SEMI VERTICAL HINGED DOOR GRAB & GO CABINET
SEMI VERTICAL SLIDING DOOR GRAB & GO CABINET

SGND153S



INSTALLATION MANUAL

9H21545_H
Apr. 2026

HUSSMANN®

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GENERAL INFORMATION

1.1 SYMBOLS:



NOTE: Not related to personal injury – Indicate[s] situations, which if not avoided, could result in damage to equipment.



CAUTION: Indicate(s) hazardous situation which, if not avoided, will result in moderate injury.



CAUTION: Indicate(s) hazardous situation which, if not avoided, will result in moderate or serious injury.



CAUTION: Indicate(s) hazardous situation which, if not avoided, will result in serious injury or death.



USE MANUAL: Be sure to follow the instruction throughly whilst doing the installation. If not performed correctly, leakage, electric shock or fire may occur. Always keep manual in safe place.



NO WALK: Do not walk on top or on any parts of the case. Case damages or personal injuries may occur.



NO SIT: Do not sit on top or on any parts of the case. Case damages or personal injuries may occur.



NO CLIMB: Do not climb on top or on any parts of the case. This may cause damage to the case or personal injury.



NO CHEMICALS: Do not use chemcial substances to clean the case. This may cause discoloration or could damage the case.



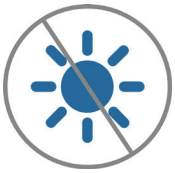
USE SOAPY WATER: Use soapy water in a spray bottle to clean the case.



NO WET AREA: Do not install case in a wet place or near water. Risk of Electricity leakage or electrical shock may occur.



NO DIRECT WATER: Do not pour excessive water onto the case. DO NOT use pressurised hose. eg fire hose. This can result in electric shock.



NO OUTDOORS: Do not use or store the case outdoor. If the case is exposed to direct sunlight or rain,leakage of electricity, electric shock or performance failure may occur.



PPE GEAR : Remember to wear Personal Protective Equipment whilst installing the case.

GENERAL INFORMATION

1.1 SYMBOLS:



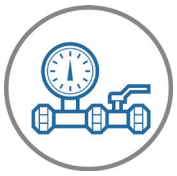
TURN OFF: Ensure that power source is disconnected when conducting any servicing or inspection. Injuries such as electric shock or burns could occur.



NO FLAMMABLE: Do not expose the case to any flamable objects. This may cause ignition and explosion due to spark.



WEIGHT: Do not exceed the weight limit of each shelf. Each standard shelf has a total maximum weight limit of 180kg/m2.



PRESSURE & VACCUM TEST : Ensure a pressure and Vaccum test is conducted. The leakage of refrigerant may result in poor performance .



NO GAS: Do not install the case where flammable gas could be realeased. If gas leaks out and flows around the case there can be risk for fire.



EARTHING : Ensure case earthed when proceeding with electical compo-nents. Electric shock or fire may occur if not correctly processed.



WARNING :

Risk of fire/flammable materials.



TECHNICIANS ONLY: Installation should only be performed by qualified technicians.



NO OBJECTS ON CASE: Do not place objects, stack or use the top of the case as storage. Object may fall and cause injury to personnel and / or damage to the case.



NO A/C: Do not install case where air blows directly at the case. This will disrupt the case airflow and affect performance.



NO WET HANDS: Ensure not to touch switches or any component with wet hands. This may cause electrical shock.



NO FLAMMABLE : Do not keep any volatile or flammable materials inside the case. It may risk explosion or fire.



NO CONNECTING SOCKETS:

D not use any connecting socket or extension cords. Be sure touse private line or socket as the main power source. Failure to do so could result in electric shock or fire.

GENERAL INFORMATION

1.2 STOP THINK ACT

STOP: Take the time to think about the installation process. Consider the outcomes of the actions needed to be taken, worst thing that could happen.

THINK: How are you going to do it, is it the safest way? if not, how can you do it better? Do I have the right PPE, tools and equipment.

ACT: Go about it in the safest way possible. Follow this installation manual here and dont rush. STOP if it can't be done safetly.

NOTE: These cabinets are heavy, can have high centres-of-gravity (thus 'tippy'), use appropriate PPE and tools and manpower levels.

1.3 STAFF TRAINING

This manual is to be used to understand and safely execute the installation & maintenance of the appliance. It is the installer & users responsibility to carry out the instructions illustrated within the manual correctly. The installer & user is responsible for setting out the the training and requirements needed for their maintenance technician staff to be educated to use the case correctly. The case should always be kept in good working order to ensure installer and user safety.

Injury to personnel and damage to the case and its components may occur if instructions in the manual are not correctly followed. If information would like to be added to this manual, or if suggestions would like to me made, contact Hussmann directly at any time.

1.4 ELECTRICAL CONNECTION

Check that the power supply voltage matches that displayed on the rating plate of the case, and that the power is adequate. Voltage provided should be ±10% of rating plate. Electrical should be hard wired by an authorised electrician to comply with all local electrical regulations. Failure to do so could result in electric shock or fire.
250V 32A Australian Standard plug socket (cable length 3m)



1.5 REFRIGERANTS



Installation & Maintenance must be performed by qualified technical personnel with appropriate training and authorisation to work with flammable refrigerants.

Operators, as well as the maintenance personnel, must carefully read and fully understand or have these instructions explained before using this equipment.

R448 :

The refrigerant R448 is not flammable. Pay close attention during transport, installation and dismantling not to damage the refrigerant pipelines. Although not flammable this material will become combustible when mixed with air under pressure and exposed to strong ignition sources.

R290 :



Cabinet utilises flammable refrigerant R290 (Propane) . Identified by specific labels. The Type of refrigerant (R290) is also specified in the serial/rating plate.

Warning! Do not damage the refrigerant circuit.

Warning! Do not keep explosive substances such as aerosol cans with a flammable propellant inside the equipment.

GENERAL INFORMATION

Warning! Do not use mechanical devices or other means to speed up the defrost process unless expressly permitted by the manufacturer.

Warning! Do not use electric appliances inside the cabinet's display area unless those (if any) expressly permitted by the manufacturer.

Warning! Keep clear of obstructing all ventilation openings in the appliance enclosure.

Warning! Do not exceed the load limits of display decks and shelves.

Warning! In case the cable or the plug is damaged, ask for a prompt replacement by qualified maintenance personnel.

R290 is classified as flammable refrigerant of Class A3 according to ANSI/ASHRAE. It is a highly flammable and very easy to ignite. It can burn with explosive impacts.

R290 in contact with air can cause a risk of fire or explosion in presence of open flames or sparks generated by electrical equipment.

R290 (Propane) has no odour. Take extra cautions if a leak is suspected i.e. quarantine the cabinet and call for a qualified refrigeration service technician to attend.

Servicing can be only performed by qualified personnel holding a valid certificate and compe tence to work on and break into a R290 refrigeration circuit safely.

Components which require substitution: - only use original spare parts for they have been specifically approved for use with R290 (Propane) refrigerant.

While working on cabinet with R290 during which the refrigerant can be possibly released to the surrounding space, all possible ignition sources, including cigarette smoking, must be at least 10 metres away from the place of installation, maintenance or disposal.

While working on cabinet with R290 during which the refrigerant can be possibly released to the surrounding space, all possible ignition sources, including cigarette smoking, must be at least 10 metres away from the place of installation, maintenance or disposal.

The refrigerant circuit is hermetically sealed (closed loop) therefore refrigerant filling, draining or substitution of some components is not possible without breaking the vacuum. In such a case:

- The substitution cannot be performed indoors at the customer's premises.
- The cabinet should be moved to a controlled workshop environment suitable for the type of repair where work can be conducted safely.
- In any case, work in confined spaces must be avoided. Work area can be in the open or, alternatively, must be properly ventilated. Ventilation should be able to safely disperse any released refrigerant and expel it safely externally to the atmosphere.

In case hot work is required (welding, brazing) best practice must always be applied. This should require the following procedure to avoid risk of fire or explosion.

- Remove refrigerant safely
- Purge the circuit (with inert gas)
- Evacuate
- Purge again with inert gas
- Open the circuit by cutting (or brazing)
- Operator must be properly skilled and authorized to perform hot works on systems working with flammable refrigerants.

EVENT OF DAMAGE:

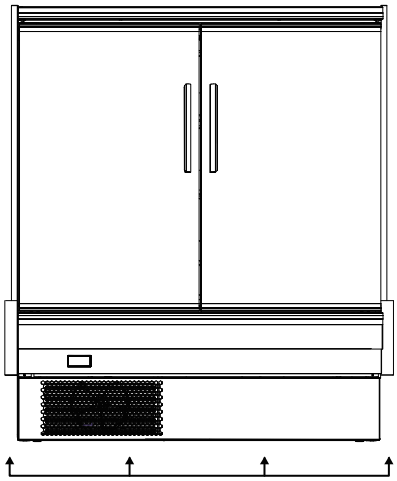
Keep surrounding flames or sources of ignition away from the appliance and gad. Properly ventilate the premises and use a breathing apparatus. Turn the unit off and notify the customer service department. Fire and heat may cause gas receptacles to rupture. Use water spray/not jet or fog to extinguish.

It is recommended to use forklift for cabinet movement, and the movement in the super market must be carried out under the condition of empty cabinet.

NOTE: Check underside ofcase before lifting to ensure no damage to electrical, drain box or other extrusions occurs.

NOTE: Check underside ofcase before lifting to ensure no damage to electrical, drain box or other extrusions occurs.

GENERAL INFORMATION



Check underside of case

FIGURE 1A

1.6 CASE VENTILATION:

AIR FLOW:

Sources of heat or air flow external to the cabinet should be avoided. i.e ventilation ducts, open doors and direct sunlight. This will deter external air from disrupting the air flow from the cabinet thus will help to maintain its performance.

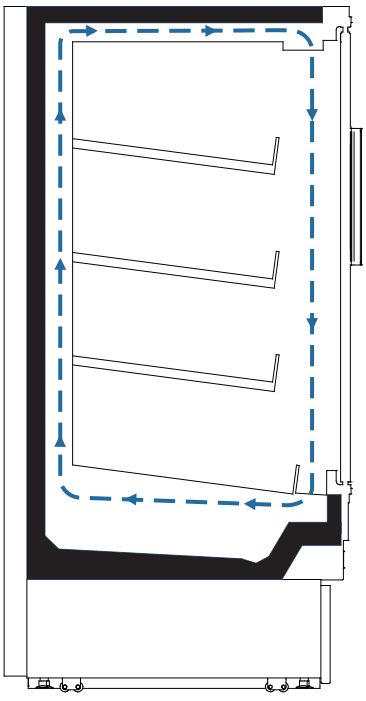


FIGURE 1B

LOCATION:

The refrigeration case should be positioned in a manner that optimal air flow can flow through the underside and rear. This will minimise the risk of condensation on the back and/or underside. Leave **100mm** gap between the rear of the case and the back wall.Leave a **300mm** gap at the top of the case.

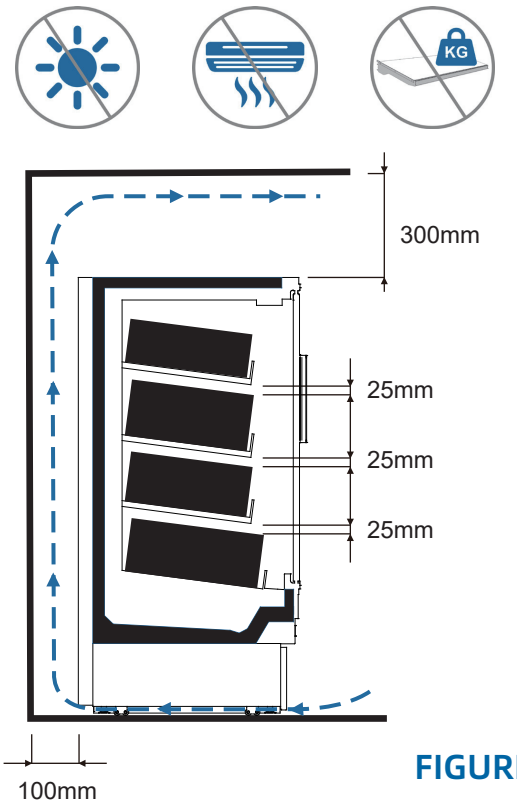


FIGURE 1C

STOCKING SHELVES:

When stocking the shelves, be sure to leave a **25mm** gap in between the stock and shelf to ensure even and consistant airflow. Not doing this correctly may result in a blockage of airflow which could freeze the stock at the rear, and not enough refrigeration being produced toward the front of the case.

Cabinets are designed to maintain the chilled product temperature placed therein for display. If loading warm product it may affect overall case product temperatures during the pull down period.

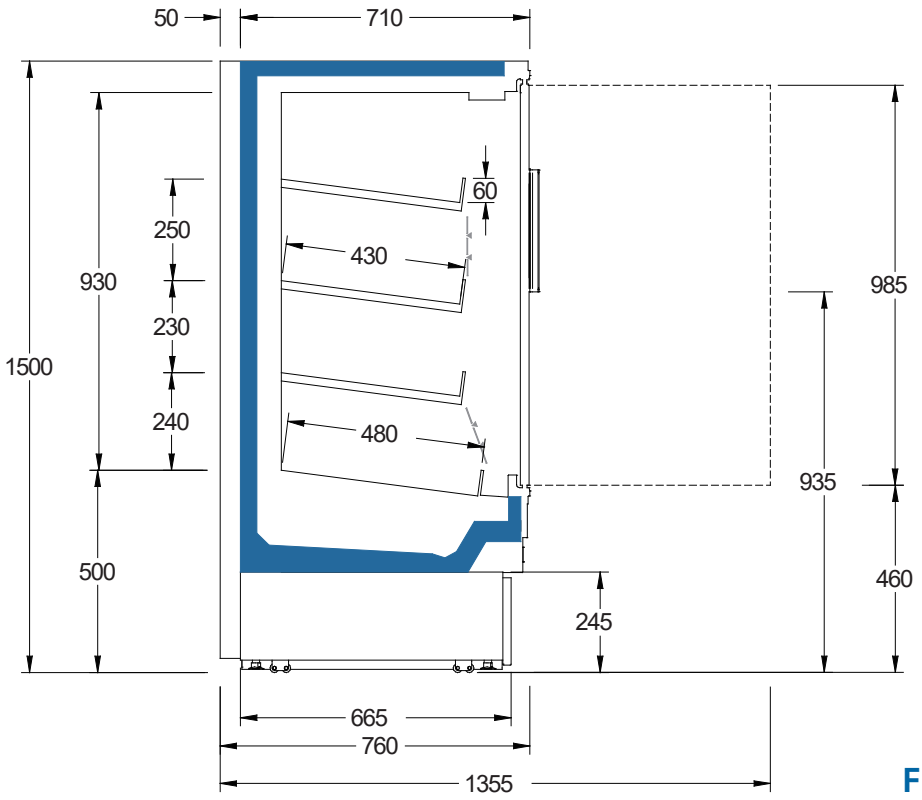


NO OBJECTS ON CASE:

Do not place objects, stack or use the top of the case as storage. Object may fall and cause injury to personnel and /or damage to the case.

