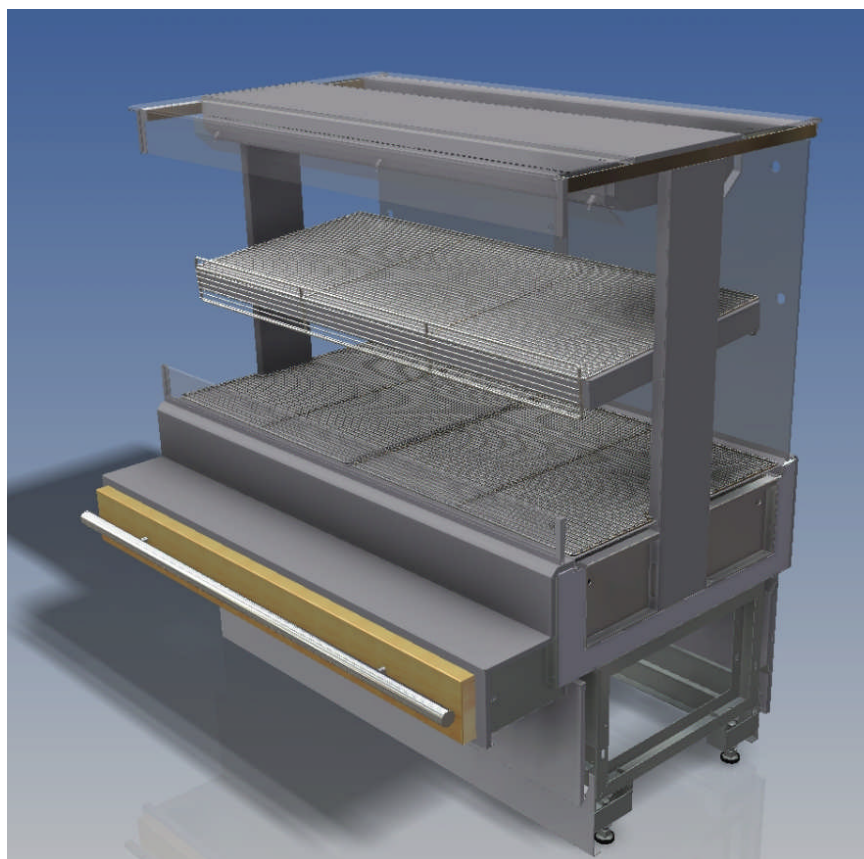




SPECIALTY CASE FACILITY



REM3 SEMI VERTICAL HOT FOOD DISPLAY CABINETS

INSTALLATION AND MAINTENANCE INSTRUCTIONS

