OD720N

SKOPE Open Deck Cooler
Hydrocarbon

Service Manual

MAN80307 Rev. 1.3 May 2022

Coca-Cola EUROPACIFIC PARTNERS

SKOPE® Refrigeration

OD720N
SKOPE Open Deck Cooler
Service Manual

MAN80307
Rev. 1.3 May 2022

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- Alters, removes (including part removal) or obliterates (including part obliteration) the trade mark on the product
- Applies any other trade mark to the product
- Adds to the product any written material that is likely to damage the reputation of the trade mark

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- Successors or assignees of the buyer
- Future owners of the product

CONTENTS

1 Specifications

Overview

This cooler uses hydrocarbon (HC) R290 as its refrigerant. R290 is a natural refrigerant that has a very low environmental impact.

Special service requirements are needed as R290 is a flammable refrigerant.

Safety hazards

The main R290 safety hazards are:

- Flammable refrigerant.
- Venting of R290 and compressor oil.
- Asphyxiation.

SKOPE does NOT recommend performing hazardous activities on the refrigeration system.

Models

This service manual is applicable to the SKOPE coolers detailed below.

Model	Description	Type
OD720N	Free-standing	O72CLN

OD720N Cabinet

Description	Free-standing	
Type	O72CLN	
Construction		
Insulation	40mm thick, polyurethane foam. Cyclo-iso pentane blowing agent: C_5H_{10}/C_5H_{12}	
Doors	n.a. Fitted with manual night blind	
Dimensions	*External*	*Internal*
Height	1540 mm	1058 mm
Width	1282 mm	1191 mm
Depth	836 mm (includes 46 mm stand-off)	633 mm
Floor area	1.07m^2 (includes 46 mm stand-off)	
Internal volume	798 litres	
Shelves	3 adjustable angle (8°or flat) adjustable height shelves + 1 fixed angle (8°) bottom shelf. Fitted with gravity feed system and shelf lighting.	
Product loading	4 layers of 600ml PET bottles. Top and middle shelves: 14 facings × 5 deep, bottom shelf: 14 facings × 6 deep, 294 per cabinet.	
Operating conditions		
Max operating temp.	25°C @ 60% RH (Climatic Class 3)	
Cabinet temp. range	-1°C to +5°C	
Electrical	220-240 Volts a.c. 50 Hz, single phase supply	
Total run Amps	4.8 Amps (unit 4.0 Amps)	
GEMS energy consumption	16.15 kWh/day	
Energy star rating	3 stars	
Sign lighting	n.a.	
Internal lighting	4 × 7.5 W LED shelf lights	

Refrigeration Unit

Description	R290 (hydrocarbon) Open Deck Cartridge
Unit model	UBQENI-0034
Compressor	Embraco NT6224U
Controller	SCS Connect
Nominal capacity	1700 Watts
Refrigerant	R290 / 135g

2 Electronic Controller

Overview

The cooler is fitted with an SCS Connect electronic controller. The controller is located behind the front kick panel.

The controller is pre-programmed. SKOPE does not recommend that settings be changed unless it is absolutely necessary. To ensure efficient operation, the controller automatically forces a defrost cycle when required.

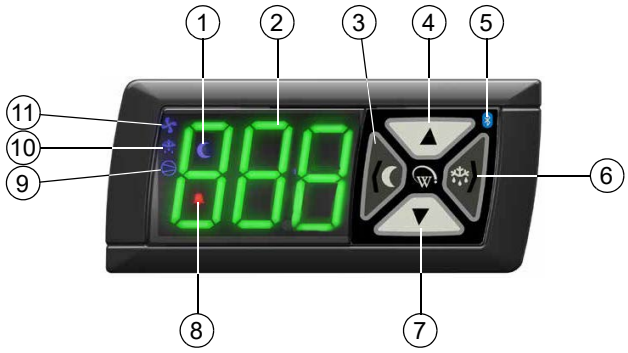
IMPORTANT
The controller must only be adjusted by an authorised service agent.

Controller servicing can be performed via the controller faceplate, or the SCS Connect Field app.

Controller Faceplate

Buttons and Display

The faceplate includes the front display panel and interface buttons.



No.	Description
1	**Night Mode:** Indicator. On during cooler night mode.
2	**Display:** Indicator. Digital display of cabinet air temperature or messages. The temperature is what the sensor inside the cooler detects, and not necessarily the product temperature. However, they may be very close depending on how the controller is set to sense temperature.
3	**Light Switch - Night Mode (back/abort):** Button. Press to switch the lights on or off. Press and hold to switch cooler between day and night mode. Used during programming.
4	**Up:** Button. Used for programming.
5	**Bluetooth:** Indicator. On when ready to connect to a device. Flashing when connected to a device.
6	**Defrost Cycle (next/enter):** Button. Press and hold to initiate manual defrost. Used during programming.
7	**Down:** Button. Used for programming.
8	**Fault - Alarm:** Indicator. On during fault or alarm. Note: Alarm message is also shown on the display during alarm.
9	**Compressor:** Indicator. On when the compressor is running.
10	**Defrost Mode:** Indicator. On during defrost cycle.
11	**Fan:** Indicator. ON when fans running.

Service Mode

Service mode can be accessed and used via the controller faceplate, refer to Wellington Drive Technologies documentation for further information.

Note: A 9 digit pin code is required to access service mode via the controller buttons. Contact your User Manager to receive your activation code.

There are 5 main service mode categories when accessing and using service mode via the controller faceplate:

Parameters

Provides access and editing of individual controller parameters.

It is not recommended that parameters are changed unless absolutely necessary. If incorrect parameter settings are suspected, reload the complete parameter set.

Reset

Returns the controller back to factory or default settings.

Manual test

Allows inspection of input values from sensors, and check the effects of output adjustments to peripherals, and to run preset test routines.

Statistics

Displays logged values and event counts to assist with fine tuning and diagnostics.

About

Lists the properties of the refrigeration system and the controller, including cooler model codes, firmware, hardware and software versions.

