

Vertical Display and Storage

EB Vertical Refrigerators

1, 2 and 3 Door Vertical Refrigerators

ORIGINAL INSTRUCTION



EB20R-B



EB20R-Sn-B



EB30R-B



EB30R-Sn-B



EB36R-B



EB36R-Sn-B



EB45R-B



EB45R-Sn-B

EB Series Bottom Mount Vertical Refrigerators Installation and Operating Instructions

MAN0921 Rev.1 Sept 2021 edition.

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Installation and Operating Manual

Please keep this manual in a safe place and refer to it and your Warranty information should it be required.

Please fill out for future reference

This information will be required for Warranty Service work to be authorized.

Purchased from:.....

Delivery Docket:.....

Product/Model:.....

Item No.

Cabinet Serial Number:.....

Commissioning Date:.....

Place of Installation:.....

Owner of Cabinet:.....

Owners Address:.....

Owners Details: email:..... Phone:.....

This manual should accompany this appliance if it is sold or reinstalled in another location to ensure correct installation, use and maintenance procedures are followed.

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The information contained within is provided for the benefit of users of these products. Keep this information in a safe place for future reference.

Product specifications enclosed are correct at time of publication. The Orford Group reserves the right to change specifications, in our endeavours for continuous product improvement. The Orford Group cannot be held responsible for errors or omissions in this document.

Shipping Damage & Uncrating

Remove upper packaging, leaving equipment on skid or shipping blocks until placed in desired location. Check for damage so that correct claim forms can be filed. Removal of upper packaging is necessary because damage may not be evident until equipment is unpacked.

Insurance Is Your Responsibility

Inspect packaging and equipment for signs of damage in transit. Notify carrier immediately regarding any damage. Everything leaving our factory is inspected and checked before packing. Everything leaving the factory will be insured by us on your behalf through the transport company's insurance unless notified by you in writing to the contrary. Transit damage is a matter between you and the Transport Company/Your Insurer where you have arranged your own insurance.

NOTE: You should sign "Received Damaged" on the delivery note if applicable.

Warranty

All equipment is tested prior to dispatch from the Factory. After receipt from the Transport Company and before delivery to the End User/Consumer, The Re-Seller (Distributor) should test run the product. Our warranty covers both labor and parts replacement for a period of 12 months (for non-corporate account customers as determined by The Orford Group).

Orford Warranties do not cover service calls resulting from poor maintenance or replacement of consumable part (s). Please refer to additional Warranty Information, or copies of any contracts, supplied with this equipment for more details.

NOTE: Ensure you consult the Problem Solving Checklist before making a Machine Service Call.

Installation

Remove equipment from skid or shipping blocks carefully. Do not use pinch bars on finish. Protect finish with heavy cardboard or similar material. When in position, equipment should be level and the weight evenly distributed over the base of the cabinet, legs or castors. This is necessary for proper door alignment and drainage of the evaporator condensate.

Cabinet Dimensions and Positioning Requirements

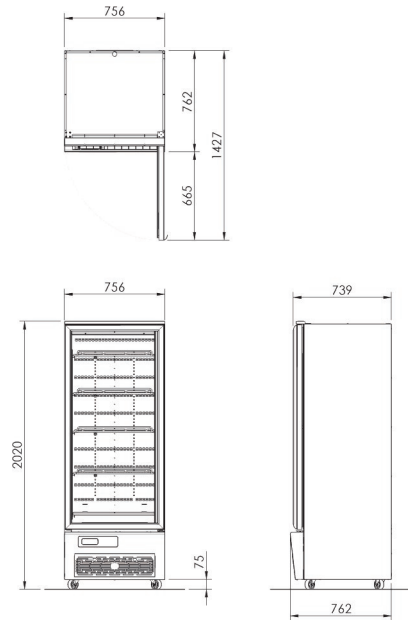
Position the refrigerator in accordance with its Climate Class.

Climate Class defines the climatic ambient conditions for which the cabinet is suited.

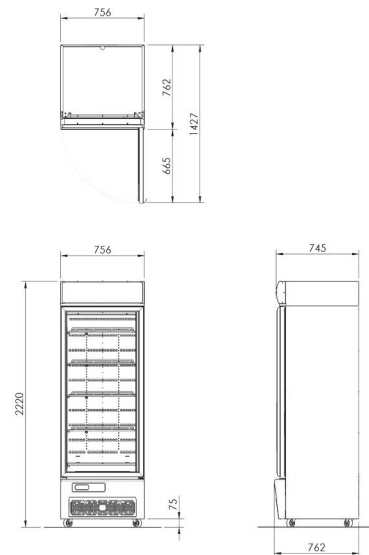
Refer table below.

The EB series are suited to the Climate Class as indicated on the cabinet identification label. Refer table below.