PRE INSTALLATION

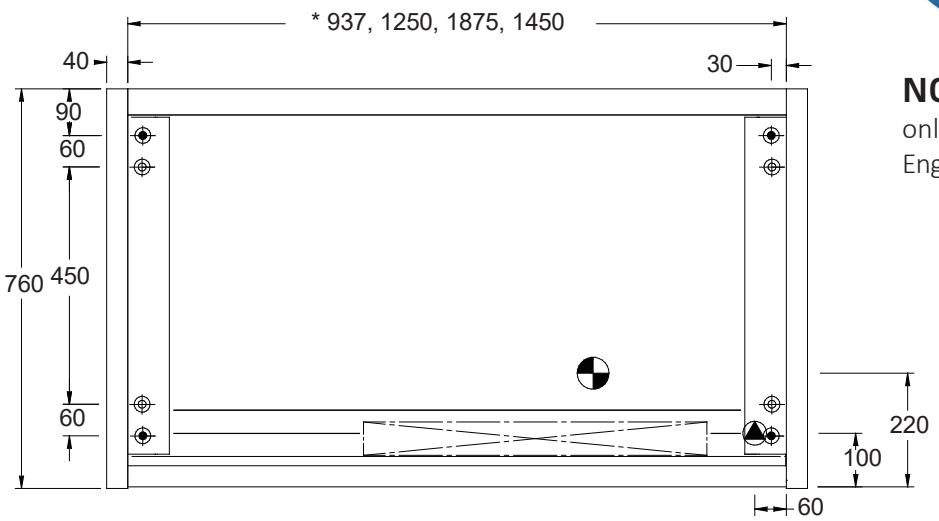
2.1 CASE DIMENSIONS & SERVICES



Case have corresponding loading restrictions. Refer to the figure on the right, the storage temperature of the goods displayed outside the loading line may not be guaranteed, and it will interfere with the overall air curtain of the freezers, resulting in a decline in the performance of the freezers, thus damaging the goods.

loading restrictions

FIGURE 2A - EXAMPLE ONLY



FEET
WHEEL
DRAIN
ELECTRICAL
REFRIGERATION

NOTE: This information is a reference only. Always refer to the latest Product Engineering Data sheet (PED).

PRE INSTALLATION

2.2 OPERATING ENVIRONMENT

Refrigerated

The Medium Temperature Multi-Deck Display Cabinet has been designed to operate in the following conditions:

Class 3M1

Ambient temperature 25°C
Relative humidity 60%
Max cross draft 0.2 m/sec
Product Temperature -1˚C to +5˚C

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

2.3 HANDLING AND TRANSPORTING CASES

Case dimensions and case weight can be found on the rating plate. Also refer to the latest Product Engineering Data (PED) available from Hussmann Customer Service.

Always ensure that the moving device is of a suitable type, and has sufficient lifting capacity for the case weight and dimension. Always lift cases from the underside.

NOTE: These cabinets are heavy, can have high centres-of-gravity (thus 'tippy'), use appropriate PPE and tools and manpower levels.

It is the responsibility of the transport company to insure adequate loading strategies are implemented to insure the safe transportation of the Hussmann cases.Cases should be strapped using the indicated strapping points highlighted on the case packaging with the "strap here" stickers'. Cases should be strapped in position ready for transport with the appropriate rated strapping and strap corner protector. Cases need to be secured correctly during road transport to insure damage free delivery. In Australia, cases should not be transported without the strap corner protectors to insure that the tie down web straps used from cutting into packaging and or causing damage to case panels in transport.

The strap corner protector is a case transport requirement in Australia, and disregarding using the protector may cause transport damage. Without the necessary implementation of correct strapping protection Warehouse Managers may refuse loading. Transportation requirements are to ensure case integrity and prevent unnecessary damage and avoid delays in the case installation schedule.

NOTE: For demonstration watch: **https://www.youtube.com/watch?v=C5wPzfFSc8Q**

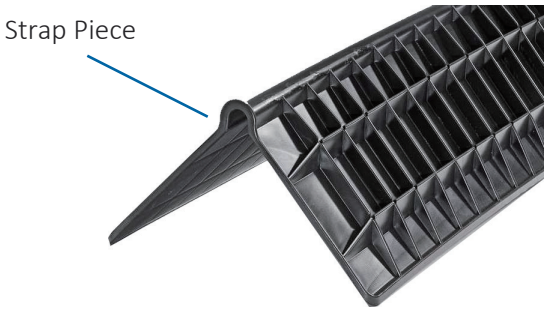


FIGURE 2B

2.3 HANDLING AND TRANSPORTING CASES

The cabinets must be stored indoors, with a temperature ranging between 0°C and +40°C and a humidity between 30% RH and 90% RH.Before storing the cabinets, ensure packaging is unbroken and does not display defect that may compromise preservation of the cabinets.

Avoid UV rays:

Permanent deformation of plastic materials or damage of cabinet parts. **DO NOT** store the cabinets in uncovered areas exposed to atmospheric agents and to direct sunlight.

PRE INSTALLATION

2.4 SHIPPING DAMAGES AND SHORTAGES

Packaging needs to be disposed of responsibly . by the installer and/or user.



Where possible please recylce as many items as possible.

After removing packaging, inspect the case for any shipping damage and ensure that all case inclusions, such as trims etc are accounted for. Immediately report any shipping damage to the carrier and inform Hussmann Customer Service of any short supplies.

Where possible all packaging and shipping braces should be removed before cases are put into there approx final position.

- Apparent loss or damage. If there is an obvious loss or damage it must be noted on the freight documentation receipt supplied by the Transport Company and notification to Hussmann or representative within seven (7) days of deliver.

- Concealed loss or damage After removing all packing etc confirm with the parts list, attached to case for any short supplied and or damaged trims, product fences etc. If required notify Hussmann or representative within seven (7) days of delivery.

Australia: Hussmann Australia Pty Ltd
Email:warranty_aus@hussmann.com
Phone: +61 2 805 0400

New Zealand: McAlpine Hussmann Ltd
Email: taurangasales@hussmann.com
Phone: +64 7 578 0965



NOTE: Refer to product MSDS for all hazardous substances used during installation in relation to their application, PPE, first aid, disposal and emergency management. Refer page 29 (Risk Analysis) For MSDS sheet contact your Hussmann.



CAUTION: Care must be taken to avoid damage to drainage outlets and electrical equipment mounted under or at the rear of cases.

INSPECT UNDERSIDE BEFORE LIFTING WITH FORKLIFT.



CAUTION: When moving cases confirm that the equipment used is approved for such works.

Do not lift or drag the case by the Patch End as this may damage both the case and/or on ends.



Refer to your companies' safe working procedure (SWP) when handling cases such as forklifts, trolleys etc.

2.5 RATING PLATES:

Each case has a 2 unique & 1 optional label that includes an identification number.

As well as on the packaging, the case identification number appears as a serial number on the rating plate (most commonly located on the ceiling panel left hand end of the case and left side rear panel) and is printed on a decal on the rear of the case .The case sequence number is also written on a ticket on the front panel.

PACKAGING TAG:

MODEL NO : SGND153S

SERIAL NO : SZ0000

ASSET CODE :

PROJECT :

SO NO :

PO NO:

DEPARTMENT TYPE :

RATING PLATE:

HUSSMANN®

MODEL:	**SGND153S-X**	CLIMATE CLASS:	
VOLTAGE:		FREQUENCY(Hz):	
RATED CURRENT(A):		LIGHTS(W):	
DEFROST/DRAIN(W):		ANTISWEAT(W):	
FOAMING GAS:		HEATER(W):	
REFRIGERANT MASS(g):		REFRIGERANT:	
MANUF. DATE:		SERIAL No:	

CONFIG ID: **SGND153S - XX - XXXX**

Maximun Working Pressure 80 bar(a)

LOCATIONS:

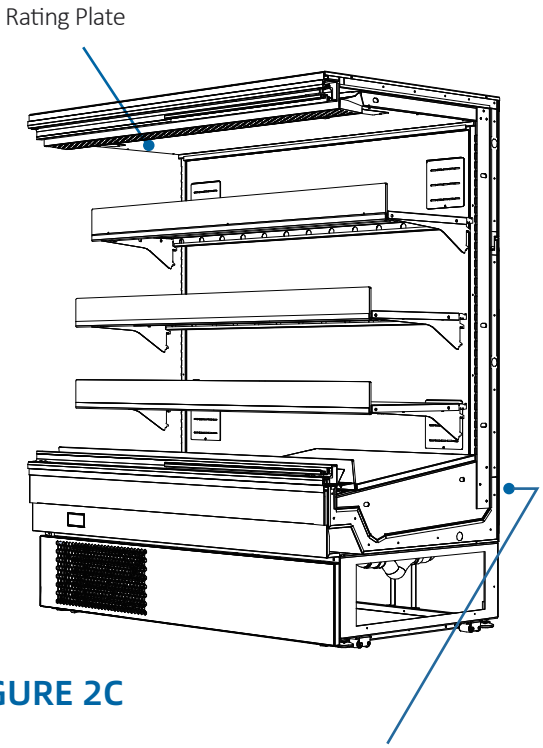


FIGURE 2C

NOTE: Refer to rating plate to identify the exact case model. The serial number and build date are key for aquiring information regarding spare parts, warranty, short parts etc.

PRE INSTALLATION

PACKAGING TAG:

- **Model No:** Identifies the model type (letters on left) as well as the model size (numbers on right).
- **Serial Number:** The unique number given to each case.
- **Asset Code:** Optional identification number for supermarket stores.
- **Project:** Used to identify location site for the case.
- **SO Number:** Sales Order number.
- **PO Number:** Purchasing Order Invoice number.
- **Department Type:** The type given for merchandising location, eg bakery, dairy, deli etc.

RATING PLATE:

- **Model :** Identifies the model type (letters on left) as well as the model size (numbers on right).
- **Climate Class:** The climate class relates to the atmospheric, or ambient conditions outside the fridge or freezer. These conditions determine how much energy the unit will utilise in specific environments.
- **Voltage:** Voltage is the amount of potential energy between two points on a circuit. This is measured in volts (V).
- **Frequency:** Frequency is the rate at which current changes direction per second. It is measured in Hertz (Hz), an international unit of measure where 1 Hertz is equal to 1 cycle per second.
- **Rated Current:** This is measured in Amps (A).
- **Lights :** The total current of the lighting modules in a case, measured in Watt (W).

RATING PLATE (Continued):

- **Antisweat:** The heater thats installed in the frames and doors of refrigerated cases to reduce condensation and prevention fogging, this is measured in Watt (W).
- **Defrost and Drain :** The current from heaters that are installed in freezer cases to stop the case from icing up, measured in Watt (W).
- **Heater :** This is measured in Watt (W).
- **Refrigerant Mass:** This is measured in Gram (g).
- **Refrigerant:** Identifies the refrigerant used in the case.
- **Manuf. Date :** The date of build.
- **Serial No:** The unique number given to each.
- **Config ID:** Identifies the model type, model size, the lineup number and the case sequence number.

INSTALLATION

3.1 POSITIONING AND LEVELLING

Unwrap the cabinet and remove the shipping braces. Lift up cabinet and remove shipping base.

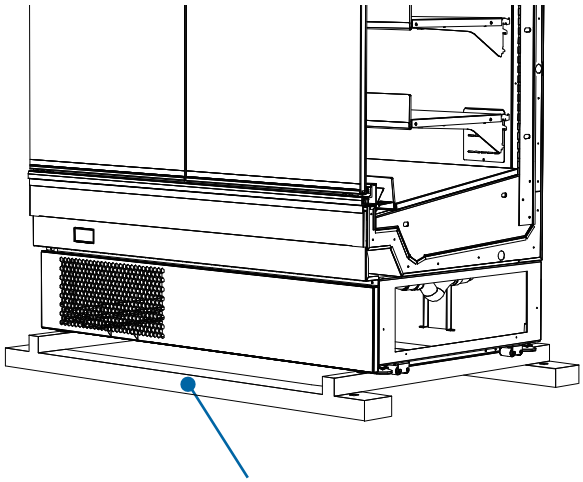


FIGURE 3A - Remove Shipping Base

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.

CAUTION: Ensure the lifting capacity of the trolley, etc is sufficient for the case. Refer to the product engineering data tables at the front of this manual for case weights and Risk Analysis .

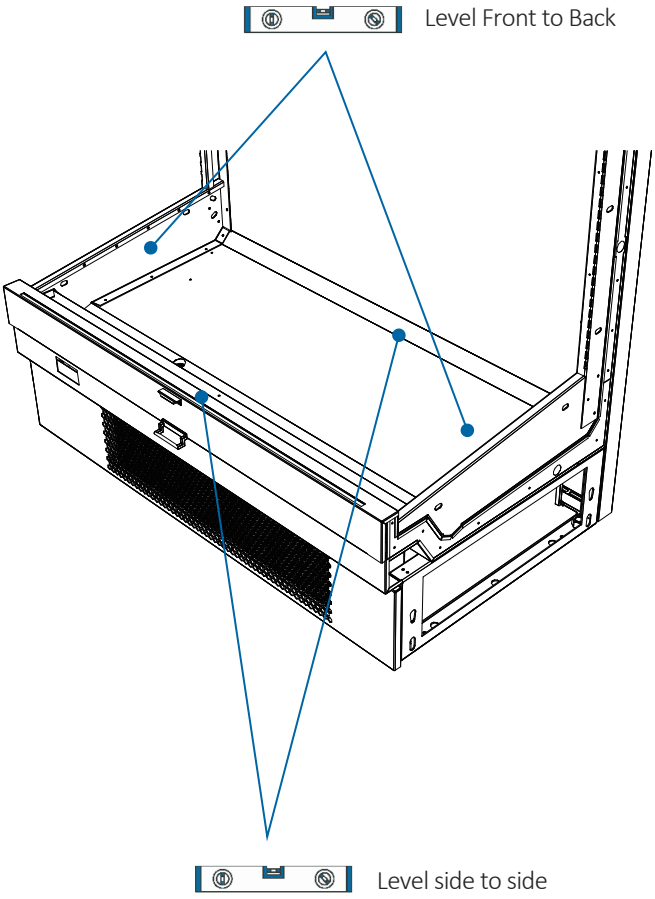


FIGURE 3B

NOTE: It is important that all cases are level for correct case joining and operation and door alignment. DO NOT SET CASE LEVELS OFF THE PATCH END fitted to a case.