Manual 145

August 2015

Rev B

HUSSMANN
Specialty

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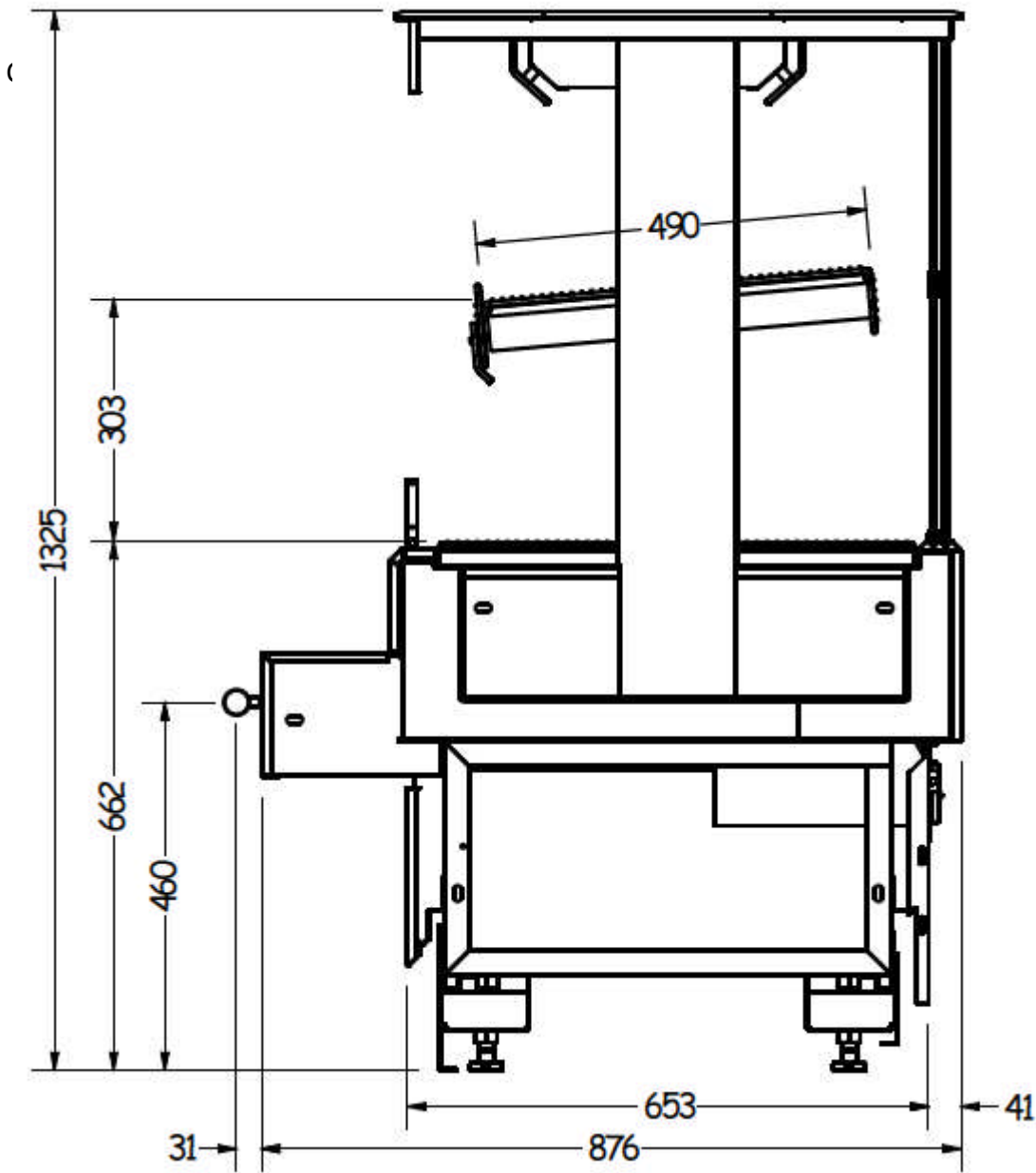