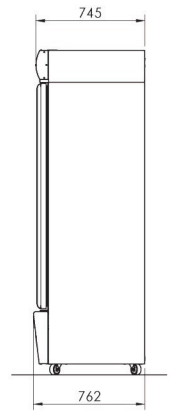
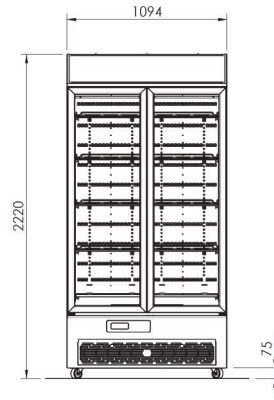
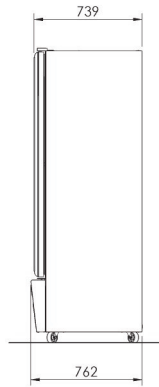
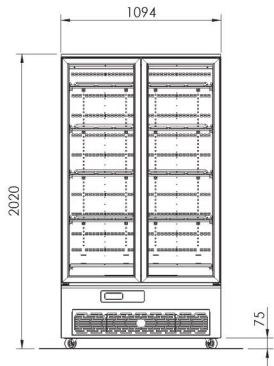
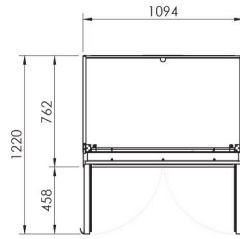
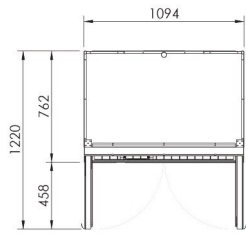
Models	Climate Class	Ambient Temperature °C	Ambient Humidity % RH
EB20R, EB30R, EB36R	5	40	40
EB45R	4	30	55



EB20R-B

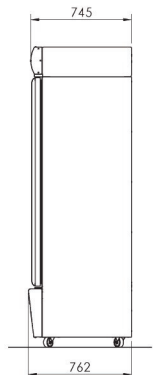
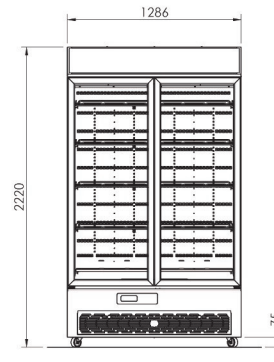
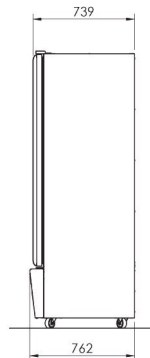
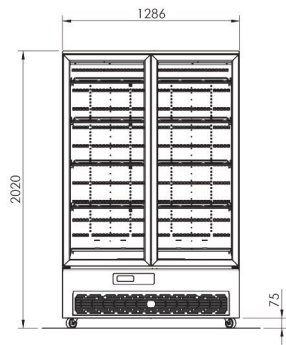
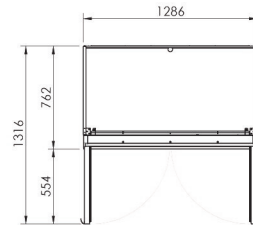
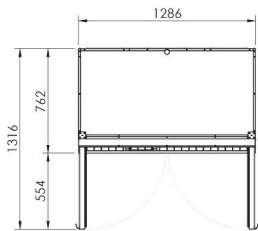