Make sure case is level:
Front to Back: +/- 1.5mm
Side to Side: +/- 1.5mm (Figure 3C)

3.1 POSITIONING AND LEVELLING

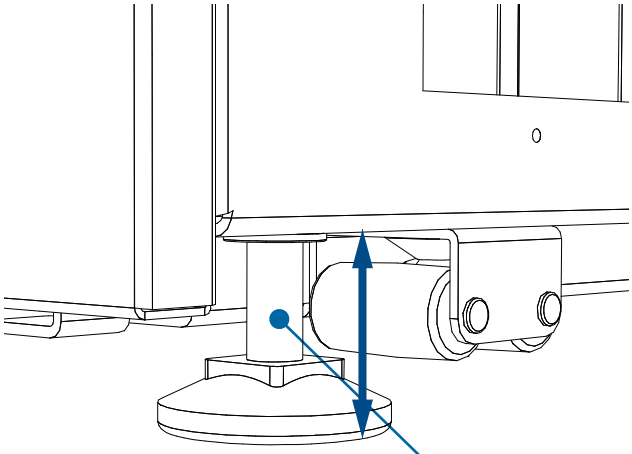


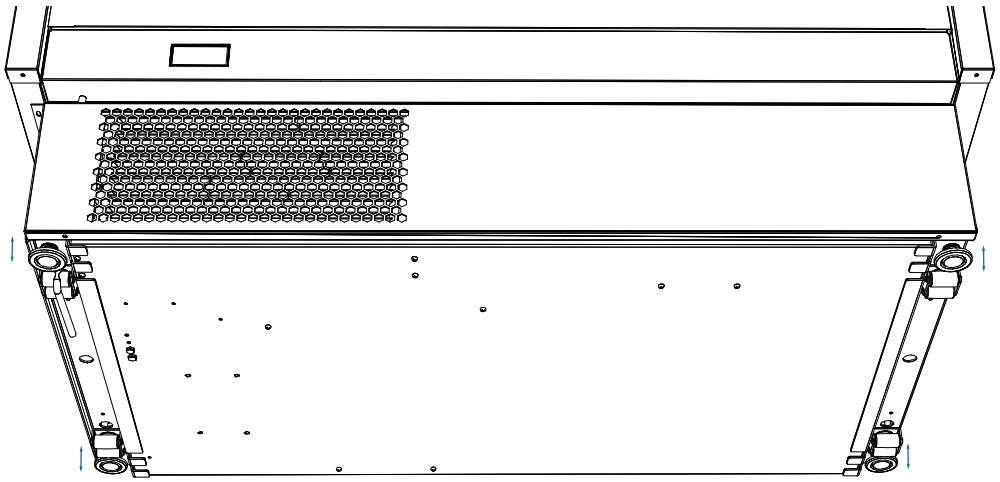
FIGURE 3C

NOTE: It is important that all cases are lined up.

USE THE CHASSIS AS MAIN POINT OF REFERENCE WHEN LEVELLING.

NOTE: All feet need to be loaded evenly on the ground. If this is not undertaken this could cause the chassis to twist.
Adjustment range of the leveling feet (0~20mm).

INSTALLATION



Example - The amount of legs will defer on a each size case.

Make sure case is level:
Front to Back: +/- 1.5mm
Side to Side: +/- 1.5mm

Make sure all feet are adjusted, NOT just the ones at the end of the case, ensuring case load is fully supported.

FIGURE 3D

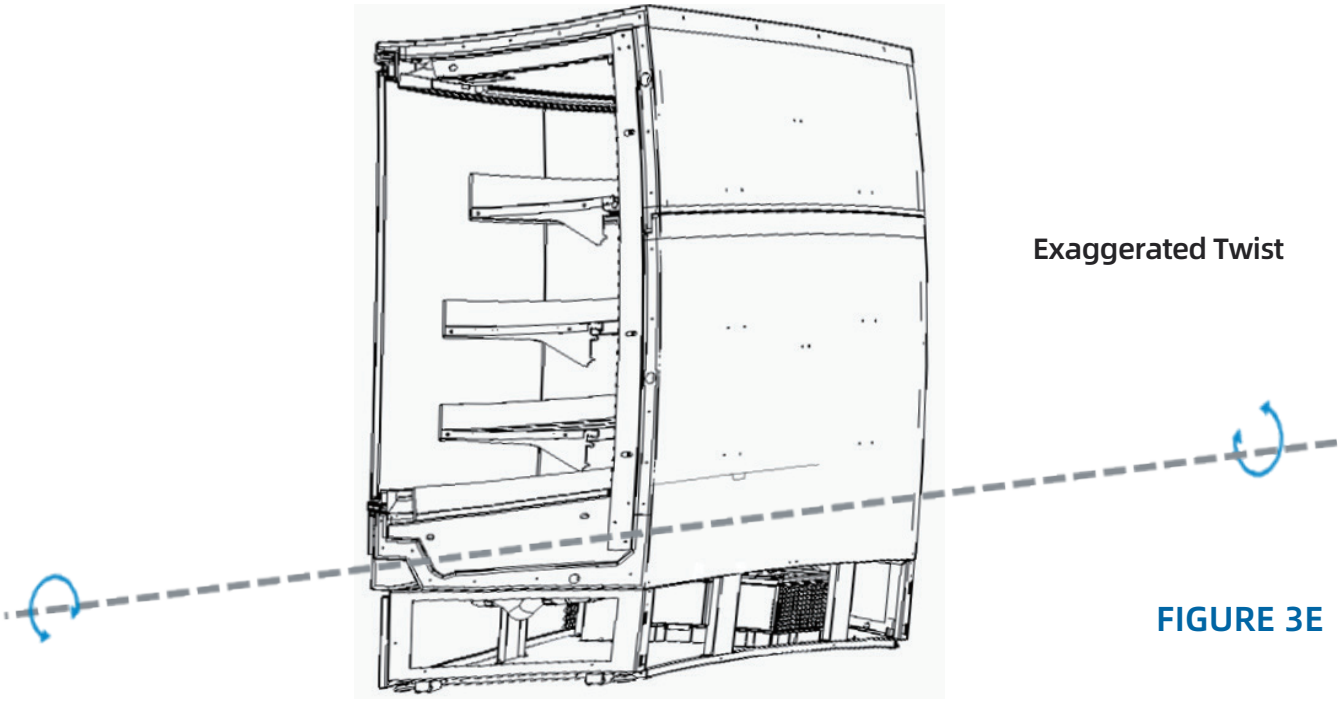


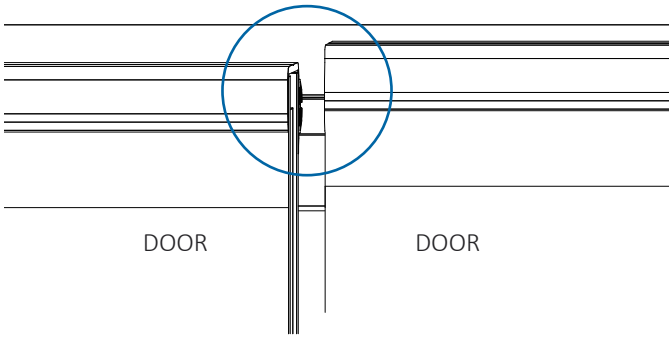
FIGURE 3E

NOTE: If feet are not adjusted and levelled correctly. The case chassis could twist causing saw toothing of the doors and other misalignments.Front support feet help with the added weight of the door assembly, ensure these are adjusted correctly.

3.2 DOOR SAW TOOTHING

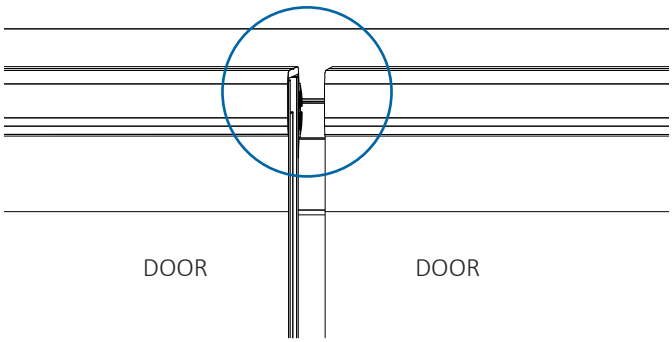
DOOR :

The doors in the images below show the misalignment (saw toothing). This should be completely horizontal and flush with each other. The door system on this case only has a minor adjustment. If doors cannot be aligned as per the following examples then the case chassis has not been leveled to tolerance and needs to be readjusted.



Misaligned / Not Parallel/ Twisted

FIGURE 3F



Aligned / Parallel / Not Twisted

FIGURE 3G

3.3 DOOR ADJUSTMENT:

If the doors do not align horizontally, they can be adjusted using the adjustment mechanism in the sill rail.
Check the vertical gap between the doors , to be adjusted and the adjacent sets of doors, to see which door is the one to be adjusted. Make small adjustments each time. Both doors may need to be adjusted to achieve the most even result.

DOOR :

To resolve the doors misalignment as shown in below image adjustment should be done through the hinge mechanism at the top of door assembly.

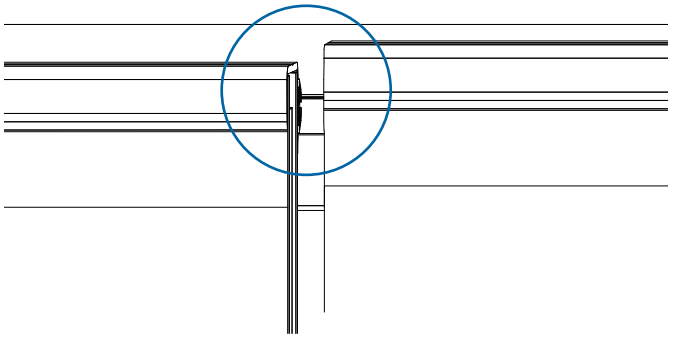


FIGURE 3H

The hinge mechanism by default is set in the middle of the rebate. Shifting the hinge left or right can be done by untightening of two screws .

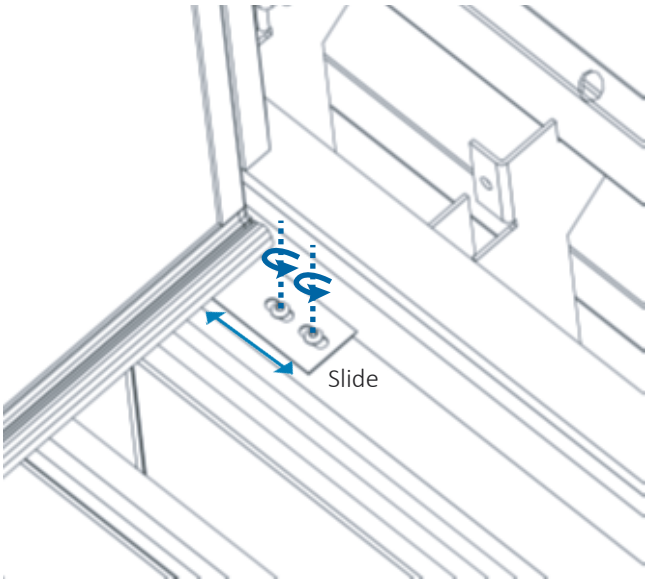


FIGURE 3I

If the doors cant be adjusted through the hinge mechanism, then the case needs to be levelled correctly.

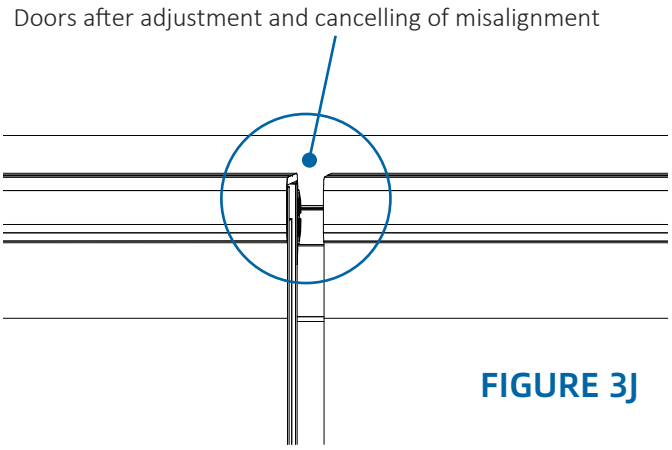
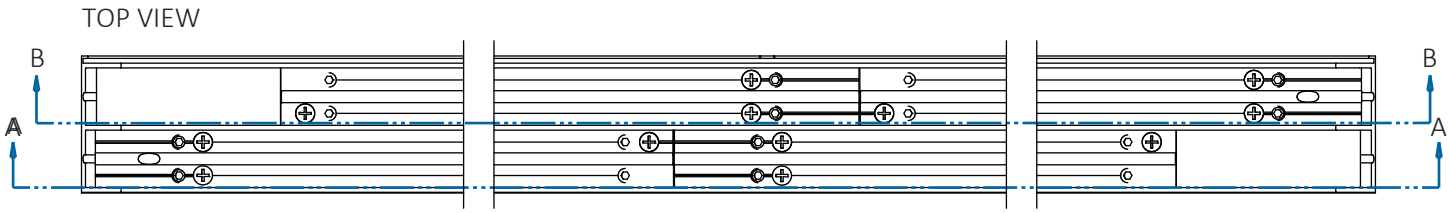
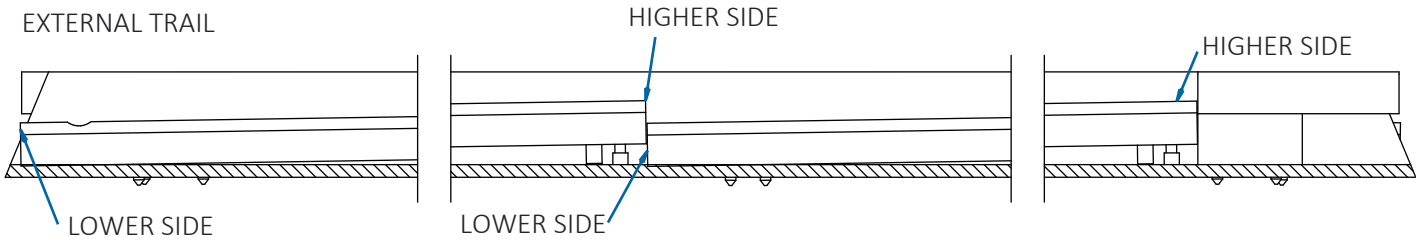