SCS Connect Field App

Connecting

The SCS connect field app allows authorised Service Technicians wireless access to the controller from mobile devices with Bluetooth capability. The app provides information on data logging, alarm notification and diagnostic control.

To install the SCS connect field app

1. Download and install the Connect Field app from Google Play or Apple Store (search for “scs wellington” to find it).
2. When you first run the app, you will be requested to enter an activation code. Contact your User Manager to receive your activation code (you must be connected to the internet at the time of activation).

   Your activation code is unique to you, and should NEVER be shared with anyone else, as it determines your personal access level for the app. The same code will give you access to all SCS apps you are authorised to use.
3. Once activation is complete, you must define a 4-digit PIN code. This can be any code unique to you. Each time you start the app, you will be required to enter this same PIN code. This is to prevent other people accessing the app from unlocked phones.
4. You can see which databases you are activated against from the “Settings” screen. You can be activated to more than one database at the same time. Simply select ACTIVATE ANOTHER DATABASE, and enter the new databases unique activation code, as in Step 2.

To connect to a controller

1. Check that the Bluetooth logo on the top right of the controller faceplate is lit, indicating that the controller is ready to connect to a device.

   Note: A flashing Bluetooth logo indicates that the controller is currently connected to a device.
2. Open the SCS connect field app.
3. Select a controller to connect to from the list of visible controllers.

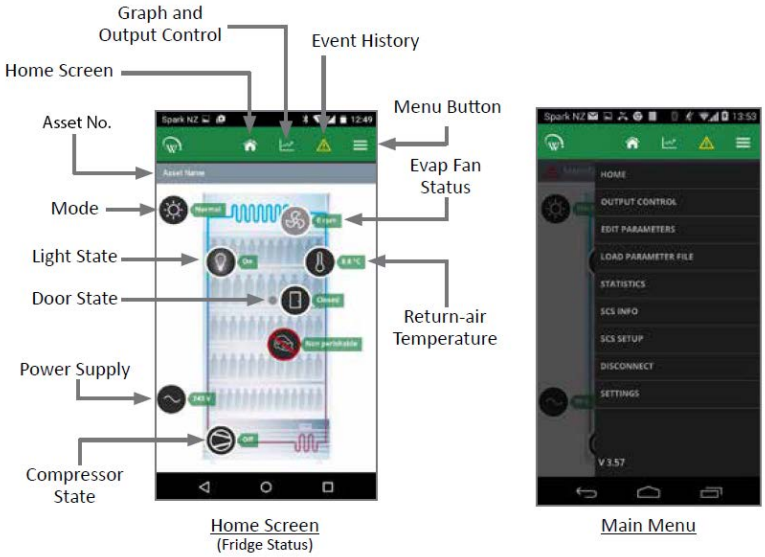
   Note: This list is filtered by your activation permissions, so devices you are not authorised to connect to will not be displayed.
4. Select ‘connect’ to connect to the controller.
5. Check that the Bluetooth logo on the top right of the controller faceplate is flashing, indicating that the controller is connected.

App Categories

Various options are available in the app menu to provide information about the connected controller and its cooler.

Home screen

The home screen shows a graphic representation of the current state of the cooler being controlled.



Home Screen (Fridge Status)

Main Menu

Output control

Provides control of the controller input sensors and switches, and output relays.

Edit parameters

Provides access and editing of individual controller parameters.
Note: Parameter changes must be recorded on warranty/job card.

It is not recommended that parameters are changed unless absolutely necessary. If incorrect parameter settings are suspected, reload the complete parameter set. **Note:** Updated parameters are not applied until DISCONNECT has been selected from the menu (after loading new parameter set).

Load parameter file

Allows reloading of cooler default parameter set or changing to new parameter set. **Note:** Updated parameters may not be applied until DISCONNECT has been selected from the menu (after loading new parameter set).

Statistics

Information from the past seven days on cooler activity including temperatures, door openings and alarms.

SCS info

Controller version and cooler asset information.

SCS setup

Add or change SCS info (see above).

Disconnect

Disconnect from currently connected controller.

Settings

Change app general settings.

Faults and Alarms

The following table explains faults and alarms that the electronic controller may log and display.

If a fault occurs, the fault - alarm indicator is lit on the controller faceplate, but no message is displayed. Faults do not affect product temperature, and require no action from the shop owner.

Alarms are logged and the alarm message is displayed on the controller faceplate. Alarms may result in abnormal product temperature.

Some faults and alarms can be cleared by the shop owner, and others can only be cleared by a service technician.

If the cabinet is connected to the power supply and has warm product, check the SCS Connect Field App for active fault or alarm, and investigate. If the cabinet does not have an active fault or alarm, check the app statistics to determine if and when the controller signalled a fault or alarm.

Refer to the tables below for faults and alarm descriptions and possible causes and actions.

Faults (alarm indicator lit - no message displayed)

Description	Possible root cause
Over-voltage protection The maximum allowable mains supply voltage has been exceeded. The cabinet has temporarily shut down to prevent damage and will restart once the supply voltage decreases.	- should be a one off; if continues: - line voltage / rural - voltage setting parameter - controller
Under-voltage protection The mains supply voltage has dropped below the minimum allowable level. The cabinet has temporarily shut down to prevent damage and will restart once the supply voltage increases.	- should be a one off; if continues: - power supply overloaded / multi-box - line voltage / rural. - voltage setting parameter - controller
High condensing temperature protection The system was operating at an elevated temperature and has temporarily shut down to prevent damage. Extended operation in this condition may result in ALARM 15, increased energy consumption and a reduction in cabinet life. This alarm may be caused by very high ambient temperature.	NO cassette swap required - condenser not clean - poor installation / ventilation - condenser fan motor / blade - controller
Excessive compressor cycling protection The system has been turning on and off too frequently.	Take spare cassette in case refrigeration system fault. - condenser blocked - poor installation / ventilation - cabinet / cassette gasket seals leaking - door not self closing / gasket leaking - product hot / blocking cabinet airflow - overloaded from excess door openings / ambient - fan motor / blade (condenser / evaporator) - controller - compressor / gas leak = SWAP cassette