EB20R-Sn-B



EB30R-B

EB30R-Sn-B

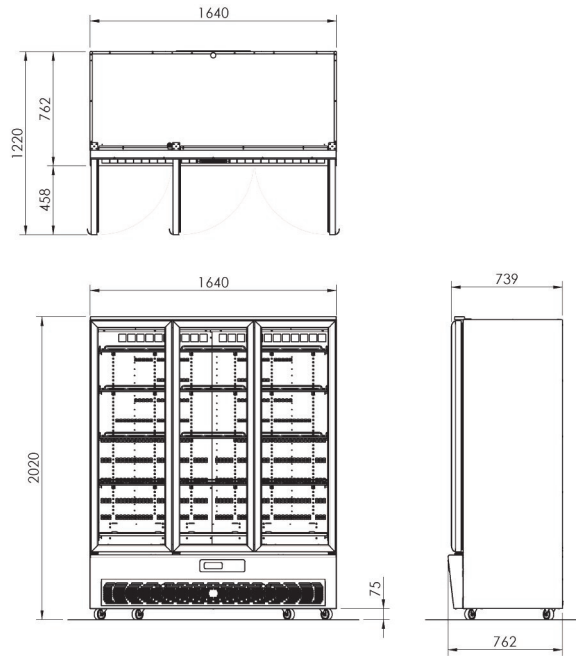


EB36R-B

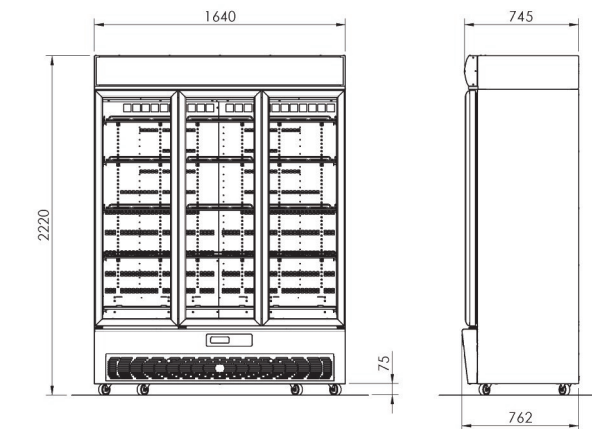
EB36R-Sn-B

EB20R-B / EB20R-Sn-B / EB30R-B / EB30R-Sn-B / EB36R-B / EB36R-Sn-B / EB45R-B / EB45R-Sn-B

EB45R-B



EB45R-Sn-B



Safety Information

- Do **NOT** use this appliance for other than its intended use.
- Do **NOT** probe any openings.
- Do **NOT** block or obstruct any openings or vents. (Refer ventilation)
- Do **NOT** use double adaptors or extension leads.
- Do **NOT** overload the shelving. (Refer Loading)
- Do **NOT** store explosive substances such as aerosol cans with a flammable propellant in this appliance.
- Allow adequate ventilation for the refrigeration unit. (Refer ventilation)
- These appliances are not designed to be stable when moving. Exercise caution when moving these appliances.
- Be careful not to touch moving parts and hot surfaces.

Warning!	Orford Refrigeration does not authorize the use of flammable refrigerants for servicing these refrigerators and freezers as injury, loss of life and/or property may result.

Warning!	This appliance is for indoor use only. Locating in a location exposed to rain may result in electrical leakage and electrical shock.
	Non qualified people must not attempt to work with electrical connections or attempt to adapt cables or leads. If the supply cord is damaged, the appliance must be repaired by an authorized person.
	Do NOT overload the power supply. Refer cabinet rating label for power requirements.

Electrical Requirements

Make sure the cabinet wiring is connected to the correct source of power. Maximum current draw is printed on the unit rating tag and where equipment can be plugged into a General Purpose Outlet (GPO). The correct plug top for the required GPO will be supplied as part of the equipment main power cord. Always check line voltage on incoming power to make certain of proper voltage. The voltage should be within 5% of the voltage printed on the unit rating tag.

EB20R-B / EB20R-Sn-B / EB30R-B / EB30R-Sn-B / EB36R-B / EB36R-Sn-B / EB45R-B / EB45R-Sn-B

To Isolate Power

- ◆ It is recommended that power be isolated by switching power off and unplugging the appliance from the power outlet.
- ◆ If the power outlet isn't accessible the power can be isolated by a green illuminated switch located in the unit compartment at the bottom of the appliance.

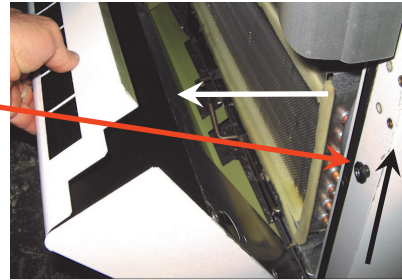
a) Remove the unit cover

Lift unit cover off mounting dowels

Pull forward at the top

Lift cover off.

Reverse to replace.



b). Switch power off at the green rocker switch

EB20R located on right hand side

Ventilation

These refrigerators require proper ventilation of the refrigeration unit (Motor).

The EB series refrigerators are ventilated at the front. The front ventilation grill must be kept free on any obstructions at all times.

The EB series refrigerators will operate satisfactorily when ventilated only from the front but it is recommended that the cabinet be kept 50mm or greater from a rear wall for maximum performance and energy saving.

Self-Contained equipment should only be installed in rooms that are well ventilated or are of sufficient size to dissipate the heat generated by such equipment.

Starting

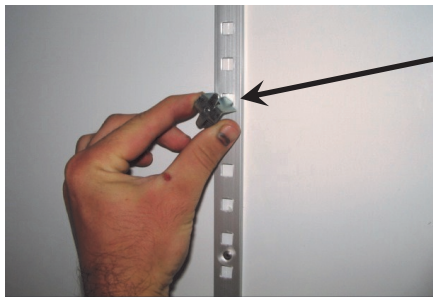
It is recommended that competent service people start up and check the equipment for correct installation and proper operation. All Self-Contained equipment is run tested in the Factory for proper temperature and operation, but it is possible that during transport or shipping damage, loosening of screws, shifting of control setting, etc, may have occurred.

Note:- Check the Energy Management System (EMS) control “Perishable Mode” to ensure the control is set to your operational requirements.

Shelving

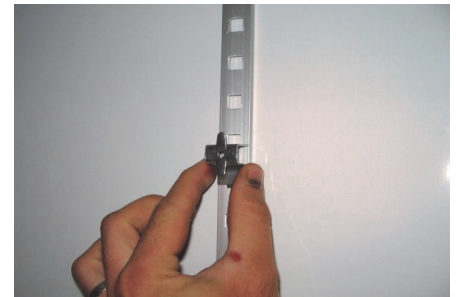
The cabinets are supplied with wire shelving. Each shelf requires 4 shelf clips.