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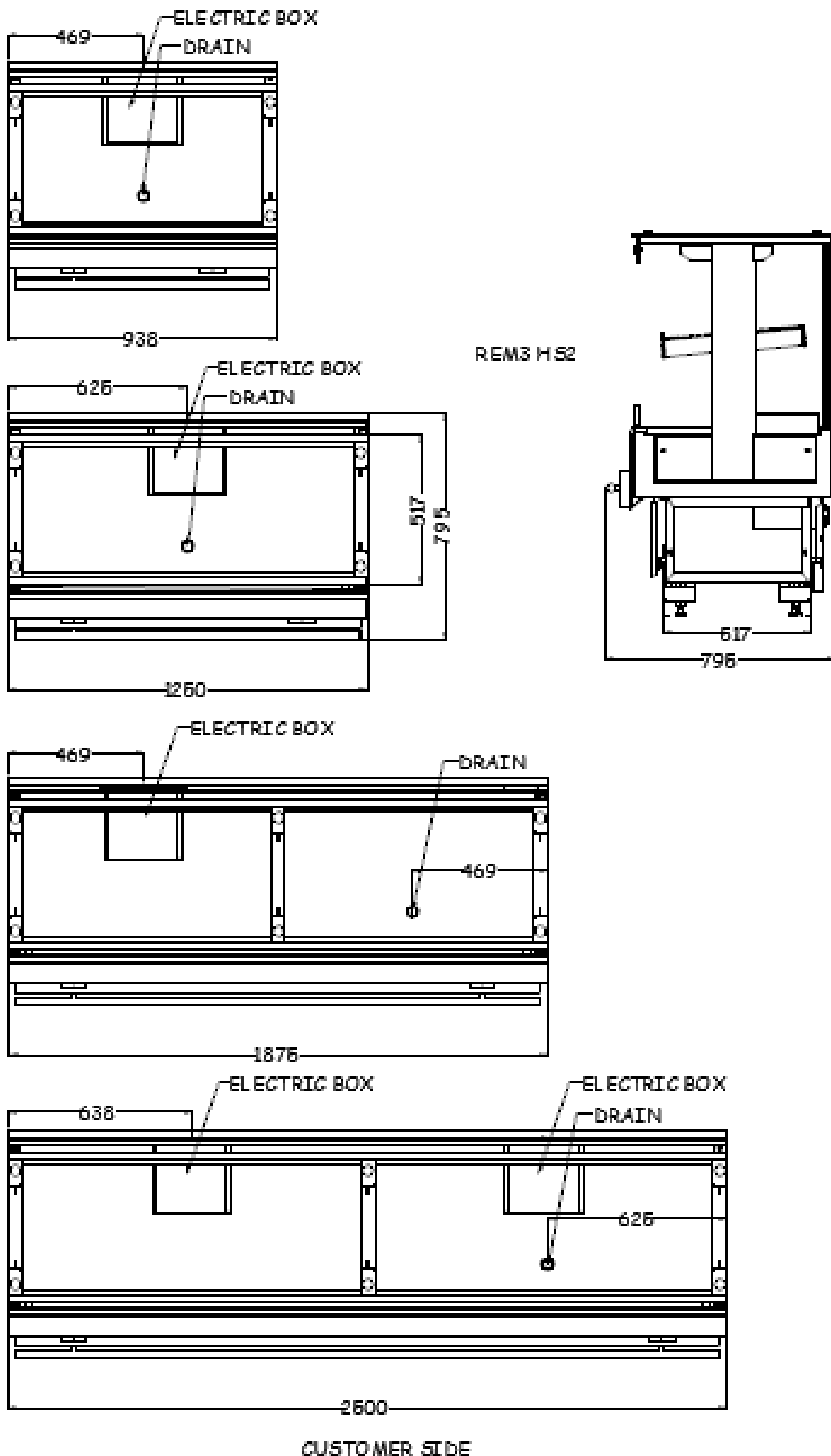
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Pre Installation