FIGURE 3J

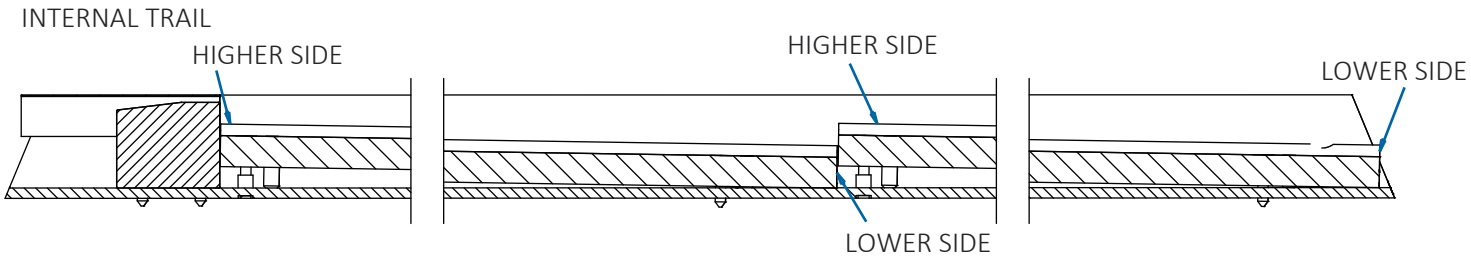
INSTALLATION

Description of components and positions involved in sliding door adjustment:

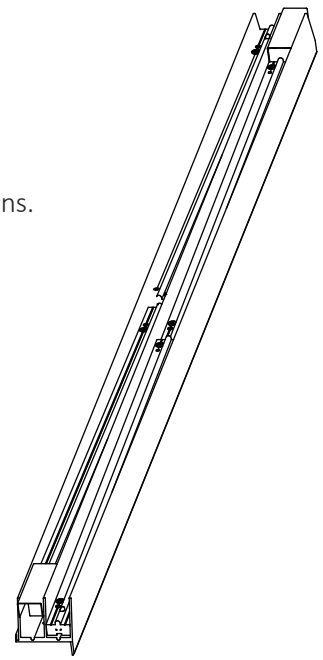




SECTION A-A



SECTION B-B



NOTE:

You can adjust 2 things:

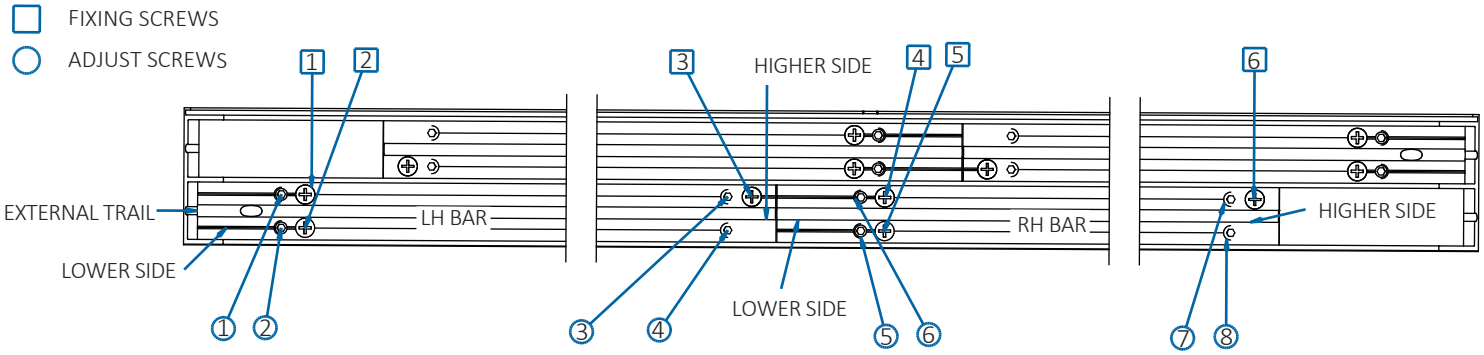
1 The gap between the door and the end, please see the details in the following instructions.
2. The running rate of the door:
2.1 Increase the speed:
Rise the higher side of the bar under the door which you would like to change.
2.2 Lower the speed:
Lower the higher side of the bar under the door which you would like to change.

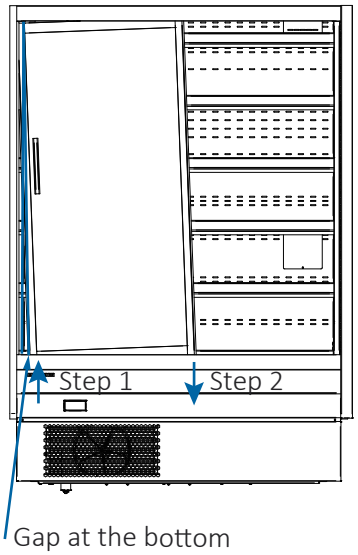
Fouction and basic way:

For adjust screw:

When anticlockwise rotation-the bar will rise
When clockwise rotation-the bar will fall
Note: before adjust the bar,should remove all the fixing screws on the bar.

INSTALLATION

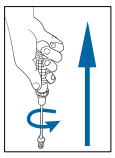




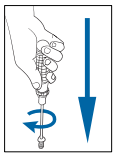
Issue:

External door have the gap at the bottom.

How to deal with this problem:



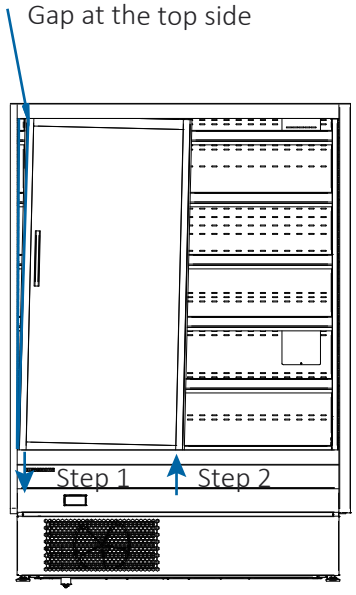
Step 1: Rise the lower side of the LH bar in the external trail.
1.1 Remove the fixing screws 1&2&3.
1.2 Anticlockwise the adjust screws 1&2.
1.3 If it works,stop here;if not,please continue step 2.



Step 2: Lower the lower side of the RH bar in the external trail.
2.1 Remove the fixing screws 4&5&6.
2.2 Clockwise the adjust screws 5&6.

Step 3: Fix all fixing screws.

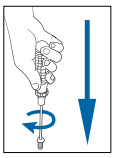
* When the bar side rise or lower 1mm,the gap between the the door gasket and the end will change about 2mm.



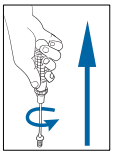
Issue:

External door have the gap at the top.

How to deal with this problem:



Step 1: Lower the lower side of the LH bar in the external trail.
1.1 Remove the fixing screws 1&2&3.
1.2 Clockwise the adjust screws 1&2.
1.3 If it works,stop here;if not,please continue step 2.

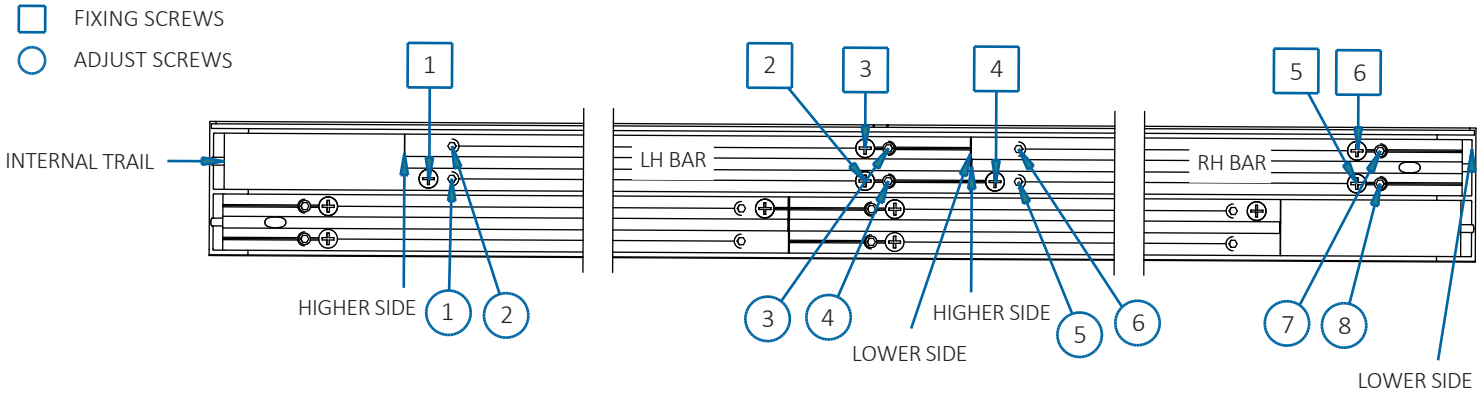


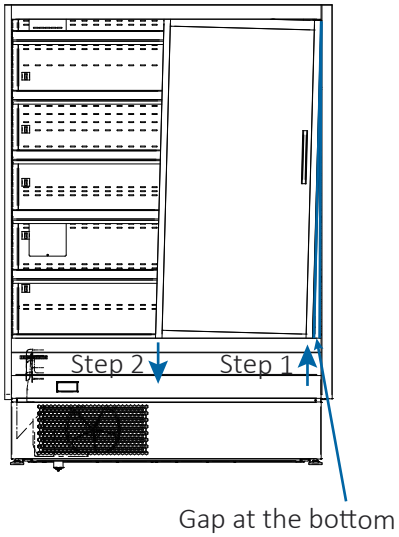
Step 2: Rise the lower side of the RH bar in the external trail.
2.1 Remove the fixing screws 4&5&6.
2.2 Anticlockwise the adjust screws 5&6.

Step 3: Fix all fixing screws.

* When the bar side rise or lower 1mm,the gap between the the door gasket and the end will change about 2mm.

INSTALLATION

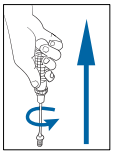




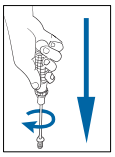
Issue:

Internal door have the gap at the bottom.

How to deal with this problem:



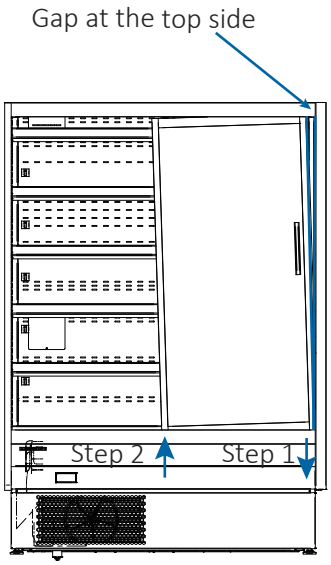
Step 1: Rise the lower side of the RH bar in the Internal trail.
1.1 Remove the fixing screws 4&5&6.
1.2 Anticlockwise the adjust screws 7&8.
1.3 If it works,stop here;if not,please continue step 2.



Step 2: Lower the lower side of the LH bar in the internal trail.
2.1 Remove the fixing screws 1&2&3.
2.2 Clockwise the adjust screws 3&4.

Step 3: Fix all fixing screws.

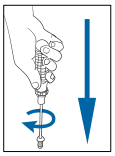
* When the bar side rise or lower 1mm,the gap between the the door gasket and the end will change about 2mm.



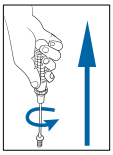
Issue:

Internal door have the gap at the top.

How to deal with this problem:



Step 1: Lower the lower side of the RH bar in the internal trail.
1.1 Remove the fixing screws 4&5&6.
1.2 Clockwise the adjust screws 7&8.
1.3 If it works,stop here;if not,please continue step 2.



Step 2: Rise the lower side of the LH bar in the internal trail.
2.1 Remove the fixing screws 1&2&3.
2.2 Anticlockwise the adjust screws 3&4.

Step 3: Fix all fixing screws.

* When the bar side rise or lower 1mm,the gap between the the door gasket and the end will change about 2mm.

3.4 JOINING THE CASES

- Draw up the required case tightly against the case already in position.
- After the layout is completed, adjust the level to ensure that the cabinet is in a uniform horizontal plane.
- Install decorative sheet metal between the bottom and top of the two cabinets.
- The end plate must not be removed.

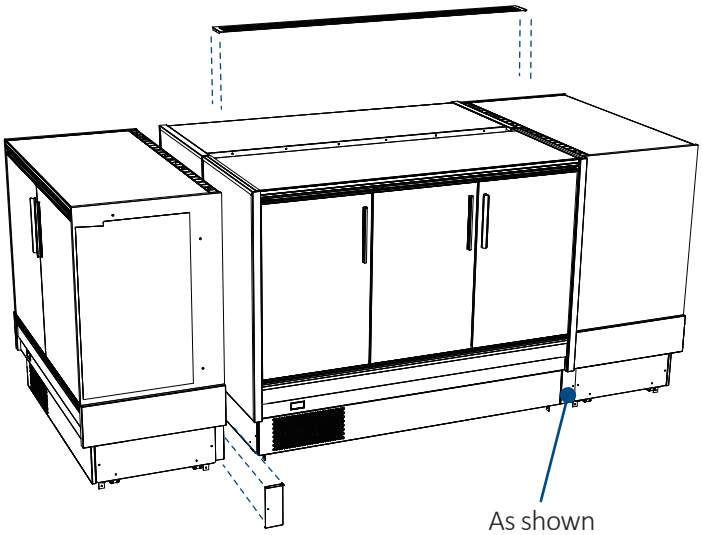


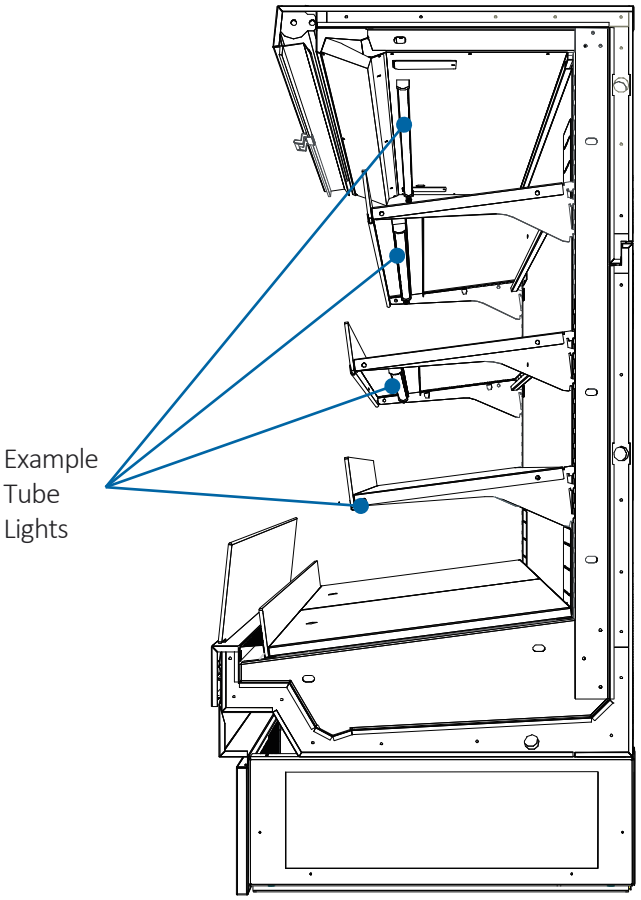
FIGURE 3K

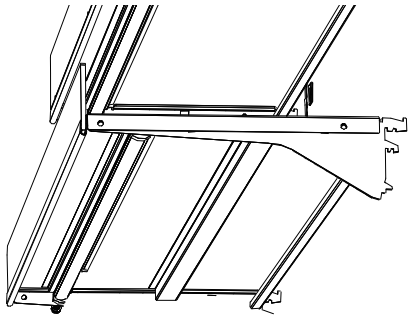
3.5 LIGHTING

Single Row Canopy LED lighting is standard.