1. Insert the top of the shelf at an angle.



Shelf Clip

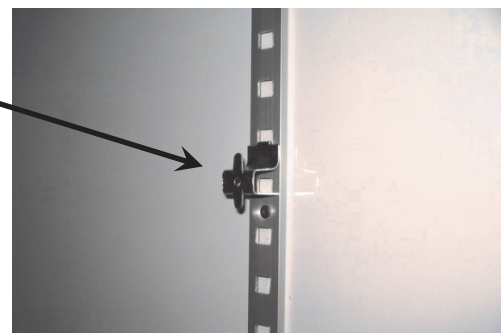
2. Turn and locate the bottoms as shown.



Shelf Clips



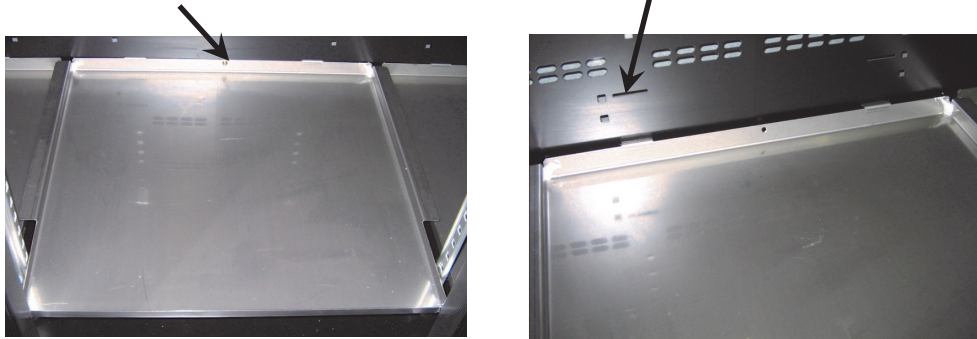
3. Sit the shelf over the shelf clips.



Note! The Shelf Clip Can Be Rotated 180 Degrees As Shown, To Have An Increment of 12mm.

Bottom shelf removal

1. Isolate power *Refer "To Isolate Power"*
2. Undo the screws and remove bottom shelf(shelves) from the slots in the vertical rear duct.



3. Lift bottom shelf up, twist it at an angle and take it out.



4. Reverse steps to replace bottom shelves

Important

The bottom shelves **MUST** be fitted in their correct position as shown above, while the refrigerator is in use. The shelves are required for maintaining correct product temperatures and for catching breakage and spillage. Refer above for the correct fitting of the bottom shelves. **These shelves MUST never be placed directly on the floor while the refrigerator is in use.**

Energy Management System

The EB Series Refrigerators utilizes the latest energy management technology to maximum energy savings.

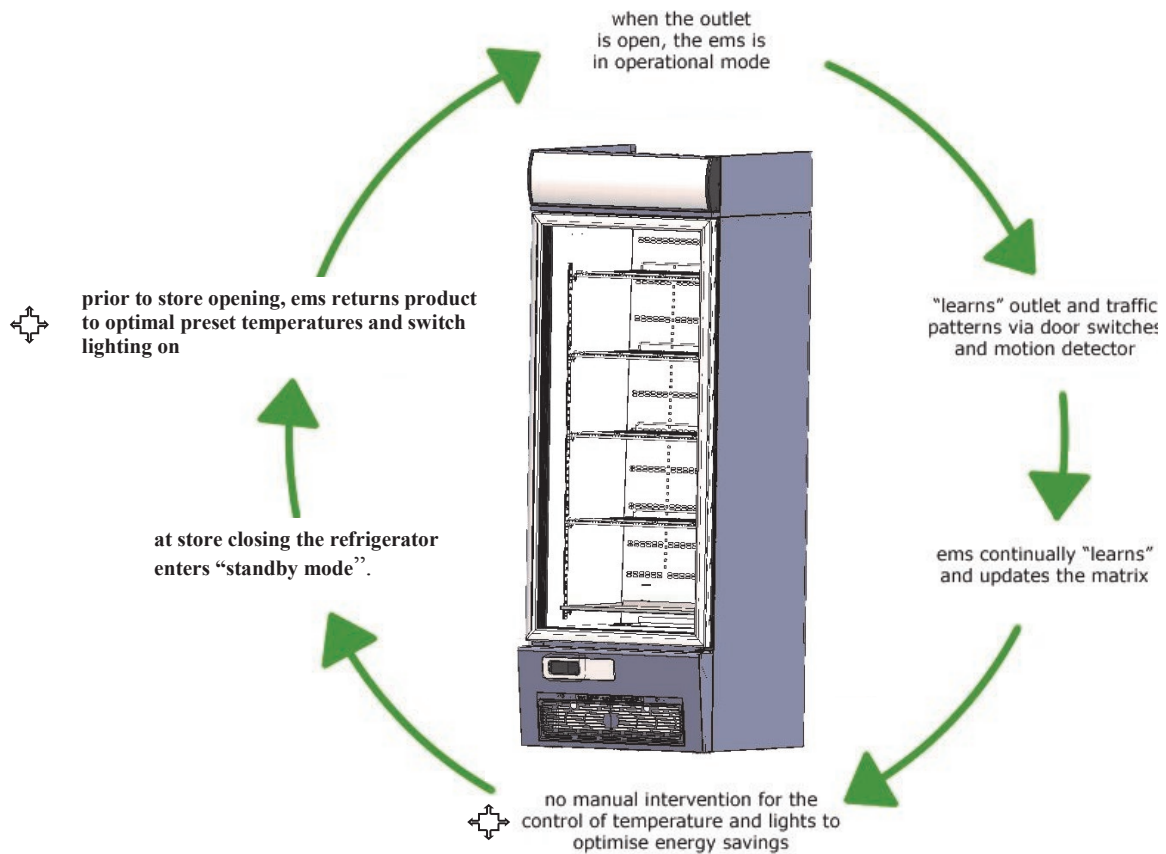
Part of this technology is the EMS Controller which automatically learns the operation of your premises by the use of door and motion sensors.