Alarms

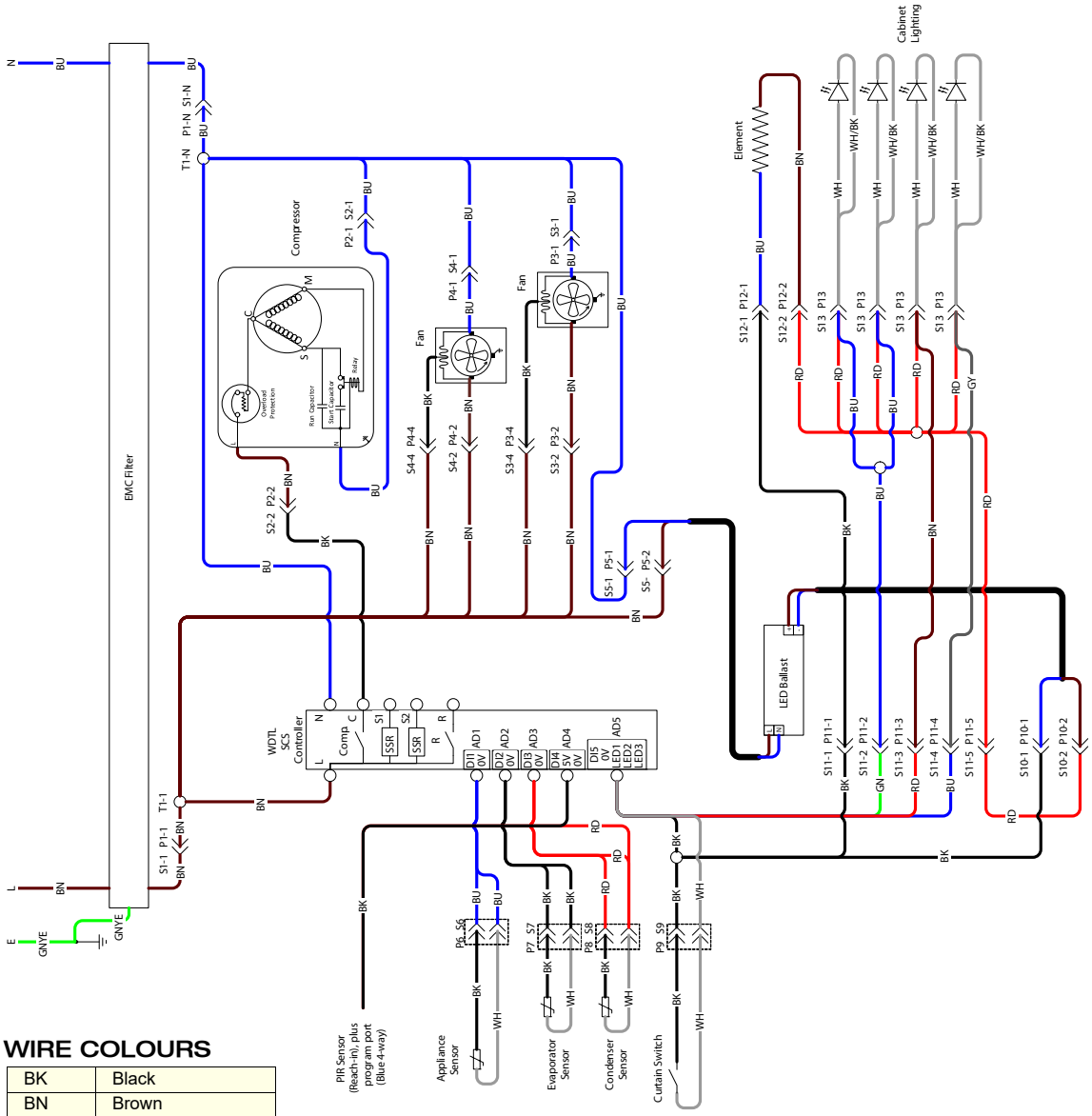
Code	Description	Possible root cause
8	Estimated product temperature below allowable range The estimated product temperature has been below the allowable range for longer than the permissible time. Potential causes are: an empty or partially filled cabinet, or low ambient temperature.	- low ambient - App settings - controller
9	Estimated product temperature above allowable range The estimated product temperature has been above the allowable range for longer than the permissible time. Potential causes are: excessive door openings, door being left open, or warm product loaded into cabinet.	NO cassette swap required to be taken (but may be required as fault could still be with sealed refrigeration system) - condenser blocked - poor installation / ventilation - frozen blocked evaporator coil - cassette gasket leaking (to cabinet seal / lid seal) - door leaking air (bad gasket / door not self closing) - product hot / blocking cabinet airflow - overloaded from excess door openings / ambient - fan motor / blade (condenser / evaporator) - App settings - controller - compressor / gas leak = arrange SWAP cassette
15	Excessive condensing temperature protection The system was operating at an excessive temperature and has shut down to prevent permanent damage. This alarm may occur due to very high ambient temperature.	NO cassette swap required - condenser not clean - poor installation / ventilation - condenser fan motor / blade - controller
17	Control probe failure A critical system sensor has failed and the cabinet can no longer operate.	NO cassette swap required - control Probe / circuit - controller
18	Electrical over-current protection activated The compressor was drawing too much current and has shut down to prevent permanent damage.	Take spare cassette in case refrigeration system fault. - condenser blocked - poor installation / ventilation - cabinet / cassette gasket seals leaking - door not self closing / gasket leaking - product hot / blocking cabinet airflow - overloaded from excess door openings / ambient - fan motor / blade (condenser / evaporator) - controller - compressor / gas leak = SWAP cassette
19	Failed to reach set temperature The refrigeration system has been operating continuously for a long period without reaching the set temperature.	Take spare cassette in case refrigeration system fault. - condenser blocked - poor installation / ventilation - frozen blocked evaporator coil - cabinet seal leaking / door / cassette - product hot / blocking cabinet airflow - overloaded from excess door openings / ambient - fan motor / blade (condenser / evaporator) - controller - compressor / gas leak = SWAP cassette
20	Over cooling product The internal temperature is too low. The system has temporarily shut down until the temperature has returned to normal. This can occur if the set temperature has been raised by a large amount.	- confirm if really too cold; change parameters accordingly
22	Evaporator fan over-current protection The current supplied to the evaporator fan motor is too high.	NO swap cassette required - faulty fan motor - fan blade fault (imbalance / debris / blockage) - controller