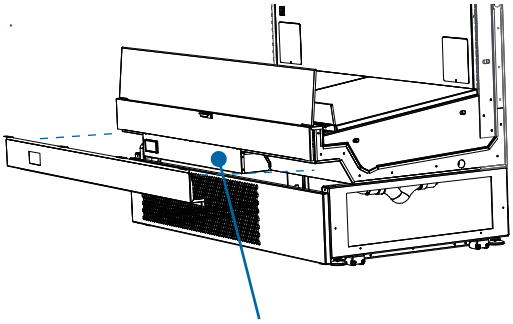
Various optional shelf LED lighting is available and where fitted is located under each of the shelves.

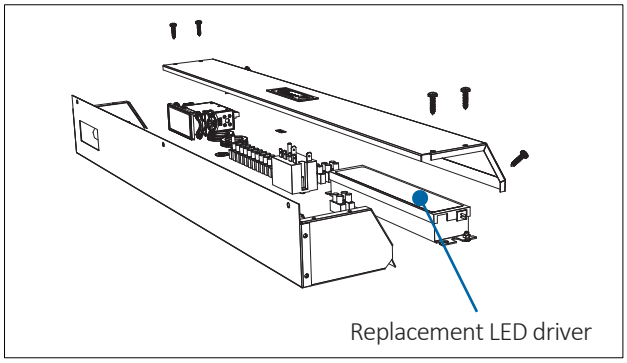
NOTE: Vertical mullion lighting is standard with Bentcam doors.





It is important that proper cable management is followed and cables are clipped in correctly. There is a plastic clip that clips into the bracket that holds the cable. Ensure all cables are retained into the back panel.



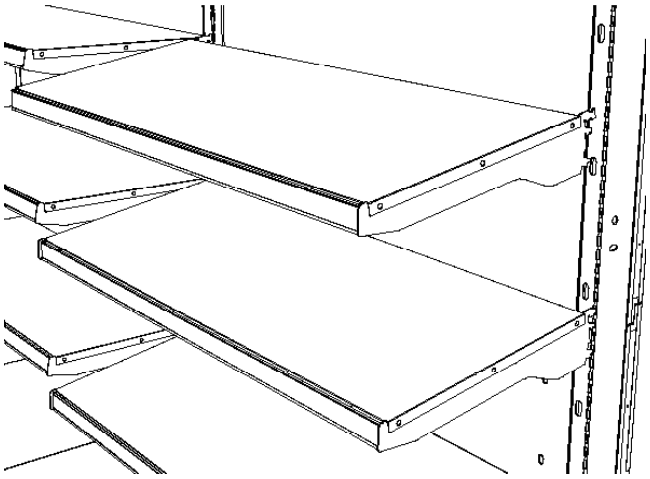


If lights appear faulty or not functioning, contact your nearest service provider for replacement.

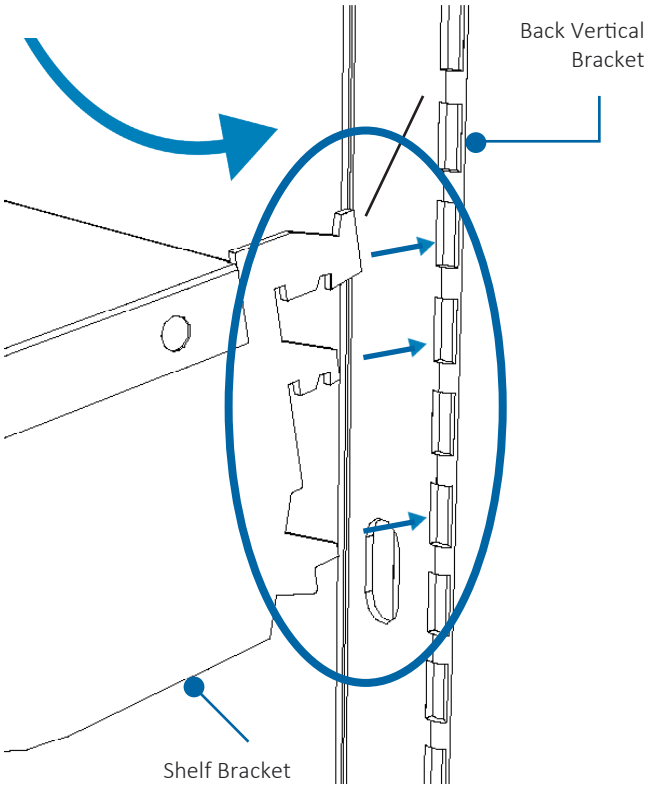
NOTE: For any information regarding customer specific lights, reach out to Hussmann.

3.6 FITTING SHELVES

Although the shelf sizes may vary, the installation and fitting will remain the same.

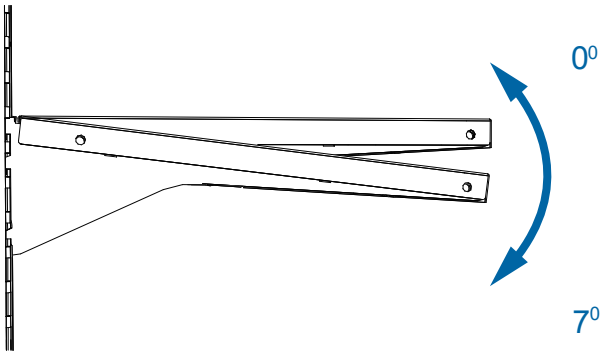


Using the hook bracket shown down below. Lift the shelf up to the back vertical bracket. The height is independently adjustable by which holes you put the bracket on. Make sure you level the shelf by inserted the bracket in its corresponding hole on the other sid.



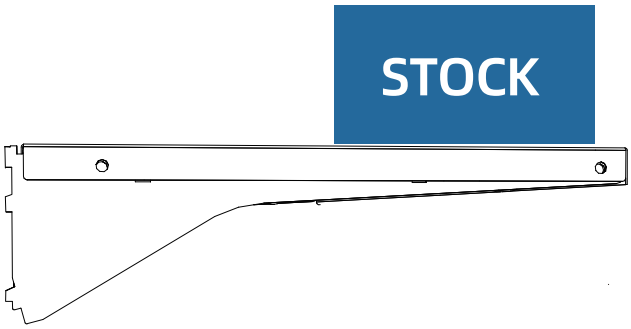
CLEANING & MAINTENANCE

TILTING SHELVES



The shelves can be titled downward in 0° or 7°. This is done by the placement of hinges on the shelf brackets.

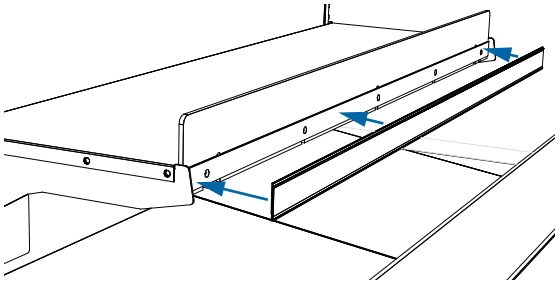
NOTE: The shelves are not able to be tilted upward.



CAUTION: Do not exceed the weight limit of each shelf. Each shelf has a total maximum weight limit of 180kg/m².

NOTE: If the case shelf arrangement has been deviated significantly from original specified setup, then product temperature may be affected.The quantity and location of shelving may affect cabinet performance. Refer to PED sheet and/or your refrigeration service provider.

TICKET STRIPS



- Remove 3M glue from the back of the ticket strips.
- Then align the shelves and paste them on.

4.1 COMMISSIONING

CLEANING

For all case cleaning activities cabinet should be turned off. (Electrical power safely disconnected and refrigeration switched off). Once all cleaning is completed, remember to turn it back on safely.

- Remove the PVC protective coating on stainless steel, where applicable
- Remove any residue, silicon or tape marks with a cloth moistened with rubbing alcohol.
- Remove all debris from in and around the case.
- Wipe case with a clean, damp cloth, if necessary.

Doors:

» At temperatures above 0°C hand wash with warm water and using a mild detergent is recommended.

» A glass cleaner can be used (Windex) using a towel. (paper towel not suggested).

» Take care with cleaning, and avoid any materials that may mark the door (Including fingerprints).

» Do not use tape, glue, stickers, attachments, magic markers, or the like on the glass.

» Do not use razor blades or any other mechanical device to remove foreign residue or objects directly from the glass.

» Do not use abrasive cleaners or materials on the glass like, Ajax, Scotch Brite or Steel Wool.

» Do not use cleaners or materials on the glass that hinder the anti-fog performance (if applicable), by leaving a residue or damaging the surface. Examples of these cleaners include : Armor All, TIlex, Bleach, Windex No-Drip, Windex Wipes, Pledge or any product containing silicone oils or waxes.

CLEANING & MAINTENANCE

» Recommended cleaners include: Greased Lightning, Formula 409 Grease & Grim, Formula 409 Grease & Surface, Fantastic, Windex Vinegar, Windex original, Now, Mean Green or Mr. Clean (degreasing cleaners).

A thorough condenser air filter check, and clean if dirty, It should be carried out by the store staff 1 week to 1 month.If condenser air filter is dirty, then the following procedures should be undertaken as a minimum:

» The front lower panel holding the condenser air filter is held in position magnetically, it is easy to remove by pulling this panel forward. Refer to photo sequence inserted further below. NOTE:- no tools are required to remove or replace the condenser air filter panel or filter.

» Use appropriate PPE.
» Remove condenser air filter panel.
» Remove condenser air filter media/mesh.
» Take to the back-of-house or an area where filter media/mesh can be undertaken appropri ately.
» If available use a vacuum cleaner with a soft brush and thoroughly clean the filter.
» If no vacuum cleaner, then washing in warm water is recommended. Ensure the filter is at least shaken dry (i.e. no water drips).
» Return now clean filter to the cabinet and replace in reverse order. Ensure filter media/mesh is correctly positioned and that the filter panel is re-fitted in its correct position.
» The above steps are in order of task:

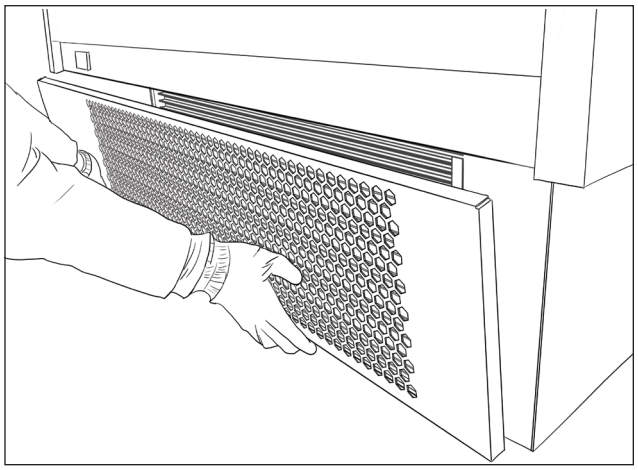


FIGURE 4A

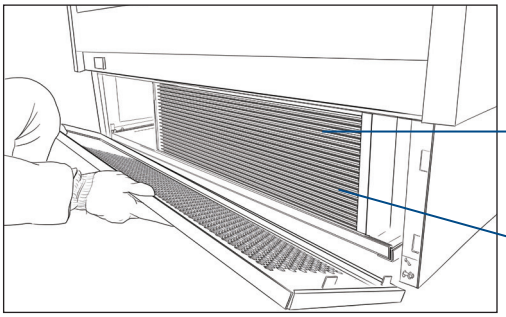


FIGURE 4B

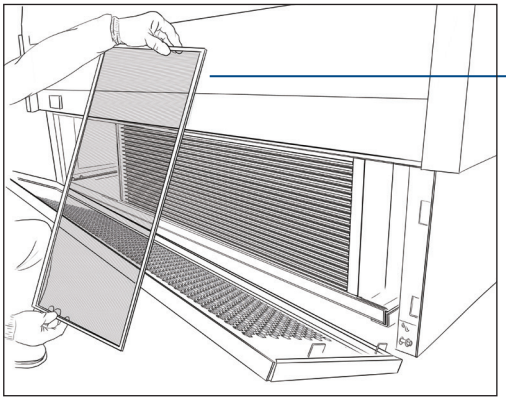


FIGURE 4C

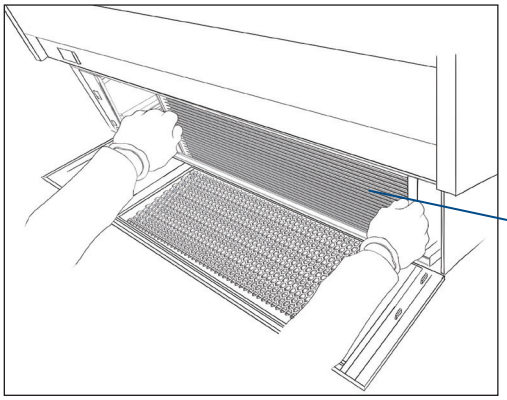


FIGURE 4D

CLEANING & MAINTENANCE

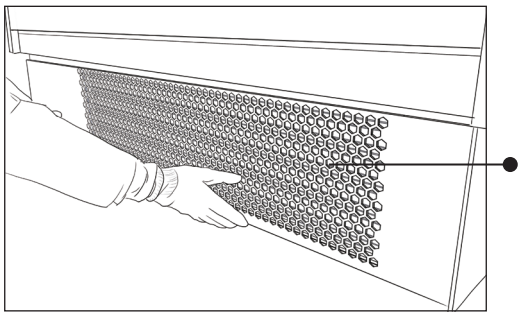


FIGURE 4E

It is recommended that blotting paper blocks be replaced once a year.The above steps are in order of task:

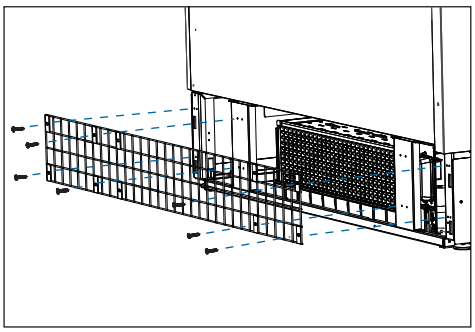


FIGURE 4F

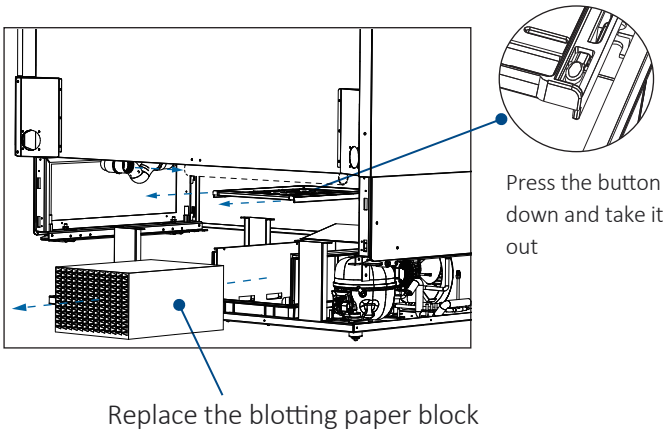


FIGURE 4G

START UP & CHECKS

- Check supply power is ready and correct voltage. (by Licensed Person).
- Confirm correct operation of RCD (if fitted) (by Licensed Person).
- Ensure that the drain trap is installed the right way up (refer to figure 3AC: drain trap orientation in the section installing the waste drain)

NOTE: Verify all electrical termination during commissioning. It is a requirement to check all electrical connections for tightness, where appropriate all electrical connections must be re-tensioned prior to powering up the cabinet.