For the first 7 days of operation it is in a learning mode. During this period the product temperature will remain unchanged and lighting will run continuously (Unless overridden by the manual light switches).

After the 7 day learning period the control will automatically switch off the interior and sign light (if fitted) when your premises are closed.

Note:- The EB Series has manual light switches to override the lighting operation if required. **Refer Manual Light Switches.**

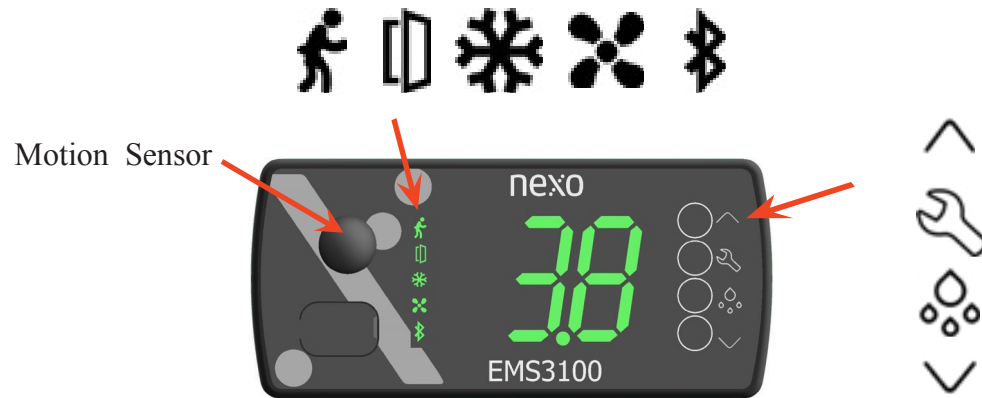
The control continues to learn so if you change your operating times the control will automatically compensate for your new times.



The product temperature remains unchanged when set to Perishable Mode.
Refer Perishable Mode.

EB20R-B / EB20R-Sn-B / EB30R-B / EB30R-Sn-B / EB36R-B / EB36R-Sn-B / EB45R-B / EB45R-Sn-B

Energy Management Control



LED Indicators



Motion: The motion LED flashes on detecting motion. If the motion detection LED is continually flashing when there is no activity in front of the refrigerator, you should contact your service provider.



Door: Illuminated when door opens.



Compressor: Illuminated when the compressor is running.



Evaporator Fan: The Evaporator Fan LED is on when the evaporator fan is running at full speed.



Bluetooth: Illuminated when connection via Bluetooth is established.

Mode. **Note:-** Perishable food temperatures will be maintained in this mode provided the control temperature is set correctly.

Note:- Factory set to perishable mode. Energy Saving Stand-by Mode setting is available with prior arrangements.

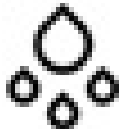
Buttons



Up: Scrolls up menus, Increases parameter values.



Set: Accept/forward - selects menu options and parameters



Defrost : Return/backward - De-selects menu options and parameters.
Activates a manual defrost
(only applicable if temp is below termination temp)



Down: Scrolls down menus. Decreases parameter values.

Note:- *These buttons are used for cancelling alarms, for temperature adjustment and by technicians.*

Temperature Adjustment

It is recommended that service technicians make the necessary temperature and other EMS control adjustments.

Normal Operation

During normal operation, the EMS controller displays the information below.



Ready Mode: Displays the refrigerator internal temperature.
The lighting is on (unless overridden by the manual light switches).

Alarms

E1 Appliance sensor failure:

Temperature sensor failure alarms are activated if the measured temperature is outside the normal measurement range.

This may be caused by a wiring fault (loose connection, short or open circuit) or the sensor itself may be faulty.

Whilst this alarm will cause the compressor to shut down when active

E2 High Temperature sensor failure:

Temperature sensor failure alarms are activated if the measured temperature is outside the normal measurement range.

This may be caused by a wiring fault (loose connection, short or open circuit) or the sensor itself may be faulty.

E3 Evaporator sensor failure:

Temperature sensor failure alarms are activated if the measured temperature is outside the normal measurement range.

This may be caused by a wiring fault (loose connection, short or open circuit) or the sensor itself may be faulty

Whilst this alarm is active only time based defrost functionality will be available.

E0 Refrigeration system failure:

The RSF alarm is activated if the Set Point temperature has not been achieved during the time period set in parameter CT (default 72 hours)

E6 Freeze up protect alarm:

If the temperature of the cooler falls below the temperature defined by parameter FU this alarm will activate.

