relay (220V)	1804241	X
Terminal Board	03S226	X
Power Switch	03S422	X
Power Cord (230v/20A)	1804385	X

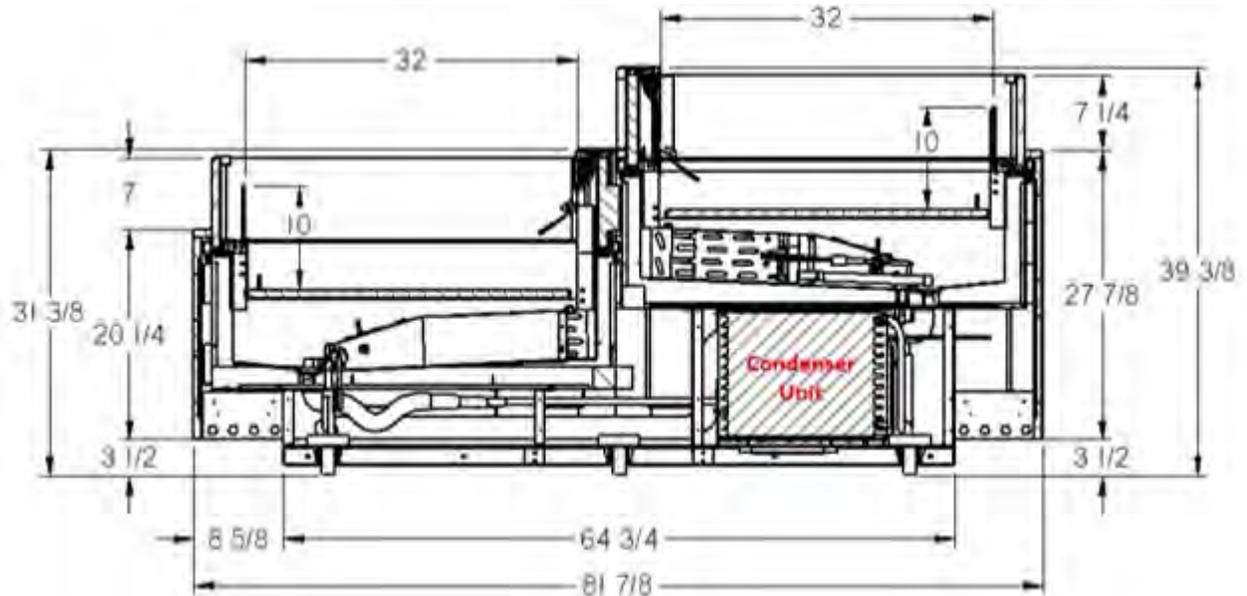
ISMGG2DA



ISMGG2DA Plan View
 General Dimensions
 Waste, Refrigeration & Electrical Outlets

Dimensions shown as inches and (mm).

ISMGG2DA



REFRIGERATION DATA

ISMGG2DA

Condensing Unit

Capacity 4000
(Btu/hr at std. rating conditions)

DEFROST DATA

ISMGG2DA

Frequency (hr) 12

OFFTIME

Failsafe (minutes) 50

Defrost Termination

Temperature °F 48

PHYSICAL DATA

Refrigerant Charge

84.2 oz 2.38 kg

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

Electrical Data

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

ISMGG2DA

	Quantity	Volts	Amperes	Watts
Evaporator Fans	2	230	0.06	4
Condensate Pan	1	208	4.2	1000

ISMGG2DA

Condensing Unit (208/230V, 1Ph, 60Hz) Standard

Minimum Circuit Ampacity	12.4
Compressor LRA	43
Compressor RLA	9

Product Data

ISMGG2DA

AHRI Total Display Area ¹ (Sq Ft/Case) 35.38 ft² (3.286 m²)

Computed using AHRI 1200 standard methodology:
Total Display Area, ft² [m²] / Unit of Length, ft [m]

Model	Volts	Hz / Ph	Refrigerant Type	Run Amps	Nema Plug	Fuse Amps
ISMGG20DA	208/230	60/1	R404a	14.5	6-20P	20