Cabinet Dimensions



Full Base Footprint



REM3 H S2

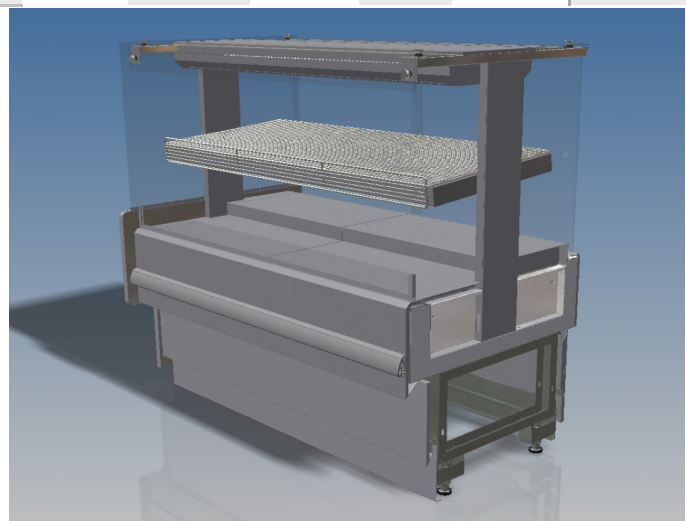
CUSTOMER SIDE

REM3-HS2

Hot Food Self Service Case

Product code & length	Product Data						
	Product temperature °C	Number of Phase circuits	Safety Indicator Lights	Self Service			
REM3-HS2-1 625mm	+65/+80 °C	1	No	Yes			
REM3-HS2-1.5 938mm	+65/+80 °C	3	No	Yes			
REM3-HS2-2 1250mm	+65/+80 °C	3	No	Yes			
REM3-HS2-3 1875mm	+65/+80 °C	3	No	Yes			
REM3-HS2-4 2500mm	+65/+80 °C	3	No	Yes			
ELECTRICAL LOAD (240V-50Hz)							
	Phase 1		Phase 2		Phase 3		Total Amps
	Watts	Amps	Watts	Amps	Watts	Amps	
REM3-HS2-1 625mm	2434	9.98					9.98
REM3-HS2-1.5 938mm	1020	4.2	945	3.9	880	3.65	11.75
REM3-HS2-2 1250mm	1813	7.3	1579	6.5	1056	4.33	18.13
REM3-HS2-3 1875mm	1100	4.62	2030	8.45	2417	10.02	23.09
REM3-HS2-3 2500mm	3626	14.6	3158	13	2112	8.66	36.26
	Number of Control Simmerstats	Shelf Front Simmerstat	Shelf Rear Simmerstat	Deck Front Simmerstat	Deck Rear Simmerstat	Canopy Simmerstat	
REM3-HS2-1 625mm	4	Yes	Yes	Yes	No	Yes	
REM3-HS2-1.5 938mm	4	Yes	Yes	Yes	No	Yes	
REM3-HS2-2 1250mm	4	Yes	Yes	Yes	No	Yes	
REM3-HS2-3 1875mm	4	Yes	Yes	Yes	No	Yes	
REM3-HS2-3 2500mm	8	Yes	Yes	Yes	No	Yes	

NOTE: 2500 cabinet has separate controls for each 1250mm section



Effective : 20th Aug 2015

Version : 1.2

Product code & length	Product Data			
	Product temperature °C	Number of Phase circuits	Safety Indicator Lights	Self Service
REM3-HS3	+65/+80° C	1	No	Yes
REM3-HS2	+65/+80° C	3	No	Yes

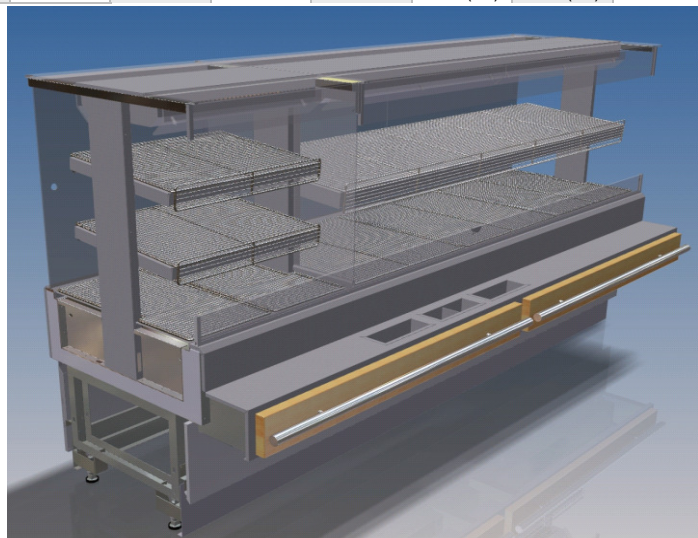
ELECTRICAL LOAD 240V					
REM3-HS3/HS2 625 + 1250 Separate electrical supply per section required	REM3-HS3 625		REM3-HS2 1250		
	Amps 1	12.1	Amps 1	7.3	
	Amps 2		Amps 2	6.5	
	Amps 3		Amps 3	4.33	
TOTAL AMPS	12.1		18.13		

REM3-HS3/HS2 625 + 1875 Separate electrical supply per section required	REM3-HS3 625		REM3-HS2 1875		
	Amps 1	12.1	Amps 1	4.62	
	Amps 2		Amps 2	8.45	
	Amps 3		Amps 3	10.02	
TOTAL AMPS	12.1		23.09		

REM3-HS3/HS2 625 + 2500 Separate electrical supply per section required	REM3-HS3 625		REM3-HS2 2500 (in two sections)			
	Amps 1	12.1	Amps 1	7.3	Amps 1	7.3
	Amps 2		Amps 2	6.5	Amps 2	6.5
	Amps 3		Amps 3	4.33	Amps 3	4.33
TOTAL AMPS	12.1		18.13		18.13	