EC Door broken alarm:

Indicates the door is not closing properly

ED Door switch broken alarm:

Indicates the door switch it not working correctly

EE High temperature alarm:

High Temperature alarm is activated if over-heating of a refrigeration system component is detected as measured by the HT sensor.

Once activated the compressor will be turned OFF and remain OFF until the HT sensor temperature lowers to an acceptable level.

Lighting

The cabinet interior lighting and (optional) illuminated advertising sign are factory set to operate automatically by the Energy Management System for maximum energy saving.

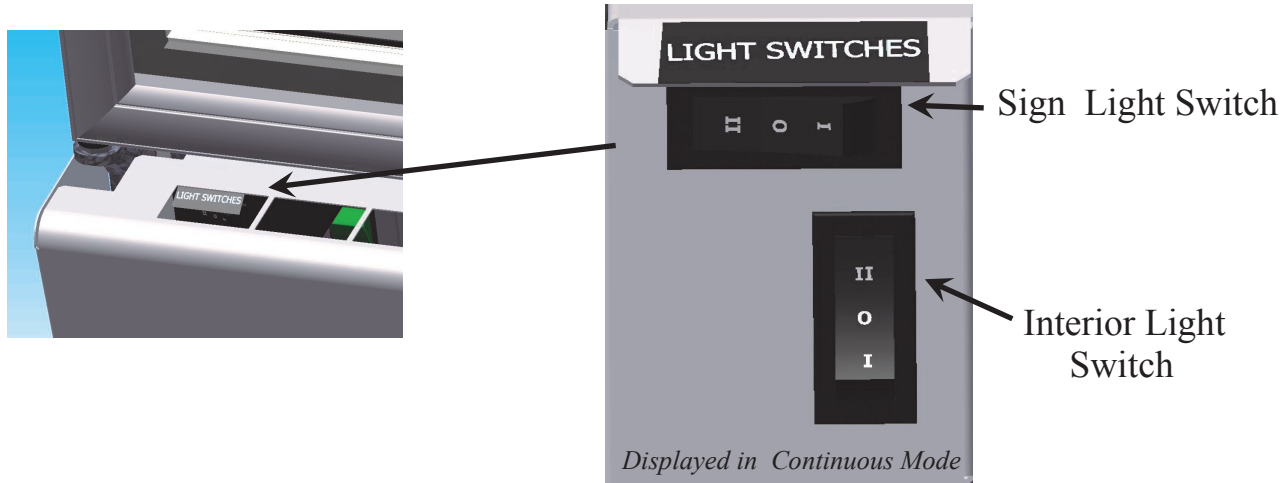
Manual Light Switches are also provided to change the lighting operation to suit special circumstances.

There are two switches, one for interior lighting and another for the sign giving separate Switch Operation:

I = Automatic (EMS Controlled) (*Factory Setting*)

O = Off

II = On Continuously (Uses more energy / higher running costs).



Note:- Models without an illuminated advertising sign are fitted with a Sign Light Switch and an electrical connection on the top of the cabinet for a sign to be added at a later date if required.

Product Loading

Product should only be loaded within the confines of the shelf provided. All cabinets should have the bottom shelf as low as possible. No product is to be stored on the cabinet floor, allowing air to circulate efficiently to maintain correct product temperatures. Do **NOT** overload the shelving. (Max 40kg. Per shelf evenly distributed).

Maintenance

Warning! Isolate Power before removing any covers for Maintenance

Note:

The front unit cover can be removed to gain access to the Power Isolation Switch.



Cleaning

Check that all vents are clean and clear of dust, dirt, lint, paper, plastic etc. that may cause an obstruction to proper ventilation.

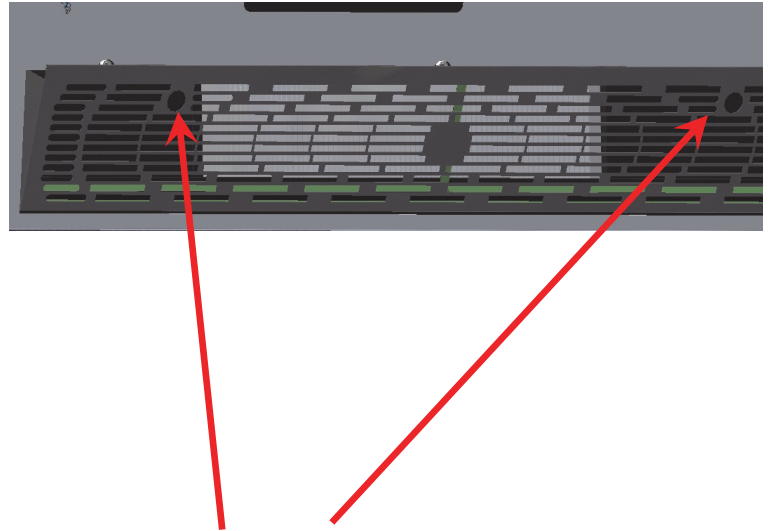
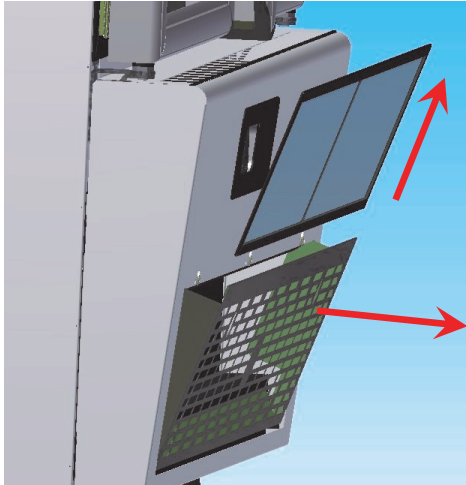
It is of the utmost importance that the refrigeration unit condenser filter be kept clean of dust, dirt and lint. The refrigeration unit fan will continually draw dust and lint on to the condenser filter and collect to form a “blanket”. This seriously restricts the passing of air for adequate ventilation and cooling of the refrigeration unit.