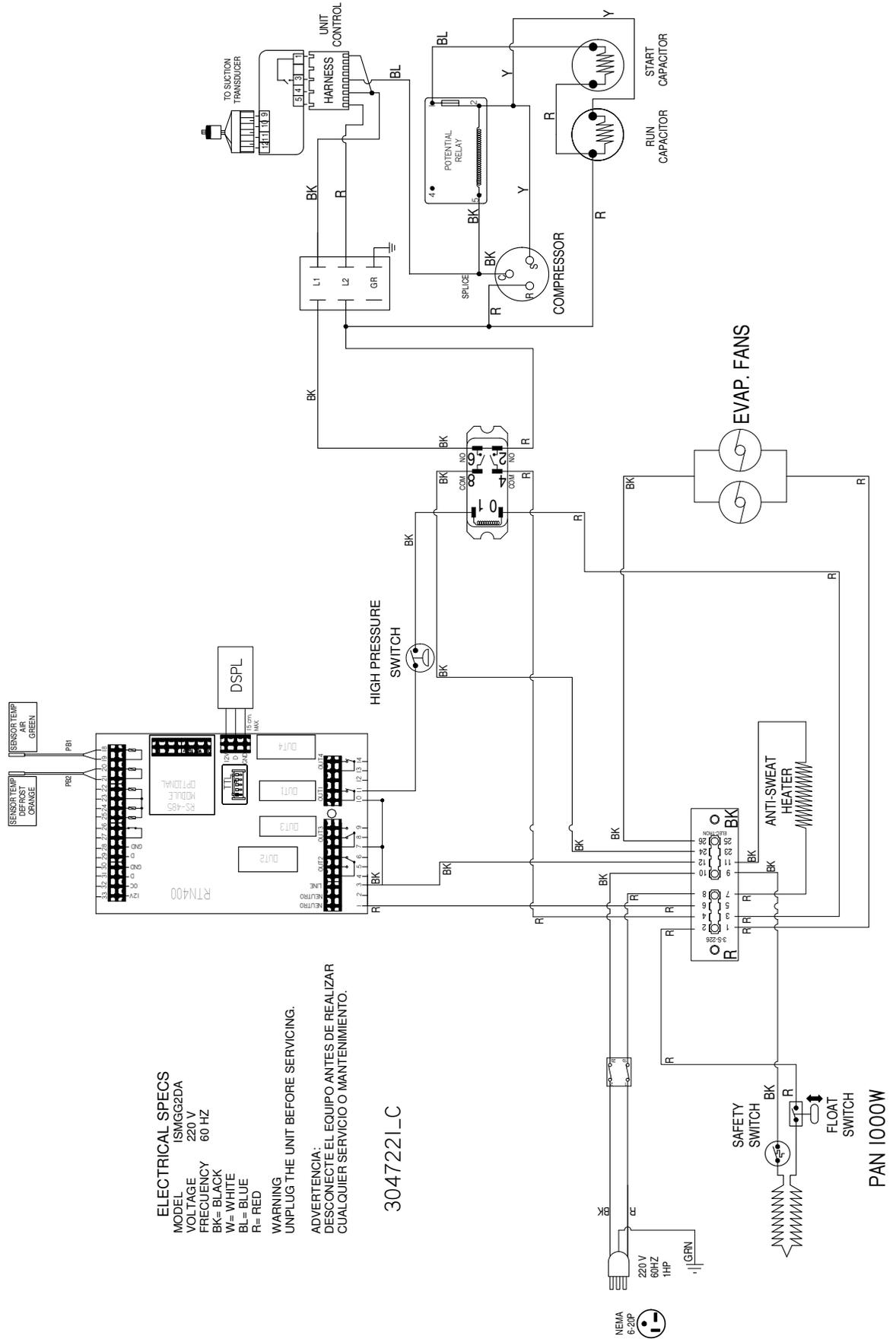
ESTIMATED SHIPPING WEIGHT ²

Case

ISMGG2DA
(Self Contained)
1168 lb (530 kg)

² Actual weights will vary according to optional kits included.