	Number of Control Simmerstats	Simmerstats							
		Top Shelf Front Simmerstat	Top Shelf Rear Simmerstat	Bottom Shelf Front Simmerstat	Bottom Shelf Rear Simmerstat	Deck Front Simmerstat	Deck Rear Simmerstat	Canopy Simmerstat	Deck Front and Rear Simmerstat
REM3-HS3 625mm	7	Yes	Yes	Yes	Yes	Yes	Yes	Yes	No
REM3-HS2 1250mm	4	Yes	Yes	No	No	No	No	Yes	Yes
REM3-HS2 1875mm	4	Yes	Yes	No	No	No	No	Yes	Yes
REM3-HS2 2500mm	8	Yes (x2)	Yes (x2)	No	No	No	No	Yes (x2)	Yes (x2)

Refer REM3-HS2 and HS3 Data sheets for more electrical detail



Effective : 8th February 2013

Version : 1.0

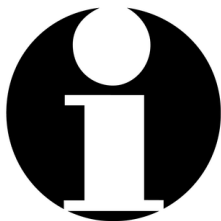
Receiving Cabinets

Cabinets will always be dispatched in good condition. Always inspect the cabinet and packaged accessories for damage. Note any damage on the carrier's consignment note prior to signing.

For concealed damage that is found later, notify Hussmann in the relevant country within 3 working days. Any issues will be addressed and rectified as applicable.

Australia: Hussmann Ltd
Email: mhl_helpdesk_au@hussmann.com
Ph. 1300 36 38 40

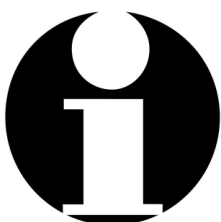
New Zealand: McAlpine Hussmann Ltd
Tauranga
Ph. +64 7 578 0965



NOTE

Please provide a photographic record of any damage found along with the cabinet serial number and a brief description of the damage.

A check should also be made to ensure that all loose parts listed on the outside packaging are present and undamaged.



NOTE

Any shortages will follow the same procedure as concealed damage.

Operating Environment

REM3 Hot Food Display Cabinets have been designed to operate in the following conditions:

Ambient temperature	20°C to 28°C
Max cross draft	0.2 m/sec
Product Temperature	+60°C to +80°C

Ambient conditions greater than those stated may result in poorer performance of the cabinet and higher running costs.



NOTE

Please reference AN/NZS4322 for Hot cabinet regulatory requirements

Installed Position

Cabinets should be sited so that external influences are minimized. Situations to avoid are:

Air draughts from:

- Air conditioning,
- Ventilation,
- Entranceways,

Mechanical damage:

- Shopping trolleys,
- Forklift trucks,
- Pallet jacks,
- Floor polishers,



CAUTION

Any of these situations could prevent this cabinet from performing correctly.

Extra protection may be required to minimize the risk of damage.



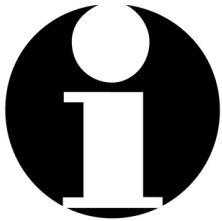
CAUTION

Location of this cabinet should also take into account the effect it will have on its surrounding environment.

Keep away from storage equipment and products that may be affected by a rise in ambient temperatures

Key Operation Points

- Preheat the cabinet for thirty minutes before loading product
- Only load product that is above 75°C
- Do not overload the cabinet with product. No more than a single layer on each level
- Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of a type recommended by the manufacturer
- Always clean cabinets as described in the cleaning section of this manual and on the cleaning instruction label on the cabinet.
- Rotate stock so that it does not sit in the cabinet for more than 4 hours.
- **The Thermometer is reading air temperature not product temperature. Do not adjust the cabinet settings based on the thermometer reading. Always measure product temperatures on all display levels before commencing any adjustment.**



NOTE

if a liquid spill should occur, the spill should be cleaned as soon as practicable. If left it can become 'burnt on', this will make it difficult to remove at a later date.



CAUTION

Do not use electrical appliances inside the food storage compartments of the appliance, unless they are recommended by the manufacturer.

Installation



NOTE

Information in this manual is to be followed in conjunction with specifications, work practices and regulations of the customer, installing company and relevant industry

Joining Cabinets

There should always be a nominal 50mm insulated (heat rated) end between heated and refrigerated cabinets. A thinner less insulated end may allow heat transfer that will adversely affect the performance of the refrigerated cabinet.