Continued over the page

Code	Description	Possible root cause
23	Condenser fan over-current protection The current supplied to the condenser fan motor is too high.	NO cassette swap required - faulty fan motor - fan blade fault (imbalance / debris / blockage) - controller
24	Controller communication error Controller has lost communication channels.	- App - controller / circuit
25	Controller update failed Controller update could not be completed.	- App - controller / circuit
26	Controller hardware failure Controller hardware has failed.	- App - controller / circuit
27	Probe failure A non-critical system probe has failed. The cabinet will continue to operate with partial function but requires service.	NO cassette swap required - evaporator probe / connections - controller
28	No downward tendency The temperature is no longer decreasing.	Take spare cassette in case refrigeration system fault. - condenser blocked - poor installation / ventilation - cabinet / cassette gasket seals leaking - door not self closing / gasket leaking - product hot / blocking cabinet airflow - overloaded from excess door openings / ambient - fan motor / blade (condenser / evaporator) - controller - compressor / gas leak = SWAP cassette
29	Compressor cutting out The compressor cut out on its internal protection or pressure switch.	Take spare cassette in case refrigeration system fault. - condenser blocked - poor installation / ventilation - cabinet seal leaking / door / cassette - product hot / blocking cabinet airflow - overloaded from excess door openings / ambient - fan motor / blade (condenser / evaporator) - controller - compressor / gas leak = SWAP cassette
30	Excessive automatic defrosting The system is automatically defrosting too frequently.	Take spare cassette in case refrigeration system fault. - door not self closing / gasket leaking - Evaporator probe - Evaporator motor / fan - controller - compressor / gas leak = SWAP cassette
31	Compressor stalling The compressor is stalling on start up.	Take spare cassette in case refrigeration system fault. - condenser blocked - poor installation / ventilation - cabinet / cassette gasket seals leaking - door not self closing / gasket leaking - product hot / blocking cabinet airflow - overloaded from excess door openings / ambient - fan motor / blade (condenser / evaporator) - controller - compressor / gas leak = SWAP cassette

3 Wiring

Model: OD720N – pre-June 2022



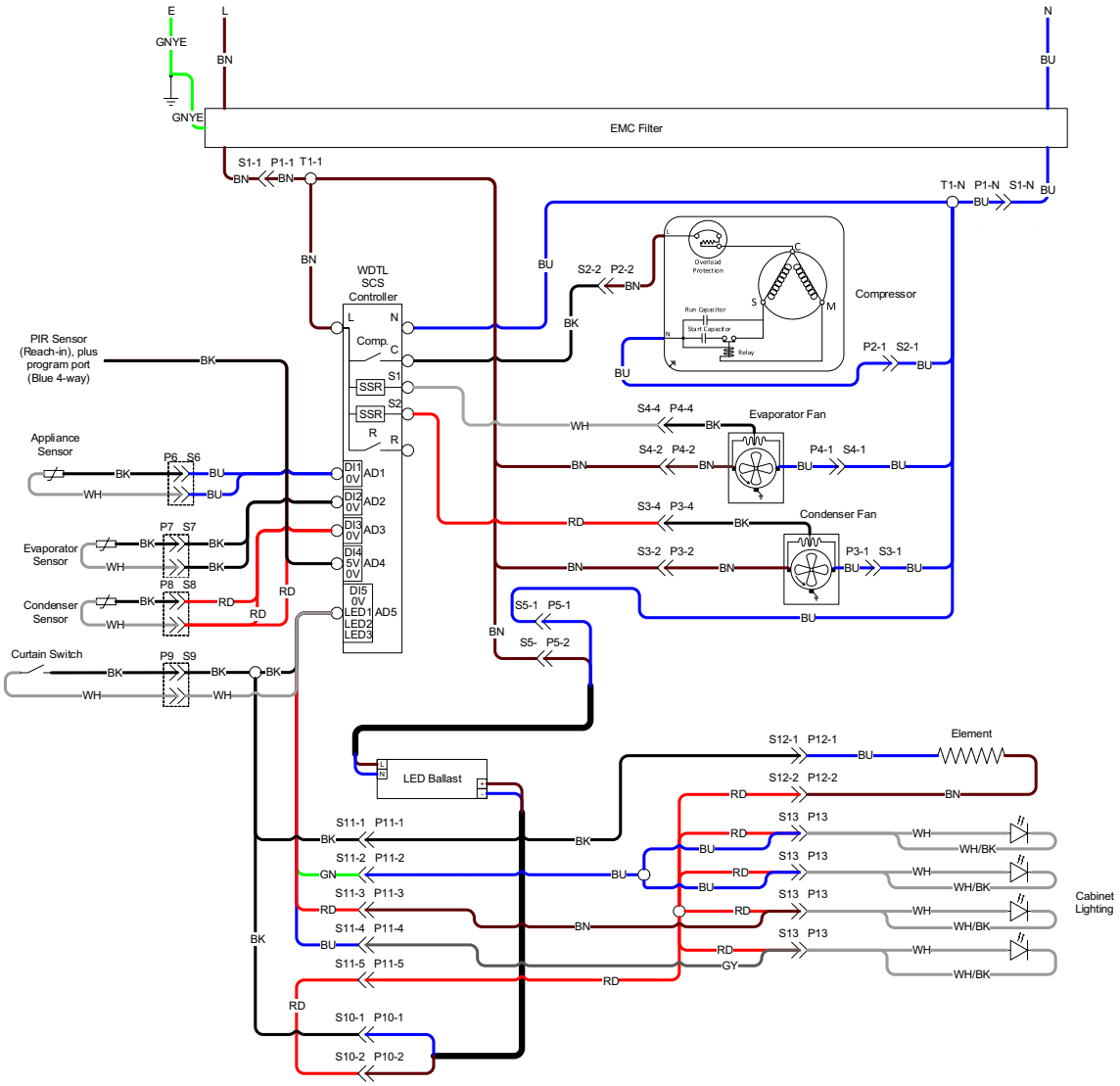
WIRE COLOURS

BK	Black
BN	Brown
RD	Red
OG	Orange
GN	Green
BU	Blue
GY	Grey
WH	White
GNYE	Green-Yellow
Based upon IEC 757 Standard	