Note:- *This condition reduces the life of the fan motor and compressor and is one of the major causes of motor and compressor failure. If the condenser filter is not cleaned regularly it will increase your running costs for the cabinet and severely reduce its operating life span.*

Note:- If the reversing fan option is used the condenser will also require cleaning. Refer Condenser Fan Switch.

Cleaning

To clean the condenser filter



1. Pull grill forward using the finger holes provided.
2. Lift filter out of the grill.
3. Brush or vacuum dust and dirt off the filter.
4. Wash the filter with clean water.

Detergent and warm water may be required to clear grease build up from cooking oil etc.

5. Shake and wipe filter so it is drip dry.
6. Refit filter. (Reverse to steps 1 & 2)

We can not recommend how often the condenser should be cleaned as this is dependent upon particular location and surrounding conditions. Clean the condenser as often as necessary to keep the air passage clear.

Door gaskets will remain in best condition if washed weekly with mild soap and water followed by a fresh water rinse.

Keep inside of the cabinet clean by washing weekly. Do not use abrasive pads to clean cabinet finish inside or out.

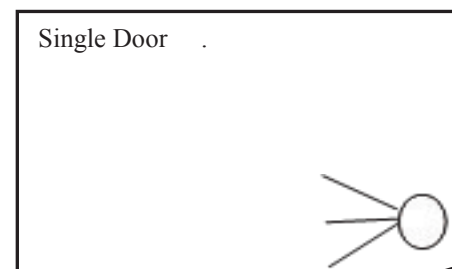
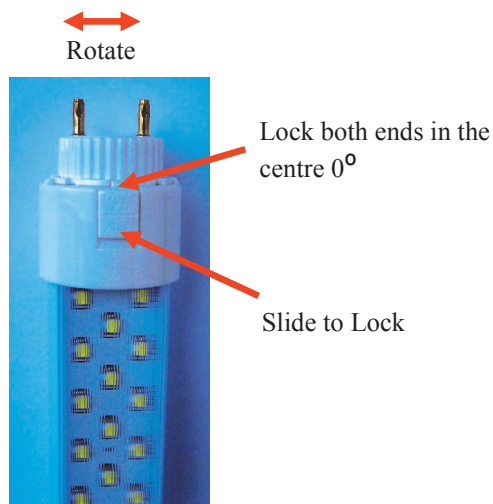
Service

Recessed LED Tube Replacement

1. Isolate power *Refer To Isolate Power*
2. To remove the plastic light diffuser, insert a screwdriver at the top and lift the diffuser. Slide it out.
3. Rotate the LED tube 90° and slide out to remove.



4. Reverse to install tube.
5. When replacing LED tube, lock rotating ends in the center +0° position for correct lighting direction. For single-side LED tube only. Double-sided LED tube do not need to be adjusted



6. Be sure to rotate tube as to shine the light across the door opening as shown.

Note!

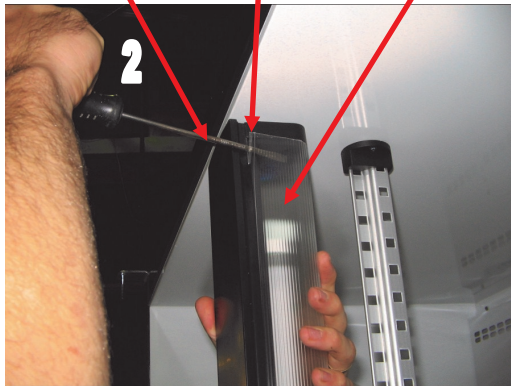
LED lamps must be replaced with identical lamps.

EB20R-B / EB20R-Sn-B / EB30R-B / EB30R-Sn-B / EB36R-B / EB36R-Sn-B / EB45R-B / EB45R-Sn-B

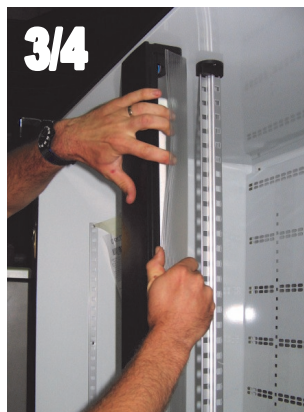
Mullion LED, Tube Replacement

1. Isolate power. Refer To Isolate Power.
2. Remove the plastic light diffuser, insert a screwdriver into the gap at the top and lift the diffuser.