TURN POWER ON

- Check that all fans and lights (and light RCDs, if installed) are working correctly.
- Check the anti sweat circuit is working correctly.

  Set expansion valves and EPRs as per Product Engineering Data – Available from Hussmann.

- Approximately 24 hours after start-up, check that the case is at correct operating temperature (refer the Product Engineering Data).

4.2 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.

FAN PLENUM

To facilitate cleaning, the fan plenum is hinged and also fastened with screws at each end. After cleaning be sure the plenum is properly returned into position and that screws are reinstalled or performance loss will result due to improper refrigeration.

CAUTION: Power to the case needs to be turned off when cleaning, ensure the fans are off during this process. REMINDER: when cleaning completed, check all items are ready to go, then safely reconnect power.

INTERIOR SURFACES

The interior surfaces may be cleaned with mild domestic detergents.

EXTERIOR SURFACES

The exterior surfaces should be cleaned with a mild detergent and warm water to protect and maintain their attractive finish. Never use abrasive or solvent based cleaners and scouring pads.

CAUTION: Do NOT use HOT(+35°C or lower) water on COLD glass surfaces.This can cause the glass to shatter and could result in personal injury. Allow glass fronts, ends and service doors to warm before applying hot water. Do NOT use hot water inside the case.

DO NOT USE:

- Abrasive cleansers and scouring pads, as these will mar the finish.
- Coarse paper towels on coated glass.
- Ammonia or sovent-based cleaners on acrylic parts.
- Solvent, oil or acetic based cleaners on any interior surfaces.



DO USE:

Remove the product and all loose debris to avoid clogging the waste outlet.

- When deep cleaning cabinets that may require the removal of the refigerated product, ensure this is stored in a suitable refrigerated area to maintain the cold chain.
- Then turn off refrigeration, then safely disconnect electrical power.
- Thoroughly clean all surfaces with appropriate cleaners noted previously. Do not use steam or high pressure water to wash the interior. These may damage the merchandisers' sealing causing leaks and poor performance.
- Remove screws and lift hinged fan plenum for cleaning. Be sure to reposition the fan plenum after cleaning merchandiser.
- Avoid water contact on all electrical components includng fan motors and lights.

CLEANING & MAINTENANCE

DO USE:

- Rinse with warm water, but do NOT flood. Never introduce water faster than the waste outlet can remove it.
- Allow merchandisers to dry before resuming operation.
- After cleaning is completed, turn on power and refrigerant to the merchandiser.
- Verify that merchandiser is working properly (ie. achieves control temperature).
- Restock cabinet with refrigerated product.



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

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 dry after wetting to avoid stains.

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 Food grade 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.



WEAR APPROPRIATE PPE GEAR WHILST CLEANING.

CLEANING COILS

Wear apppropriate PPE.

NEVER USE SHARP OBJECTS AROUND COILS. Use a soft brush and water 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.
Do NOT use chlorine or ammonia-based cleaners. 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.



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

CLEANING UNDER MERCHANDISERS

Remove splashguards not sealed to floor. Use a vacuum with a long wand attachment to remove accumulated dust and debris from under the merchandiser. Ensure this is undertaken by qualified personnel. Caution needs to be taken below case around power cables, drainage,ensuring nothing is dislodged during the cleaning process.

4.3 DAILY CHECKS

- If an alarm system is not part of the refrigeration installation, the temperature of each case should be checked on a daily basis via the thermometer that may be located in the left hand side of the ceiling panel, or via another reliable method.
- The case temperature should be in the range of -2°C to +4°C (except during defrost).
- Up to three separate readings may have to be taken to ensure the case temperature isn't being taken during a defrost cycle (which would give a higher than desired reading).
- If it is consistently outside this range, contact your refrigeration service provider.
- Visually check the case for damage or spills and take appropriate remedial action.
- Visually inspect drain strainer and drain for any debris which could result in the drains becoming blocked with the possibility of spilling on the floor creating a slip hazard.
- If the cabinet is turned off during non trading hours ensure the cabinet is cleaned thoroughly to avoid bacterial growth during off time.



CAUTION: If any damaged electrical components are identified during inspection isolate case power and contact service contractor.

CLEANING

A thorough cleaning and service of the case should be carried out by qualified refrigeration and electrical engineers on a six monthly basis. Please contact Hussmann Pty Ltd or your service provider. Cases should also be cleaned by store staff on at least a weekly basis; some cases may, however, require more frequent cleaning.

IMPORTANT NOTES

- DO NOT use hot water on cold glass surfaces as the glass may shatter and cause serious injury.
- DO NOT use abrasive, solvent, ammonia or oil-based cleaners.
- DO NOT use steam or a high-pressure system to clean the case.
- When flushing the waste drain, do not use high pressure water hoses and be careful not to introduce water faster than the waste outlet/drain can drain it.
- DO NOT apply the detergents directly onto the surfaces to be cleaned.
- DO NOT use steam cleaning equipment.
- DO NOT use excessive force.
- DO NOT use high pressure cleaning equipment. This may cause injury to the installer or user and may damage cabinet.



4.4 SIX MONTHLY MAINTENANCE

A thorough cleaning and maintenance check should be carried out on a six monthly basis by qualified and approved refrigeration and electrical engineers. The following procedures should be undertaken as a minimum.



CAUTION: If any damaged electrical components are identified during inspection isolate case power and contact service contractor.

Validate all electrical termination has been tightened once more.

Check all electrical connections for tightness and re-tensioned where needed prior to powering up the cabinet.

1. Isolate power.
2. Remove of all product stock and store appropriately.
3. Check that all case panels, glass and trims are secure and undamaged.
4. Check for rust or paint damage.
5. Clean the air grilles on the cases.
6. Clean glass or mirrored surfaces with a clean soft cloth and mild glass cleaner.
7. Wipe LED lights with a dry cloth.
8. Wipe down the exterior and interior of the case, paying particular attention to the perforations in the rear panels and the air return grill with a clean soft cloth and mild soapy water.
9. Remove the base trays and fan panel, wash with mild soapy water and rinse.
10. Remove all foreign materials from the bottom of the case. Wipe over with clean dry cloth.
11. Carefully clean the evaporator using a soft bristle brush and mild soapy water, clean any residue with a bucket of warm water and drain out. Ensure the drain is free flowing and check it for damage.
12. Carefully flush the waste drain with a bucket of water and allow the base to drain. Ensure the drain is free flowing. You may need to clean out the drain trap. Refrain from adding excessive water that will not be able to be drained as rapidly as poured.
13. Ensure all cable connections, including screw terminals, earth leads and straps, are secure.
14. Ensure insulation to all electrical components, including solenoid valves, fans, controls, earth terminals and lights, are sound.
15. Carry out electrical safety tests, including earth continuity and insulation resistance.
16. Ensure that the correct fuse rating and type is fitted for all circuits.
17. Ensure that there are no refrigerant leaks.
18. Replace fan panel and base trays,
19. Safely switch power to the case back on.

With case power turned on:

20. Check that all fans, valves, lights and controls are working correctly.
21. Ensure light RCDs (if fitted) are working.
22. Allow the case to attain correct working temperature (approximately 30 minutes) and restock the shelves.

DECOMMISSIONING & DISPOSAL

5.1 DECOMMISIONING

Plan and risk assess the decommissioning process to include the following:

- Disconnect all case services. Disconnection is to be undertaken by qualified persons only.
- Removal of the case is to be in the reverse order of installation listed previously.
- Dismantle the cabinet in accordance with the local laws on waste disposal and in respect of the environment in which we live.



5.2 DISPOSAL

The case must be disposed of in accordance with local authority guidelines.

75% of the materials in this case are able to be recycled; the materials in this case are as follows;

- **Sheet Metal** and other various metals.
- **Copper / Aliminum**
- **Tempered Glass**
- **Wood**
- **PVC**
- **Polystyrene**
- **Polycarbonate**

Remaining by commercial waste management



TROUBLESHOOTING

6.1 TROUBLESHOOT TABLE

ISSUE	POSSIBLE REASON	REMEDIAL ACTION
Product temperature is higher than requirement	Store condition is warmer or more humid than climate class 3 (25°C/60%RH)	Check store climate control is operating correctly.
	Refrigeration plant is not running or operating at inappropriate settings or conditions.	Check that compressor unit is running. If unit is running and other possible reasons are eliminated, then call refrigeration service technician to check plant operation.
	Insufficient or no air flow appears at the cabinet honeycomb air curtain.	Check if coil is iced-up. If iced-up then check defrost settings are as per the manufacturers guideline or set to suit the store operating condition. A colder store may require longer defrost duration. A humid store may need more frequent defrost.
		Check if case fans are turned on or operating correctly. If any doubt of fan operation contact technician.
	Case shelf arrangement has been deviated significantly from original specified setup.	Re-align the shelf arrangement as per the original specification.
	Air Return is blocked by merchandise or detritus.	Remove merchandise / clean detritus so air grille is free on any encum-brances.
	None of above.	Contact refrigeration service technician.
Products are freezing up	Store condition is too cold compared to design climate class 3.	Check store air conditioning operation. If store condition cannot be lifted, then adjust cabinet set-points and defrost strategy to suit.
	Store humidity is high	Check store air conditioning operation.
	Insufficient ventilation	Check case ventilation under and at rear of the case. A fan kit may be needed due to local/micro-climate conditions.

TROUBLESHOOTING

6.1 TROUBLESHOOT TABLE

ISSUE	POSSIBLE REASON	REMEDIAL ACTION
LED Lights are not working	No power supply.	Check supply is “on” and light switch is working.
	Light cable connection loose.	Have your refrigeration service provider fault0find and rectify as needed.
	LED Lamp or power driver failed.	Have electrician fault0find and repair as needed.
Water spill on the floor	The door was not closed on time.	Close the door on time at night.
	Climate classes exceed design specification (25°C, 60%).	Adjust air condition maintain climate.
	Environmental wind field disrupts the wind curtain.	Adjust the direction and speed of the air conditioning discharge air speed.
	Condenser filter block.	Clean the filter screen.
	Excessive cleaning water usage.	Keep the cleaning water volume within 1 liter.
The compressor doesn’t start after 2 minutes	The power supply cable is disconnected.	Reconnect plug.
	The circuit breaker has tripped.	Contact service provider.
	The unit is damaged.	Contact service provider.
Increased cabinet noise	The condenser coil is dirty	Contact service provider.
	The evaporator is blocked with ice	
	The compressor is damaged	
The compressor never stops	The condenser coil is dirty.	Contact service provider.
	The cabinet has a leak and is low on refrigerant.	
	The digital control unit is not regulat-ing or is damaged.	
	The evaporator is blocked with ice.	

TROUBLESHOOTING

6.1 TROUBLESHOOT TABLE

ISSUE		CAUSE OF THE ALARM	INSPECT
Fault code	rE	Virtual control sensor.	Inspect the temperature probe: S1/S2, measure the resistance value
	E0	Probe S1 fault.	Inspect the temperature probe: S1, measure the resistance value
	E1	Probe S2 fault.	Inspect the temperature probe: S2, measure the resistance value
	E2	Probe S3 fault.	Inspect the temperature probe: S3, measure the resistance value
	E3	Probe S4 fault.	Inspect the temperature probe: S4, measure the resistance value
	E4	Probe S5 fault.	Inspect the temperature probe: S5, measure the resistance value
	LO	Low temperature alarm	Inspect actual temperature and elated parameter A1,AL
	HI	High temperature alarm	Inspect actual temperature and elated parameter A1,AH
	Afr	Freezing alarm	Inspect actual temperature and elated parameter ALF, AdF
	IA	Immediate alarm from external contact	Inspect exteranl alarm
	dA	Delayed alarm from external contact	Inspect exteranl alarm
	cht	Condenser dirty pre-alarm	Inspect condenser fan work properly Clean the condenser filter net
	CHT	Condenser dirty alarm	Inspect condenser fan work properly Clean the condenser filter net
	dor	Door open for too long alarm	Inspect cabinet door and door closer
	Etc	Real time clock fault	Replace controller
	EE	Flash unit parameter error	Replace controller
	EF	EEPROM operating parameter error	Replace controller
	n1 - n6	Alarm on unit 1 to 6 in the network	Inspect slaver controller alarm content