LEGEND

T1	Unit Junction Box Terminal	S7/P7	Evaporator Sensor Socket/Plug (Black 2-way)
S1/P1	IEC Isolation Socket/Plug	S8/P8	Condenser Sensor Socket/Plug (Red 2-way)
S2/P2	Compressor Socket/Plug (Blue 4-way)	S9/P9	Door/Curtain Switch Socket (White 2-way)
S3/P3	Fan Motor Socket/Plug (Red 4-way)	S10/P10	LED Driver Output Socket/Plug (Red 2-way)
S4/P4	Fan Motor Socket/Plug (Red 4-way)	S11/P11	Cabinet Supply Socket/Plug (6-way)
S5/P5	LED Driver/Plug (on Unit) (White 3-way)	S12/P12	Heater Socket/Plug (Black 3-way)
S6/P6	Appliance Sensor Socket/Plug (Blue 2-way)	S13/P13	Cabinet Lighting Sockets/Plugs (Red 2-way)

Model: OD720N – June 2022 onwards



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Based upon IEC 757 Standard	

LEGEND

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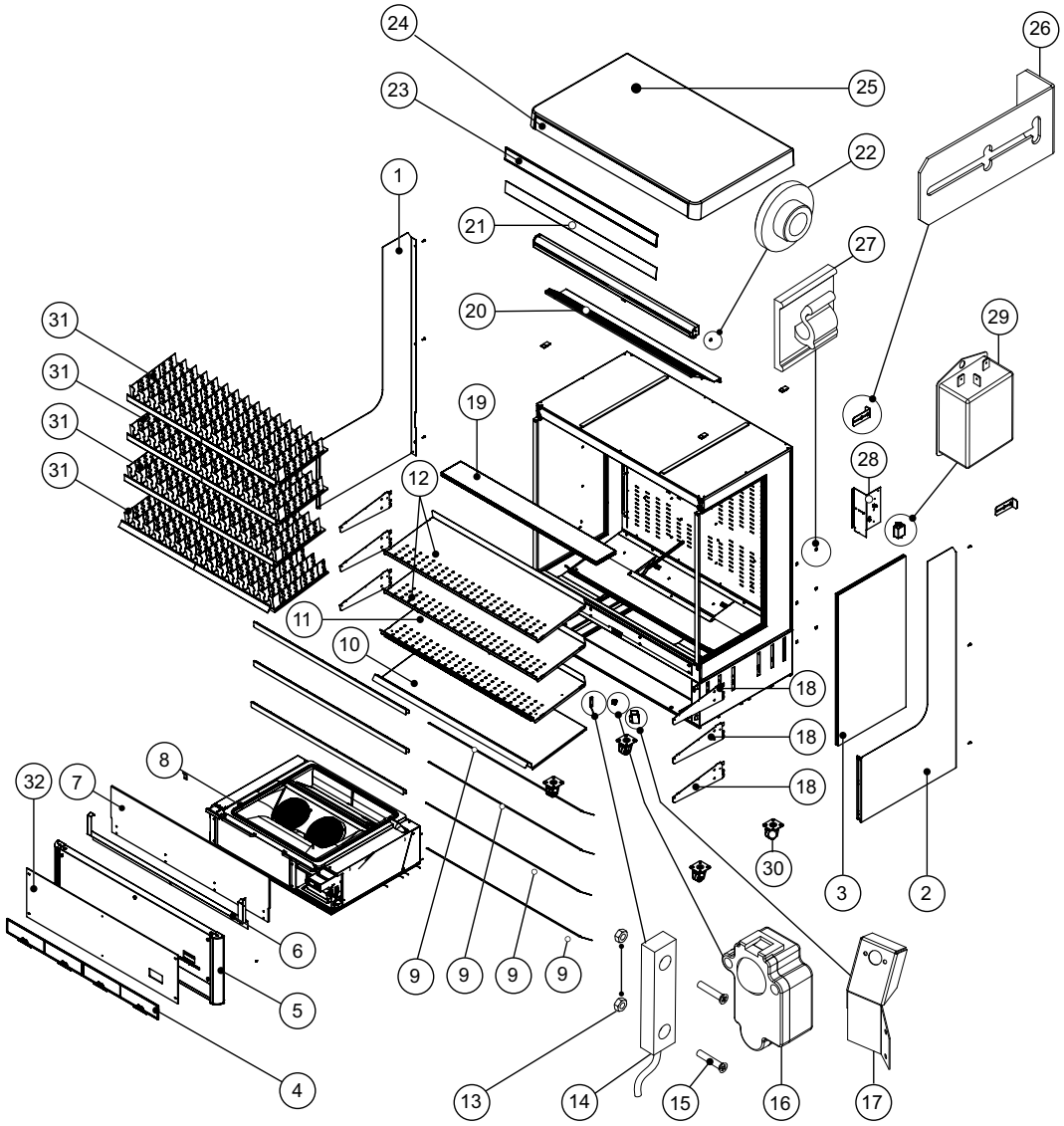
S1/P1	IEC Isolation Socket/Plug	S8/P8	Condenser Sensor Socket/Plug (Red 2-way)
S2/P2	Compressor Socket/Plug (Blue 4-way)	S9/P9	Door/Curtain Switch Socket (White 2-way)
S3/P3	Fan Motor Socket/Plug (Red 4-way)	S10/P10	LED Driver Output Socket/Plug (Red 2-way)
S4/P4	Fan Motor Socket/Plug (White 4-way)	S11/P11	Cabinet Supply Socket/Plug (6-way)
S5/P5	LED Driver/Plug (on Unit) (White 3-way)	S12/P12	Heater Socket/Plug (Black 3-way)
S6/P6	Appliance Sensor Socket/Plug (Blue 2-way)	S13/P13	Cabinet Lighting Sockets/Plugs (Red 2-way)
>>	Socket and Plug	O	Terminal