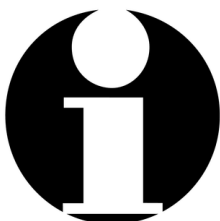
REM3 cabinets are fitted with solid 20mm ends, positioning them adjacent to refrigerated cabinets should be done with the above requirements in mind.

Electrical Installation

The electrical installation shall:

- Meet existing regulations and safety codes,
- Have an electrical supply to the cabinet that is independent of other supplies,
- Be individually isolated,
- This cabinet complies with EMC regulations.

There is a wiring diagram in the electric box of each cabinet.



NOTE

If you require a replacement wiring diagram, please contact the Hussmann help desk

Please supply the cabinet serial number with the request



NOTE

It is recommended that this cabinet is connected to a dedicated circuit that is not controlled by a Residual Current Device (RCD). This cabinet contains bar elements that may cause nuisance tripping of the RCD.

Drain Installation

Points to be aware of for cabinet drain installation:

- The cabinet should be correctly levelled,
- Water traps are factory fitted to the cabinets,
- The installer should ensure that the drain then slopes to the drainage point,
- That a grease trap is provided if required by local regulations



NOTE

All drains should be 40mm or bushed to 40mm as soon as practicable after the water trap



NOTE

Any condensate and waste drains must be installed to local regulation requirements

Pre-Start Checklist

It is suggested that the following items be included but not limited to any pre-start check of this cabinet.

- All electrical connections are secure and electrical tests completed.
- All guards are correctly fitted.
- Drain traps have been primed with water to seal and drain screens are fitted where provided.
- Any loose material created during installation has been cleaned from the cabinet. These could cause rust spots and pitting that could permanently damage the stainless steel.
- Any components removed for installation have been refitted.

Cabinet Operation

Loading Limits

Please be aware of the following:

- Food products must be warmer than 75°C when stocking the cabinet.
- Ensure that rotation of product is carried out to avoid deterioration of older stock.
- Stock that has been in the cabinet for over 4 hours should be replaced.



NOTE

REM3 cabinets are designed to hold a single layer of product per display level. If product is stacked it may not be held within the correct temperature ranges

Fittings and Accessories

Only fittings and accessories designed for this cabinet should be used. Any other additions may cause the cabinet to not work in its intended fashion.



CAUTION

Fittings and accessories supplied are designed for optimal performance of the cabinet. If these are removed or altered, product temperatures and cabinet safety may be compromised

Temperature Checking

Product temperatures should be checked and recorded at least daily using an approved temperature probe.



NOTE

The thermometer is reading air temperature not product temperature. DO NOT adjust the cabinet settings based on the thermometer reading

Temperature Adjustment

Factory settings are shown beside the simmerstats. Before making adjustments during commissioning, check:

- That simmerstats are set to factory settings.
 - That all elements and lights are working.
 - That actual product is being measured. **The thermometer only reads air temperature**
1. The simmerstats for adjusting the temperature of the product are accessed from the rear of the cabinet.
 2. To adjust the temperature of product on any level adjust the simmerstat setting of the level above. Therefore, for the top shelf adjust the setting on the canopy simmerstat.
 3. Adjusting a shelf setting will mainly effect the level below, but will have a small impact on product temperatures on that shelf.
 4. Adjust deck simmerstats if product on the lowest level (deck) is not correct.



CAUTION
Only Service Technicians or staff that have had suitable training should adjust settings.

Maintenance



CAUTION

Always isolate the cabinet from the mains power supply before any maintenance



CAUTION

Allow the cabinet to cool before performing any maintenance

Cleaning

To maximize efficiency and durability, It is suggested that your cleaning and maintenance program include a deep clean weekly and a maintenance clean daily

Deep cleaning should include:

- Removal of all food products.
- Removal of all removable panels.
- Remove all food scraps.
- Sanitizing wash.
- Rinsing with clean water.

Maintenance clean should include:

- Removal of all food products.
- Wipe down of all exposed panels.
- **Inspect for spills that may require deeper cleaning**



NOTE

if a liquid spill should occur, the spill should be cleaned as soon as practicable. If left it can become 'burnt on', this will make it difficult to remove at a later date.

Stainless steel is used inside the cabinet to give a strong corrosion resistant finish that maximizes the cabinet's service life.