TROUBLESHOOTING

6.1 TROUBLESHOOT TABLE

ISSUE		CAUSE OF THE ALARM	INSPECT
Fault code	“P1”	Room probe failure	Compressor output acc. to par. **Con** and **CoF**, Inspect the temperature probe, measure the resistance value
	“P2”	Evaporator probe failure	Defrost end is timed, Inspect the temperature probe, measure the resistance value
	“P3”	Third probe failure	Outputs unchanged, Inspect the temperature probe, measure the resistance value
	“P4”	Fourth probe failure	Outputs unchanged, Inspect the temperature probe, measure the resistance value
	“HA”	Maximum temperature alarm	Outputs unchanged, Inspect actual temperature and related parameter
	“LA”	Minimum temperature alarm	Outputs unchanged, Inspect actual temperature and related parameter
	"HA2"	Condenser high temperature	It depends on the **AC2** parameter, Inspect condenser fan work properly, Clean the condenser filter net
	"LA2"	Condenser low temperature	It depends on the **bLL** parameter
	“dA”	Door open	Compressor and fans restarts
	“EA”	External alarm	Output unchanged.
	“CA”	Serious external alarm (**i2F=bAL**)	All outputs OFF.
	“CA”	Pressure switch alarm (**i2F=PAL**)	All outputs OFF
	“rtc”	Real time clock alarm	Alarm output ON; Other outputs unchanged; Defrosts according to par. **idF** Set real time clock has to be set
	“rtF”	Real time clock board failure	Alarm output ON; Other outputs unchanged; Defrosts according to par. **idF** Contact the service

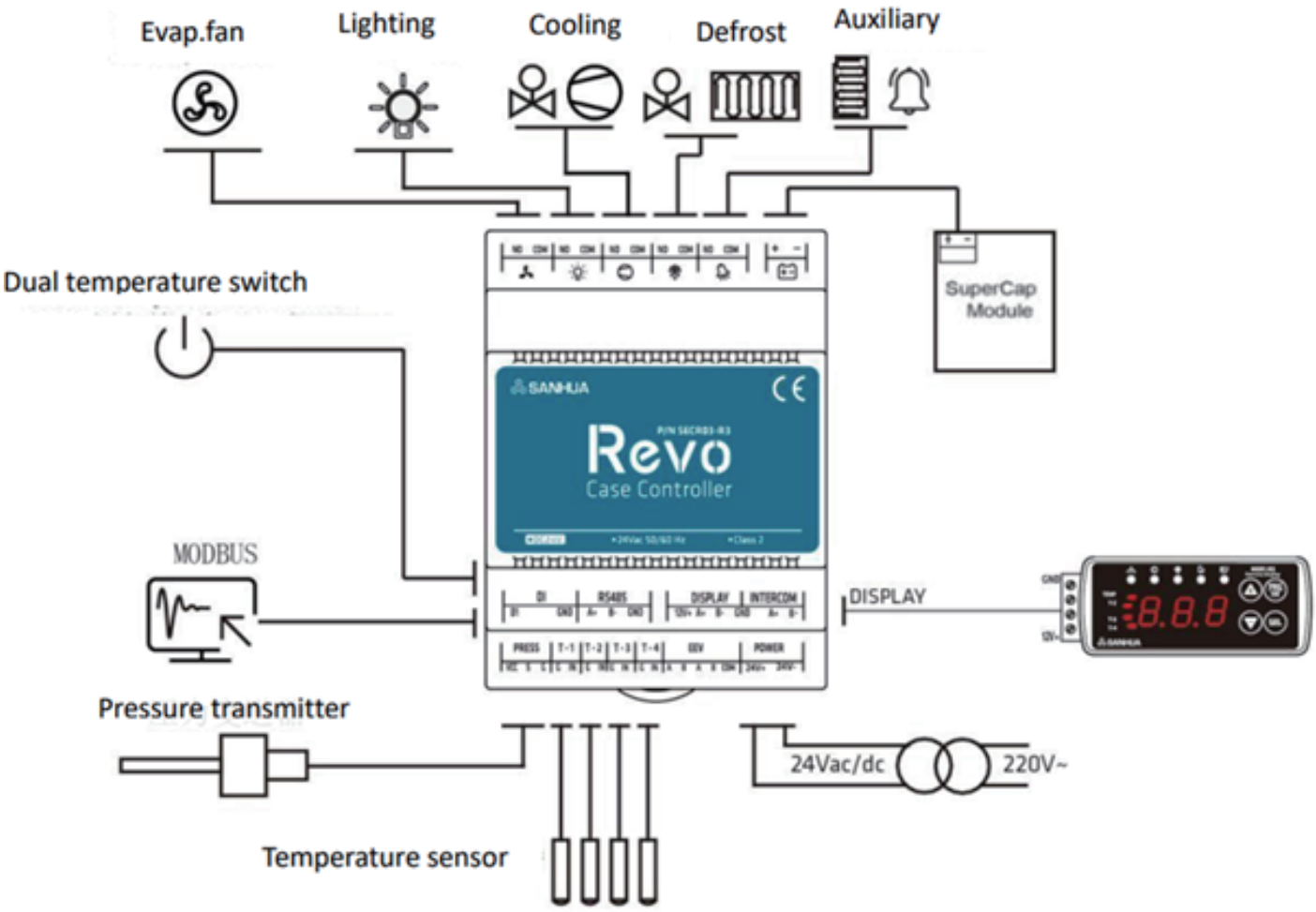
TROUBLESHOOTING

6.1 TROUBLESHOOT TABLE

ISSUE		CAUSE OF THE ALARM	INSPECT
Fault code	T2O	Outlet air temperature sensor open circuit	Check the temperature probe.
	T2S	Outlet air temp. sensor short circuit	Check the temperature probe.
	T3O	Inlet air/condensing Temp sensor open circuit	Check the temperature probe.
	T3S	Inlet air/condensing Temp sensor short circuit	Check the temperature probe.
	T4O	Defrost Temp sensor open circuit	Check the temperature probe.
	T4S	Defrost Temp sensor short circuit	Check the temperature probe.
	HCT	High cabinet temperature alarm	Check the actual temperature, check whether the refrigerator is running properly, check the H08 parameter
	LCT	Low cabinet temperature alarm	Check the actual temperature, check whether the refrigerator is running properly, and check the H12 parameter
	cht	High condensing temp. alarm	Check whether the condenser fan works properly and clean the condenser filter
	CHt	High condensing temp. protection	Check whether the condenser fan works properly and clean the condenser filter
	EL	Refrigeration overtime alarm	Check whether the refrigerator is running normally, check the actual temperature, and check the H15 and H16 parameters
	FrE	Anti-freeze protection alarm	Check the J13 parameter, check the frosting status of the evaporator, and check whether the refrigerant is leaking

7.1 SECR03-R3 series Controller operation instruction

1. Controller function & wiring diagram



2. Operating instruction

2.1 Remote display



7.1 SECR03-R3 series Controller operation instruction

Item		Description
LED		Set as a master controller, LED is ON, Set as a slave controller, LED is OFF
		When compressor or Liquid line solenoid valve is working, the LED is ON
		When heater or defrosting solenoid valve is working, the LED is ON
		When the alarm/ anti-condensation heater is working, the LED is on.
		When communicate with upper computer/supervision, LED light is ON
	℃/bar	Units of temperature and pressure
	★TEMP	Cabinet temperature
	T-2	Outlet air Temp.
	T-3	Inlet air Temp.(by default)/Condensing Temp.
	T-4	Defrosting Temp.
	TEMP +T-2	T1 Temp.

2.2 Button Functions

- Cabinet temperature is displayed by default; press the SEL key to switch the display content, view other parameters such as T-2 Temp, T-3 Temp, etc., and automatically return to the current Cabinet Temp display after 1 minute of without operation.
- Press SEL for 3s to start control function and digit screen displays “ON”.Press for SEL 3s again to close control function and digit screen displays “OFF” , then screen will be off. Under “OFF” mode, the timer will keep running while other controls of cooling, defrost and evaporating fan are OFF.
- During defrost mode, press both and for 3 seconds to compulsively quit defrost mode and start the cooling mode.During cooling mode, press both and for 3 seconds to compulsively end the cooling mode and start defrost mode.
- Press both PRG and SEL button for 3 seconds to enter or exit the fault/alarm display.When displaying faults, switch between the value and the current fault code, switching once every 1 second.

CONTROLLER DESCRIPTION

7.1 SECR03-R3 series Controller operation instruction

- Press both and button for more than 5 seconds to reset the alarm (in case of manually reset alarm).
- Press both and button for 3 seconds to switch between day and night, Lights are turned off in night mode.

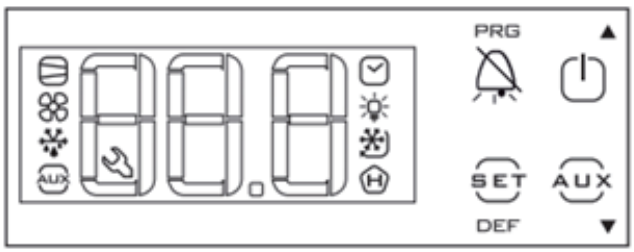
2.3 Parameter setting

- Long press key for 5 seconds, and enter the password through the 【+】 【-】 button, press the【SEL】 key to confirm, and enter the parameter setting mode(When the password is correct, the value flashes and can be modified. When input wrong password, users can check the parameter but cannot modify the parameter. Default password = 5.
- Input password to enter page Menu (1.Pr, 2.Pr, 3.Pr, 4.Pr, 5.Pr, 6.Pr, 7.Pr, 8.Pr, 9Pr), Press t choose the page menu and press【SEL】 to enter the target page.
- Press to select the parameter needed to be revised and press 【+】 and 【-】 to revise the value. Press 【SEL】 to access to next parameter and press “PRG” to return to page menu.
- Press for 3 seconds to save the parameter setting and exit parameter setting mode. Without operation after 1 minute, automatically exit the parameter setting.

* Refer to the controller manual for detailed operation and parameters.

7.2 CAREL-IR33 Controller operation instruction

1. Keys and Functions



Button	Normal function Pressing the button alone
PRG/MUTE PRG	• pressed for more than 5 s accesses the menu for setting type “F” (frequent) parameters • in the event of alarm: silences the audible alarm (buzzer) and disables the alarm relay
ON-OFF/UP	• if pressed for more than 1 s, enables/disables the regulation • during the parameters modification increase the value displayed move towards the next paramenter
AUX/DOWN AUX	• if pressed for more than 5 s, enables/disables the auxiliary output • during the parameters modification decrease the value displayed or move towards the previous paramenter
SET/DEF SET DEF	• if pressed for more than 1 s, enables/displays and/or set the set point • if pressed for more than 5 s, enables a manual defrost

7.2 CAREL-IR33 Controller operation instruction

2. Signals on the display

Icon	Function	Normal operation		
		ON	OFF	blink
	COMPRESSOR	compressor ON	compressor OFF	compressor required
	FAN	fan ON	fan OFF	fan required
	DEFROST	defrost in progress	defrost not required	defrost required
AUX	AUX	auxiliary output AUX active	auxiliary output AUX not active	anti-sweat heater function active
	ALARM	delayed external alarm (before the expiry of the time 'A7')	no alarm present	alarms and malfunctions
	CLOCK	at least one timed defrost has been set	no timed defrost is present	clock alarm
	LIGHT	auxiliary output LIGHT active	auxiliary output LIGHT not active	anti-sweat heater function active
	SERVICE		no malfunctions	malfunction (es. EEPROM error or probe fault)
H	HACCP	function not enalbled	function enabled (HA and/or HF)	HACCP alarm enabled
	CONTINUOUS CYCLE	function enabled	function not enalbled	function required

3. How to set the set point (desired temperature value)
To change the set point Set :

A. press Set for more than 1 s: the display shows Set and then the current value of St;
B. press UP/DOWN until reaching the desired value;
C. press Set to save the new value of St.

4. How to Change a Parameter Value Procedure:

A. press Prg/Mute one or more times to return to the standard display;
B. press Prg/Mute for more than 3 seconds (if an alarm is active, the buzzer is muted): the display will show the code PS (Password) and the number 0;
C. press UP/DOWN and enter the password: 22. Press Set, the display shows parameter /2;
D. press UP or DOWN until reaching the desired parameter: when scrolling, an icon is displayed that represents the category the parameter belongs to;
E. press the SET button to display the value of the parameter;
F. press UP/DOWN until reaching the desired value;
G. press Set to temporarily save the new value and display the parameter code again;
H. repeat steps D) to G) to set other parameters;
I. to permanently save the new values of the parameters, press Prg/Mute for 5 seconds. This exits the parameter setting procedure.

* Refer to the controller manual for detailed operation and parameters.

7.3 DIXELL XR75CX Controller operation instruction

1. Keys and Functions



- SET Press to display target setpoint, to select a parameter in programming mode, or to confirm an operation.
- Starts a manual defrost.
- Press the UP arrow key to see the MAX stored temperature, to browse the parameter codes in programming mode, or to increase the displayed temperature value. Press the DOWN arrow key to see the MIN temperature, to browse the parameter codes in programming mode, or to decrease the displayed temperature value.
- Switches the device ON and OFF, if onF = oFF
- Switches the light ON and OFF, if oA2=Lig
- SET + To enter programming mode.
- SET + Returns to room temperature display.

2. Use of LEDS

	ON	Compressor enabled		ON	Continuous cycle is running
	Flashing	Anti-short cycle delay enabled			
	ON	Defrost enabled		ON	Energy saving enabled
	Flashing	Drip time in progress		ON	Light ON
	ON	Fans enabled	AUX	ON	Auxiliary relay ON
	Flashing	Fans delay after defrost in progress.	°C,°F	ON	Measurement unit
	ON	An alarm is occurring		Flashing	Programming phase

CONTROLLER DESCRIPTION

3. How to See the Setpoint



1. Press and immediately release the **SET** key: the display will show the setpoint value.
2. Press and immediately release the **SET** key or wait for 5 seconds to display the probe value again.

4. How to Change the Setpoint

1. Press and hold the **SET** button for more than 2 seconds to change the setpoint value.
2. The value of the setpoint will be displayed and the **°C** or **°F** LED will start blinking.
3. To change the setpoint value, press the **UP** or **DOWN** buttons within 10 seconds.
4. To memorize the new setpoint value, press the **SET** key again or wait 10 seconds.

5. How to Change a Parameter Value

1. Enter the Programming mode by pressing the **SET** + **DOWN** buttons for three (3) seconds (the **°C** or **°F** LED will start blinking).
2. Release the buttons and then push the **SET** + **DOWN** buttons for more than seven (7) seconds. The **Pr2** label will be displayed immediately followed by the **HY** parameter. *You can now browse the Hidden Menu*.
3. Select the required parameter.
4. Press the **SET** button to display its value.
5. Use the **UP** or **DOWN** buttons to change its value.
6. Press **SET** to store the new value and move to the next parameter.

To exit: Press **SET** + **DOWN** or wait 15 seconds without pressing a key.