4 Spare Parts

Cabinet Assembly - OD720N

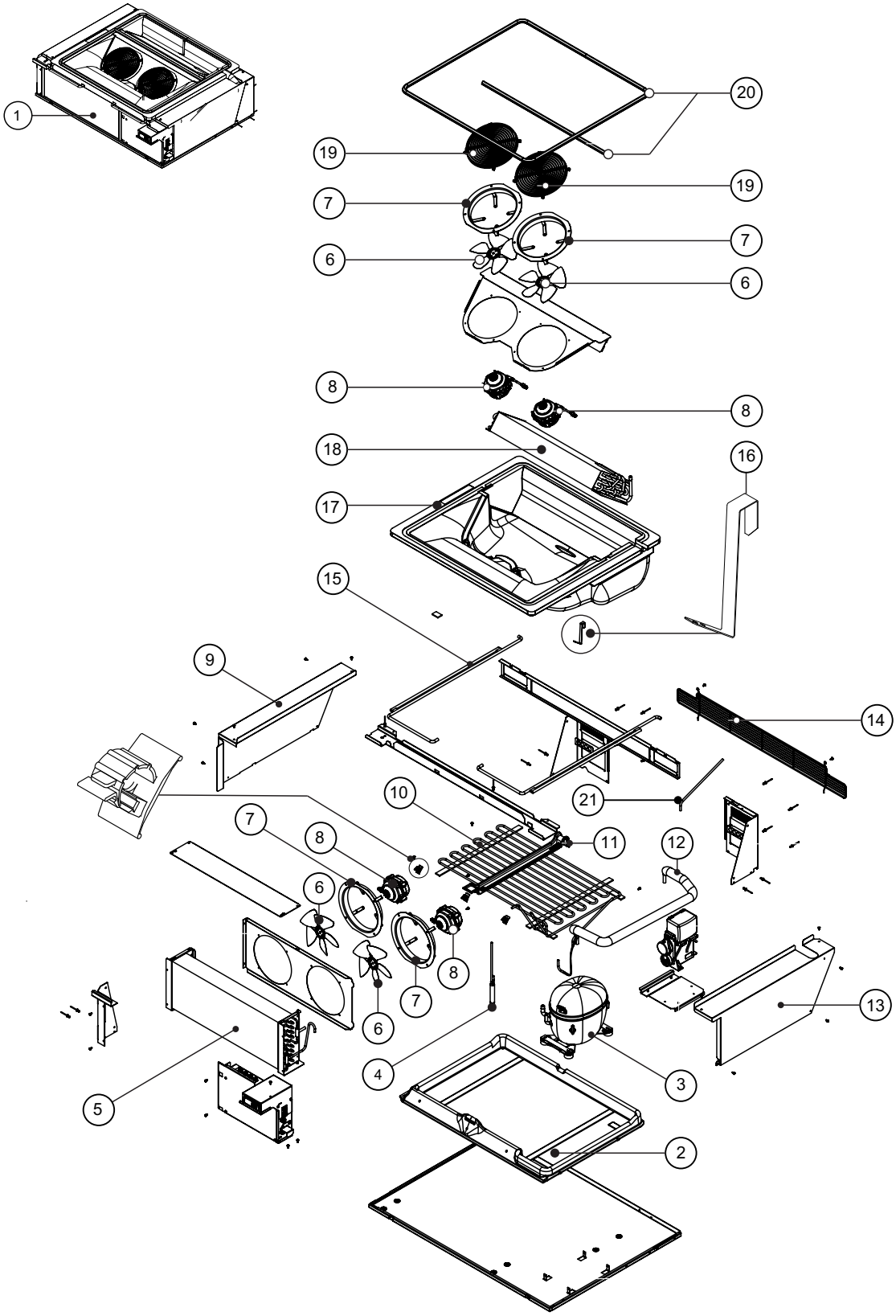


Parts – Cabinet OD720N

Item	Description	SKOPE Part No.	CCEP-NZ Part No.
1	Cladding – left hand side	O720/009L-EX	TBC
2	Cladding – right hand side	O720/009R-EX	TBC
3	Glass unit (left and right hand side)	GLA12200	150103195
4	Filter	HB0070204892	150100863
5	Kick panel assembly	O720/131A-EX	150103197
6	Night blind bracket	O720/678-32	TBC
7	Upstand	PLY12196	150103208
8	Cassette assembly	UBQENI-0034-P	TBC
9	LED shelf light	ELL12193	150103192
10	Shelf – bottom	O720/590A-32	150103198
11	Shelf – mid	O720/590B-32	150103199

Item	Description	SKOPE Part No.	CCEP-NZ Part No.
12	Top shelf assembly – white	O720/590C-32	150103200
13	M3 x16 mm Nylon Ph C/Snk Scr Blk	FAS11917	TBC
14	Night blind sensor	HB0074091444	150100034
15	M3 nylon nut black	FAS11918	TBC
16	PIR sensor	O332N/X03	150103196
17	PIR sensor bracket	O720/U07-32	TBC
18	Shelf bracket	STY12223-32	150103210
19	Honeycomb air guide	PLX12199	TBC
20	Return air grille	O720/586-32	TBC
21	OD720N manual night blind	SXX12195	150103212
22	Night blind spigot bush	PLM10342	150103206
23	Sign clear polycarbonate	PLY12255	TBC
24	Sign insert holder	PLE11375-1160	TBC
25	Top lid	PLM12191BK	TBC
26	Rear cabinet stop	SM12BV/106	TBC
27	Shelf bracket wire clip	PLM12298	150103207
28	Electrics gear tray assembly	O720/G29	TBC
29	EMC/EMI filters	ELZ10136	150103193
30	Castors	SXX11977	150103211
31	Matting + ticket strips	CCEP source – MFT	TBC
32	Overlay upstand acrylic	PLY12197	TBC
NS	OD720 mains flex	OD720/E53	TBC
NS	Lighting lead – 1930 mm	O720/X01	150103202
NS	Lighting lead – 1700 mm	O720/X02	150103203
NS	Lighting lead – 1450 mm	O720/X03	150103204
NS	Lighting lead – 550 mm	O720/X04	150103205
NS	Unit to cab lighting loom	O720/X05	TBC
NS	Cab IEC flex	O720/X06	TBC