It is not rustproof, particularly in the harsh environment of Food Display cabinets.

Chlorine and bromine, commonly used for sanitisation are highly caustic chemicals for stainless steel and heat and humidity enhance the corrosiveness of these chemicals.

Regular cleaning is the best way to prevent corrosion and add to the service life for your stainless steel product. The goal of your cleaning and maintenance program should be to keep the stainless steel's protective chromium oxide layer intact. This is what prevents corrosion.

For cleaning use:

- Warm water (Less than 55°C)
- Water based solutions
- Soft cloths

Do not use:

- Abrasive products
- Solvent based products

Things to be aware of when cleaning:

- The lower front glass and any glass dividers can be removed for cleaning
- Keep water away from any electrical components, The bar elements under the deck display area are water proof.
- Do not flood the tub area below the deck display area as penetrations and seals may be compromised causing damage and water leaks.
- Check drain traps are clear of obstruction

Regular Inspection

To ensure reliability of the cabinet, it is advisable that trained personnel carry out periodic maintenance.

It is recommended (as a minimum) that a check be made 3 months after commissioning of the cabinet and then every 6 months.

The maintenance check should include but not be limited to:

- Checking all elements are working and in good order,
- Checking all halogen lamps are working and in good order
- Checking simmerstats are operating correctly and are set so product maintains required temperature
- Check that all heat guards are in place and secure.
- Check there is no build up of food residue on any part of the cabinet.
- Check the drain trap is clear of any build up of residue or other objects.
- Check all electrical components have not been damaged.
- Check all fittings and accessories supplied with the cabinet are being used correctly

These checks will ensure the best possible performance of the cabinet over its service life.



CAUTION
Particular attention should be given to the operation of
any safety devices.

Disposal of the Cabinet

It is encouraged that the cabinet be refurbished if practical.

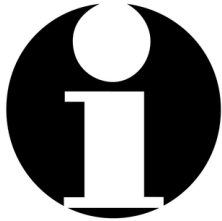
If disposal is necessary, please be aware that the foam-insulated panels incorporate cyclo-pentane as the blowing agent and will require the cabinet to be disposed of in accordance with local authority guidelines.



NOTE
Components could have high value as scrap, please recycle as many
parts as possible

Replacement Parts

Spare parts are available from Hussmann.



NOTE

When ordering replacement parts please quote the serial number of the cabinet to ensure correct replacement.

Risk Analysis

Hazard	Person at Risk	Potential Consequences	How Likely	Risk	Control Measures
Manual Handling while installing cabinets	Installation Technician	Strains and sprains; Bruised or crushed fingers/limbs	Likely	Moderate	Utilise correct Manual Handling techniques. Lifting equipment should be used where possible. PPE - Gloves, Overalls and Safety Boots
Electrical installation	Qualified Service Technician	Death, Burns, Electric shock	Unlikely	High	Do not connect cabinet to power supply before checking all wiring circuits
Electrical Maintenance	Qualified Service Technician	Death, Burns, Electric shock	Unlikely	Moderate	Electrically isolate cabinet before works
Glass Breakage	Installation Technician Customers Operating Staff	Glass in eyes, Scratches, Fright	Unlikely	Low	Do not over stress glass or hit with objects
Manual Handling whilst loading and unloading stock	Operating Staff	Back injuries, Burns	Likely	Moderate	Training of employees in correct Manual Handling practices. Use PPE when loading hot areas - Gloves
Spillage of hot liquids from chickens	Operating Staff Customers	Burns, Slipping on greasy floors	Likely	Moderate	Ensure product containers are correctly sealed. Clean up any spills immediately
Chicken juice/fat - fire hazard	Operating Staff Customers	Death, Burns, Electric shock, Fire	Unlikely	Low	Clean all surfaces regularly. Pay special attention to elements under deck pans
Hot Surfaces	Customers Operating Staff	Burns	Likely	Moderate	Warning Labels fitted to the cabinet to alert Customers. Polycarbonate and wire shields fitted to prevent accidental touching of hot surfaces. Hot surfaces outside reach of infants. PPE - Gloves, Tongs
Halogen replacement	Service Technician	Cuts, Electric shock	Unlikely	Low	Electrically isolate cabinet before works. PPE - Gloves