ISMGG2DA — Self Contained

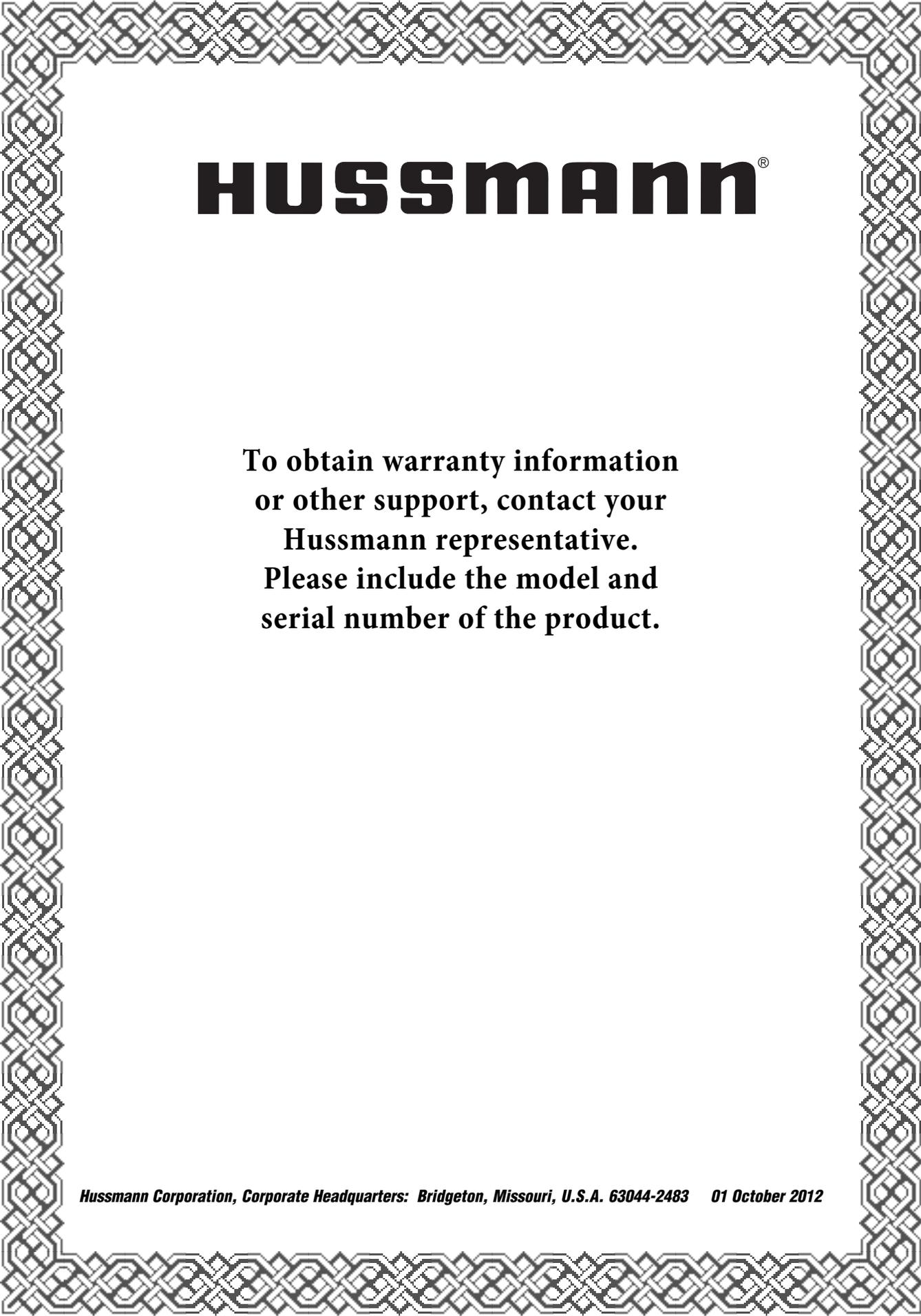


ELECTRICAL SPECS
 MODEL ISMGG2DA
 VOLTAGE 220 V
 FREQUENCY 60 HZ
 BK= BLACK
 W= WHITE
 BL= BLUE
 R= RED

WARNING
 UNPLUG THE UNIT BEFORE SERVICING.

ADVERTENCIA:
 DESCONECTE EL EQUIPO ANTES DE REALIZAR CUALQUIER SERVICIO O MANTENIMIENTO.

3047221_C



HUSSMANN[®]

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

Hussmann Corporation, Corporate Headquarters: Bridgeton, Missouri, U.S.A. 63044-2483 01 October 2012