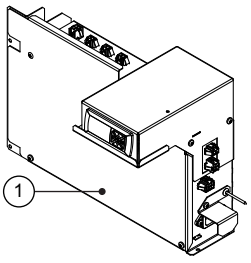
Refrigeration Cassette Assembly

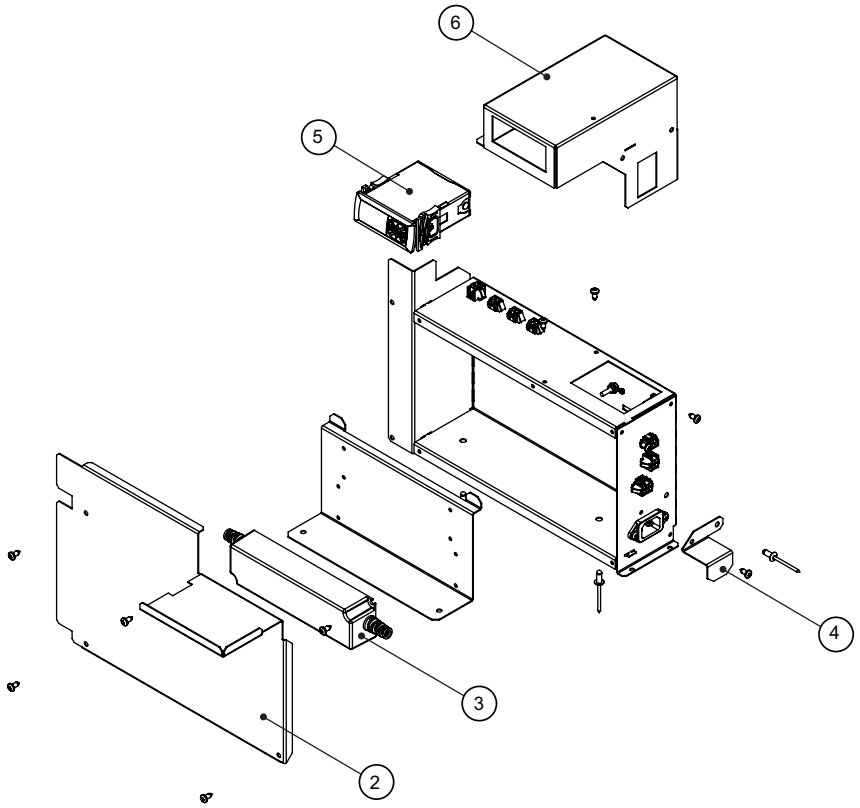


Parts – Refrigeration Cassette

Item	Description	SKOPE Part No.	CCEP-NZ Part No.
1	Cassette	UBQENI-0034-P	TBC
2	Condensate tray	UP10N00003	150103216
3	Compressor	CPR12170	150103190
4	Drier	DRY11210	150103191
5	Condenser coil	CLS12068	150103179
6	Fan blades	FAN1168	150102216
7	Wall ring	HB0070109669	TBC
8	Fan motors	ELM11309	150102489
9	Side cover – left hand	US04N00010	TBC
10	Suction line assembly	UA0400018	150103214
11	Condensate tray hold down bracket	UP10N00004	TBC
12	Condensate line	UT03N00021	150103217
13	Side cover – right hand	US04N00011	TBC
14	Cassette rear guard	UX02N00002	150103223
15	Lifting arm	UX01N00001	TBC
16	Probe bracket	US09N00001	
17	Evaporator tub	UA0500015	150103215
18	Evaporator coil	CLS12067	150103178
19	Fan guard	UX02N00001	150103222
20	Gaskets/seals – perimeter	RUE12210-OD720-KIT	150103209
21	Process tube	UT04N00001	TBC
NS	Evaporator fan extension flex	UW0100094	TBC
NS	Condenser fan extension flex	UW0100065	TBC
NS	OD720 evaporator probe – black	UW0300037-150BK	150103218
NS	OD720 control probe – blue	UW0300037-150BU	150103219
NS	OD720 condenser probe – red	UW0300037-150RD	150103220

Cassette Junction Box Assembly





Parts – Cassette Junction Box

Item	Description	SKOPE Part No.	CCEP-NZ Part No.
1	Cassette junction box assembly	UA0300028	150103213
2	Mounting bracket – controller	US07N00015	TBC
3	LED driver (MEAN WELL LPF-60-24)	ELZ12205	150103194
4	ICE retaining clip	US07N00017	TBC
5	W/Drive SCS Controller – CCEP	ELZ11488-1627	150102785
NS	Junction box loom	UW0300041	150103221

5 Installation

Climate Class

The cooler is designed to operate within a climate class 3 environment (25°C @ 60% RH).

Cabinet Location

The cooler should not be left exposed to direct sunlight at any time as this may cause distortion of plastic parts.

IMPORTANT

Do **not** leave the cooler exposed to direct sunlight as this may cause distortion of the plastic cladding.

The cabinet must not be situated where it is affected by air-conditioning air outlets, ventilation fans or air re-circulation fans, as this will compromise the airflow and product temperature in the open cabinet zone.

There must be no air movement directly into the cabinet opening. Air movement will cause failure of the air curtain over the product, resulting in excessive temperature rise. Detectable air draft will adversely affect the cabinet operation. Maximum air movement across the cabinet opening must not exceed 0.2 m/s.

IMPORTANT

There must be **no** air movement directly into the cabinet opening.

Ventilation

Keep the ventilation slots in the front panel clear at all times. **Never** store cardboard cartons or other objects in front or behind the cooler. To maximise airflow on the rear of the cabinet, ensure rear stand-off's are fully extended when cabinet is installed.