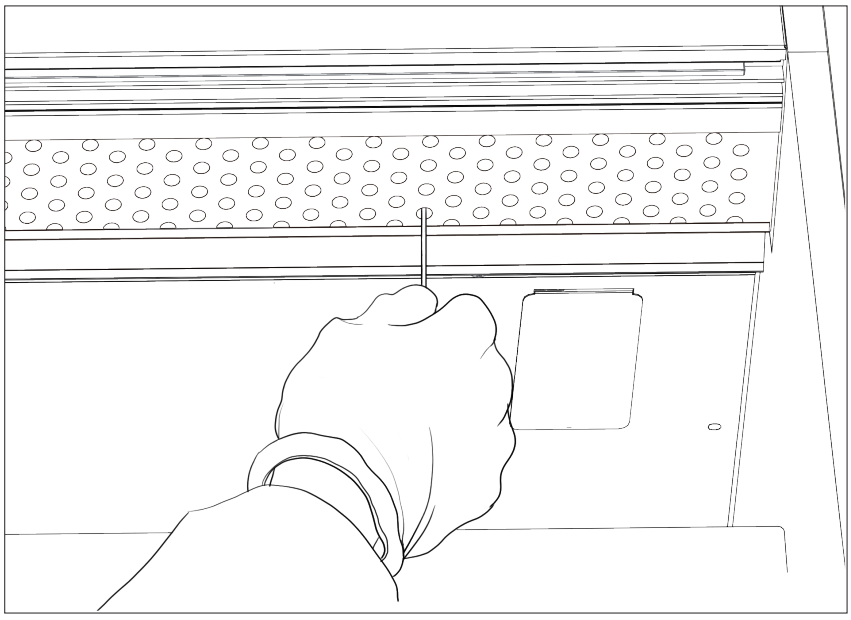
* Refer to the controller manual for detailed operation and parameters.

APPENDIX

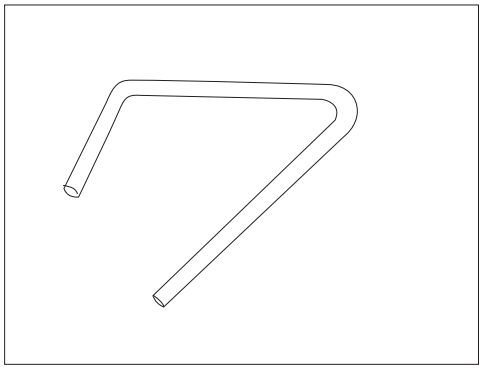
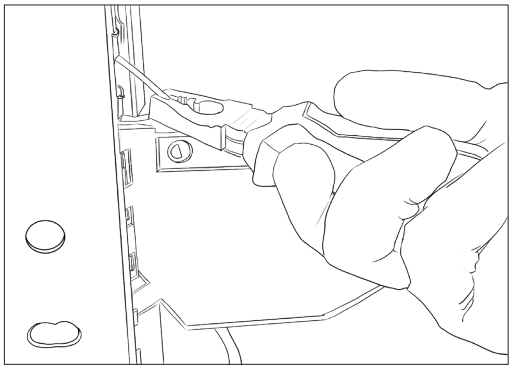
8.1 APPENDIX 1 - Risk Analysis

HAZARD	CONTROL MEASURES
Electrical - Replacement of electrical components	Request a service call. Electrically isolate cases before works
Ergonomic - Moving/ positioning/ adjusting cases	Staff must be trained in the correct procedures for settingup cases and ergonomic practices. PPE must be worn
Falling - Checking wiring during servicing	Use of barriers & fall arrest systems as appropriate & in accordance with State & Territory Legislation. Safe working at heights
Entanglement - Contact with fans when cleaning	Electrically isolate cases before work is carried out. Staff training,
Cuts and stabbing - Potential for cuts from broken fluorescent tube or during tube replacement	Electrically isolate cases. Staff not to replace tubes. Call service provider. PPE must be worn.
Electrical - Potential for electric shock when cleaning electrical fittings and components	Electrically isolate cases before work is carried out. Staff training, RCD. Keep electrical connections dry at all times.
Falling - Climbing on shelves	Staff must be trained in OH&S procedures. MUST not climb on shelves or cases.
Crushing - Hands or fingers may become pinched or crushed during the positioning of base trays, shelves & stock	Staff must be trained in the correct procedures for setting up cases and ergonomic practices
Slipping - Drain may leak or become blocked causing water spillage	Visual Inspection and regular maintenance. Request service call when necessary.
Cuts and stabbing - Potential for cuts caused by damaged or missing parts	Visual Inspection and regular maintenance. Request service call when necessary. PPE must be worn when handling broken or damaged parts.
Ergonomic - Stretching during the cleaning of the case and positioning of stock and shelves leading to strains and sprains	Staff must be trained in the correct procedures for cleaning cases & ergonomic practices. Cleaning tools which reduce the need for stretching should be used.
Slipping - Surfaces may become slippery due to spillage from the case during operation or cleaning	Visual Inspection. Appropriate remedial action.
Cuts and stabbing - Cleaning cold glass surfaces with hot water	Do not use hot water to clean any parts of the cabinet. Staff must be trained in the correct procedures for cleaning cases and ergonomic practices
Crushing - fingers, hands or body between product trays	Operators to always lift product trays using finger pulls provided, ensuring the area is clear of other persons.
Electrical - electrical connections in cases	Electrically isolate cases before work begins. An electrical work must be carried out by an appropriately trained service provider.

8.2 APPENDIX 2 - Start-up Check List

STEP	START-UP ACTIVITY	CHECK
1	Read, and place this install/operation manual in a safe place for future reference.	
2	Examine unit. Confirm there is NO damage or concealed damage.	
3	Level the unit, side to side and front to rear. Check for stability and ensure roller wheels are not in contact with the floor once in final position.	
4	Remove all shipping braces etc.	
5	Unit connected to a dedicated electrical circuit, without the use of an extension cord.	
6	The proper electrical supply has been used for the equipment.	
7	Verify all electrical wiring is secured and clear of any sharp edges or hot lines.	
8	Verify discharge air honeycomb is correctly positioned, if mis-placed this can be easily corrected using a pair of long-nose pliers or narrow width screwdriver to gently pull the honeycomb down into its retainer position. 	

8.2 APPENDIX 2 - Start-up Check List

STEP	START-UP ACTIVITY	CHECK
9	The shelves should be in the correct positions, but if not, these can be re- positioned in the normal manner after the transport retainer clip located above each shelf and on each side of shelf is removed with a pair of pliers. See photos below:  	
10	Verify all required clearances on the front, sides, and back of unit.	
11	Verify there are no air disturbances external to the unit. Heat and air registers, fans, and doors etc.	

Advise owner/operator that merchandiser must operate for minimum 4 hours at temperature prior to loading with product.

APPENDIX

8.3 APPENDIX 3 - WARRANTY

The information in this manual is for **"Qualified Persons Only"**. It is **NOT** an Installation Guide for **"NON Qualified Persons".**

To obtain addititonal warranty information or other support, contact your nearest Hussmann representative.

Please include the following:

Customer site location.
Cabinet model & serial number of product.
Reason for warranty.



NOTE: Failure to comply with the instructions in this manual shall void the warranty.

8.4 APPENDIX 4 - DISCLAIMER

Hussmann reserves the right to modify the components within the case, as well as alter the descriptions and intructions provided in the manual.

The default factory setting of product controller is only suitable for the cabinet temperature class and climate class declared on the product nameplate.
When field climate and temperature class change, the controller setting parameters shall be adjusted by qualified persons to the actual situation, Hussmann don't undertake the product failure and loss of goods due to improper parameter adjustment.

In order to obtain the latest manual, please contact your nearest Hussmann representative.

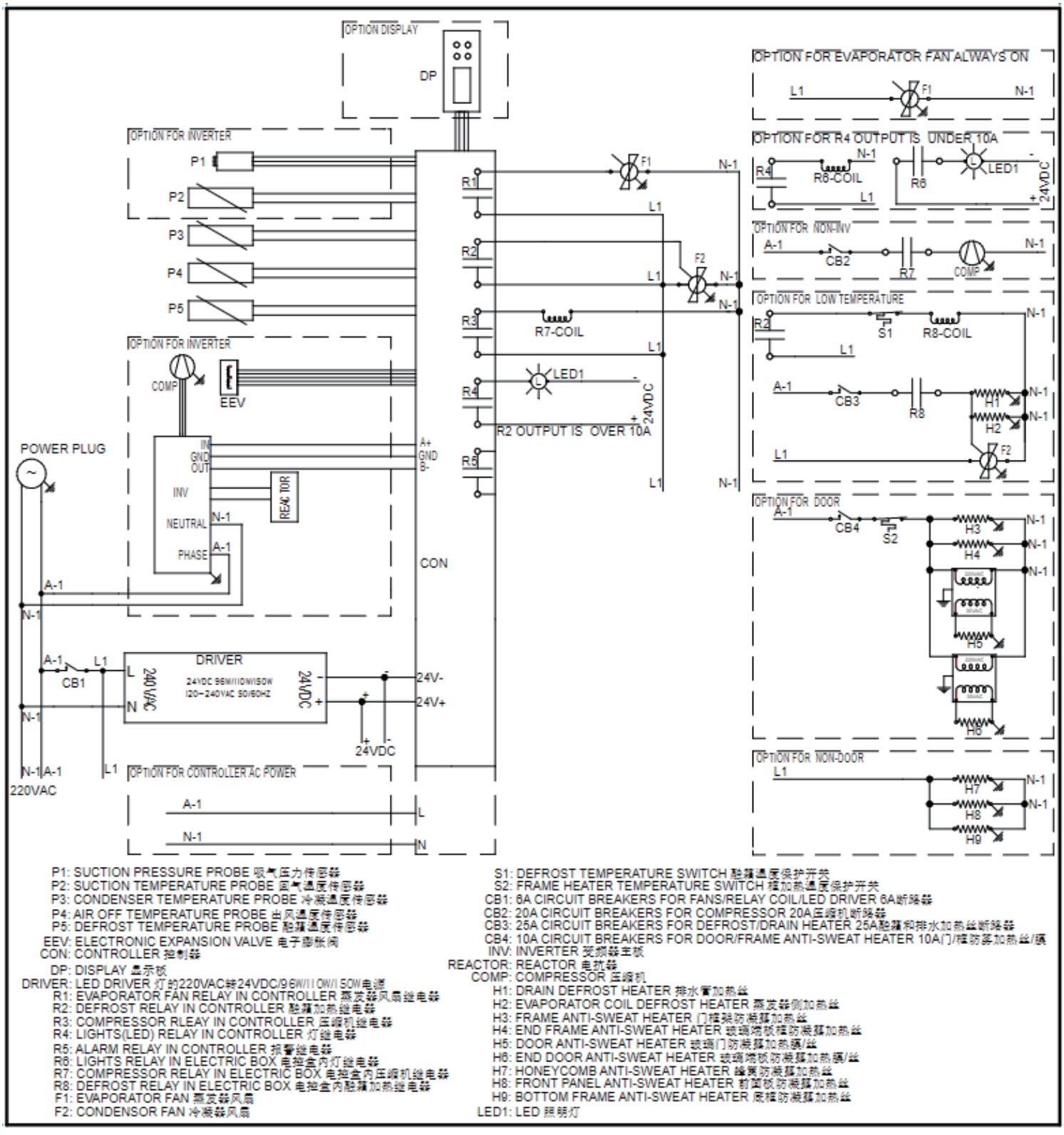
8.5 APPENDIX 5 - LIABILITIES

The manufacturer is not liable for:

- Defects in the electrical power supply
- Failure to comply with instructions
- Interventions carried out by unqualified/untrained personnel
- Improper, incorrect and unreasonable use of the cabinet
- Non-compliance of maintenance and cleaning sched ules as recommended by Hussmann.
- Use of accessories that are not provided nor authorized by Hussmann.
- Unauthorized modifications and interventions
- Incorrect installation not performed in accordance with the norms indicated
- Use of non-original spare parts

APPENDIX

8.6 APPENDIX 6 - ELECTRICAL SCHEMATIC DIAGRAM



P1: SUCTION PRESSURE PROBE 吸气压力传感器
P2: SUCTION TEMPERATURE PROBE 回气温度传感器
P3: CONDENSER TEMPERATURE PROBE 冷凝温度传感器
P4: AIR OFF TEMPERATURE PROBE 出风温度传感器
P5: DEFROST TEMPERATURE PROBE 融霜温度传感器
EEV: ELECTRONIC EXPANSION VALVE 电子膨胀阀
CON: CONTROLLER 控制器
DP: DISPLAY 显示板
DRIVER: LED DRIVER 灯的220VAC转24VDC/96W/110W/150W电源
R1: EVAPORATOR FAN RELAY IN CONTROLLER 蒸发器风扇继电器
R2: DEFROST RELAY IN CONTROLLER 融霜加热继电器
R3: COMPRESSOR RLEAY IN CONTROLLER 压缩机继电器
R4: LIGHTS(LED) RELAY IN CONTROLLER 灯继电器
R5: ALARM RELAY IN CONTROLLER 报警继电器
R6: LIGHTS RELAY IN ELECTRIC BOX 电控盒内灯继电器
R7: COMPRESSOR RELAY IN ELECTRIC BOX 电控盒内压缩机继电器
R8: DEFROST RELAY IN ELECTRIC BOX 电控盒内融霜加热继电器
F1: EVAPORATOR FAN 蒸发器风扇
F2: CONDENSOR FAN 冷凝器风扇

S1: DEFROST TEMPERATURE SWITCH 融霜温度保护开关
S2: FRAME HEATER TEMPERATURE SWITCH 框加热温度保护开关
CB1: 6A CIRCUIT BREAKERS FOR FANS/RELAY COIL/LED DRIVER 6A断路器
CB2: 20A CIRCUIT BREAKERS FOR COMPRESSOR 20A压缩机断路器
CB3: 25A CIRCUIT BREAKERS FOR DEFROST/DRAIN HEATER 25A融霜和排水加热丝断路器
CB4: 10A CIRCUIT BREAKERS FOR DOOR/FRAME ANTI-SWEAT HEATER 10A门/框防露加热丝/膜
INV: INVERTER 变频器主板
REACTOR: REACTOR 电抗器
COMP: COMPRESSOR 压缩机
H1: DRAIN DEFROST HEATER 排水管加热丝
H2: EVAPORATOR COIL DEFROST HEATER 蒸发器侧加热丝
H3: FRAME ANTI-SWEAT HEATER 门框架防凝露加热丝
H4: END FRAME ANTI-SWEAT HEATER 玻璃端板框防凝露加热丝
H5: DOOR ANTI-SWEAT HEATER 玻璃门防凝露加热膜/丝
H6: END DOOR ANTI-SWEAT HEATER 玻璃端板防凝露加热膜/丝
H7: HONEYCOMB ANTI-SWEAT HEATER 蜂窝防凝露加热丝
H8: FRONT PANEL ANTI-SWEAT HEATER 前面板防凝露加热丝
H9: BOTTOM FRAME ANTI-SWEAT HEATER 底框防凝露加热丝
LED1: LED 照明灯

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