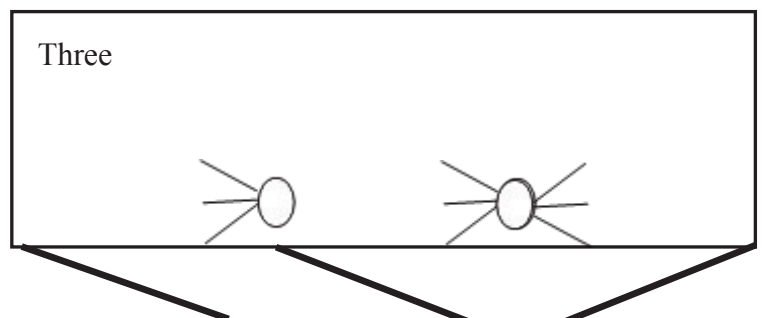
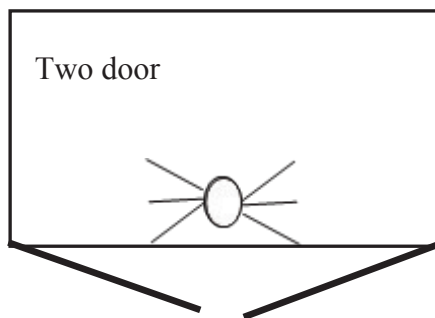
Screw driver Gap at the top Plastic light diffuser



3. Slide it out of the mullion
4. Repeat for the other side.
5. Turn the diffuser and remove.



6. Twist the LED tube 90 degrees and slide out to remove.
7. Reverse to replace.
8. Be sure to rotate tube as to shine the light across the door opening as shown.



Note!

LED lamps must be replaced with identical lamps.

EB20R-B / EB20R-Sn-B / EB30R-B / EB30R-Sn-B / EB36R-B / EB36R-Sn-B / EB45R-B / EB45R-Sn-B

Problem Solving

Check before calling for machine service

Note: Routine adjustments and maintenance procedures are not covered by warranty, refer to Warranty information supplied with your equipment, for conditions and responsibilities.

If after following the checklist your equipment fails to operate correctly, please have the Series Model Number, Item Number and Cabinet Serial Number ready **before** calling for service.

Problem	Possible Cause (s)	Corrective Action (s)
Cabinet does not operate	No electrical power to machine. Cabinet on/off switch is "off" No power to outlet. Blown fuse, circuit breaker.	Check cord is plugged into outlet. Turn switch to "on". Check another appliance can operate from the outlet. If outlet is not working, change blown fuse or reset tripped circuit breaker.
Light (s) not working	Light switch in "OFF" position. EMS Control in Stand by Problem with tube connection. Blown tube.	Turn light switch "On" <i>Refer to Light Switch Operation</i> <i>Refer EMS control Operation</i> Slightly rotate tube in its fittings tube may have been bumped. Replace Note: This action for the optional illuminated display (Mini / Maxi) sign <u>MUST</u> be performed by Suitably Qualified Service Personal.
Alarm sounding	Blocked condenser Blocked condenser filter Ambient temperature too high	Turn cabinet off, clean condenser filter and condenser. <i>Refer Cleaning & Maintenance</i>
Cabinet noisy	Unit cover not fitted correctly	Ensure cover is installed correctly.
Cabinet doors do not close properly	Cabinet not level.	Reposition cabinet.
Cabinet not maintaining temperature	EMS Control in Stand by Refrigeration unit overheating. Door not closing.	<i>Refer EMS control Operation</i> Turn cabinet off. Clear filter and all vents, grills, louvers of dust etc. <i>Refer cleaning instructions.</i> <i>Refer cabinet doors do not close properly.</i>
Odour from cabinet interior	Interior not cleaned before use. Some foods produce odours.	Carefully clean interior with mild solution of bicarbonate of soda and warm water. Ensure foods are covered.
Water Inside/Outside cabinet	Check for spills. Check Ambient conditions Check water source Check if door is not fully closed	Carefully clean interior/exterior Ensure operating in correct climate Check the cabinet is level. <i>Refer cabinet doors do not close properly.</i>

Disposal: *** Note:- These refrigerators use flammable blowing agents for their insulation and must be disposed of in accordance with Government regulations pertaining to your area.

General Specifications				
Model	EB20R-(Sn)-B	EB30R-(Sn)-B	EB36R-(Sn)-B	EB45R-(Sn)-B
Power Requirements	230 - 240V 50Hz.	230 - 240V 50Hz.	230 - 240V 50Hz.	230 - 240V 50Hz.
	Standard 10 Amp Power Point			
Gross Volume (L)	595	900	1077	1407
Refrigerated Shelf Area (m ²)	1.44	2.164	2.614	3.4
Total Display Area (m ²)	0.68	0.965	1.17	1.45
Interior Lighting	LED	LED	LED	LED
Illuminated Sign Panel (Sn)	LED	LED	LED	LED