CAUTION

To prevent over-heating and conserve energy, ensure air flows freely all around the cooler, including underneath and on top.

Power Cord

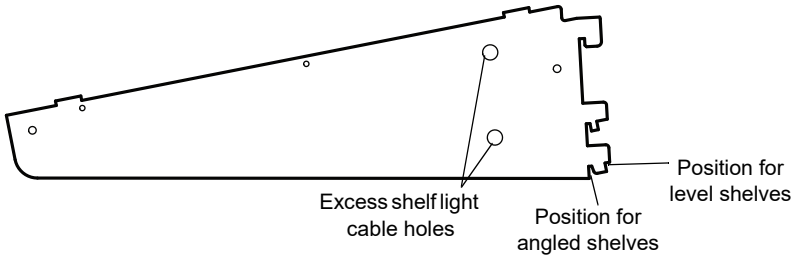
The cooler has a flexible power cord fitted with a 3-pin plug, which exits the rear of the cabinet. Pull the power cord around so that it's not trapped before you position the cooler.

Shelves

Adjusting the Shelves

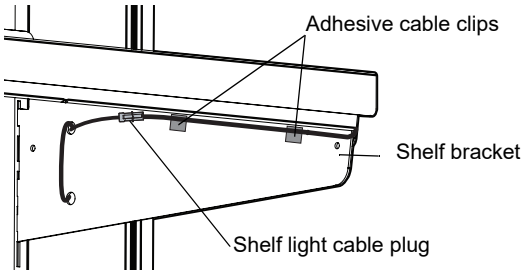
The cooler is fitted with four metal shelves. The three top shelves are height and angle adjustable, and removable. The angled bottom shelf is not adjustable. The top two shelves are the same depth, shelf three is slightly deeper and the bottom shelf deeper again.

The three top shelves are each held in place by two cantilevered shelf brackets which clip into cut-outs in the cabinet back duct. The top three shelves can be adjusted at 28mm increments (see image below).



To reposition a shelf

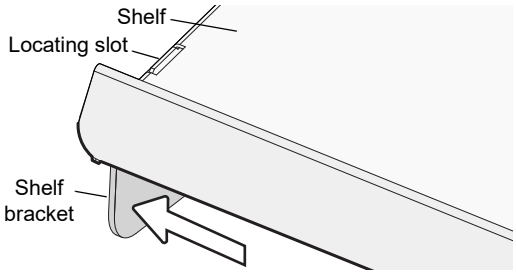
1. Unplug the cooler from the power supply.
2. Remove product from the shelf that is being moved.
3. Unplug the shelf light cable at the inside of the RH shelf bracket.



4. If present, lift the gravity feed matting from the shelf and remove from the cabinet.
5. Lift the shelf up off the brackets and remove from the cabinet. Be careful not to damage the shelf light cable.
6. Unwind the cable from the back of the shelf bracket.
7. Establish the desired shelf position. The shelves can be repositioned as far as the shelf light cable reasonably allows.
8. Reposition the shelf brackets to the desired position.
9. Place the shelf, and if present the gravity feed matting, onto the shelf brackets. Ensure the back of the shelf clips over the rear of the brackets.

Continued over the page

10. Push the cantilevered brackets outwards until they clip into the edge locating slots on the side of the shelf.



11. Take up any excess shelf light cable by winding it through the two holes at the rear of the shelf bracket, and reconnect the shelf light cable plug.

12. Reassemble the cabinet and check for correct operation.

Gravity Shelf System

Each shelf is supplied with corresponding gravity feed matting (including shelf light) and shelf dividers. The gravity shelf system comes in two sizes to suit the different size shelves (see chart below).

Shelf Position	Matting Depth	Divider Quantity
Top 3 shelves	369 mm	15
Bottom shelf	413 mm	15

To fit the gravity feed matting and shelf dividers

1. Match up the shelf dividers with the corresponding mats (see above chart).
2. Starting from the LH or RH side of the mat, fit the LH or RH end divider into the end row of slots.
3. Work across the matting and fit the centre dividers at required intervals, then fit the opposite end divider.
4. Place the mat and dividers onto the corresponding shelf inside the cooler.
5. Repeat for the remaining shelves.

6 Replacement Procedures

Isolating Electrics

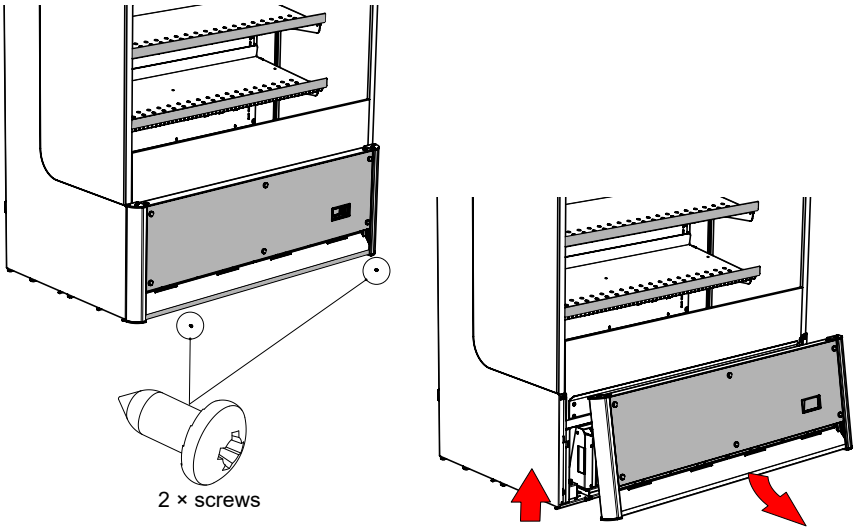
The cooler should be isolated from the power supply before attempting **any** maintenance. To isolate the cooler from the power supply, switch off and unplug the power cord from the power supply.

Kick Panel

The cooler is fitted with a kick panel that hooks onto the front of the cabinet.

To remove the kick panel

1. Remove the two screws (1) (bottom of the front panel), and lift the panel up and off the cabinet (2).

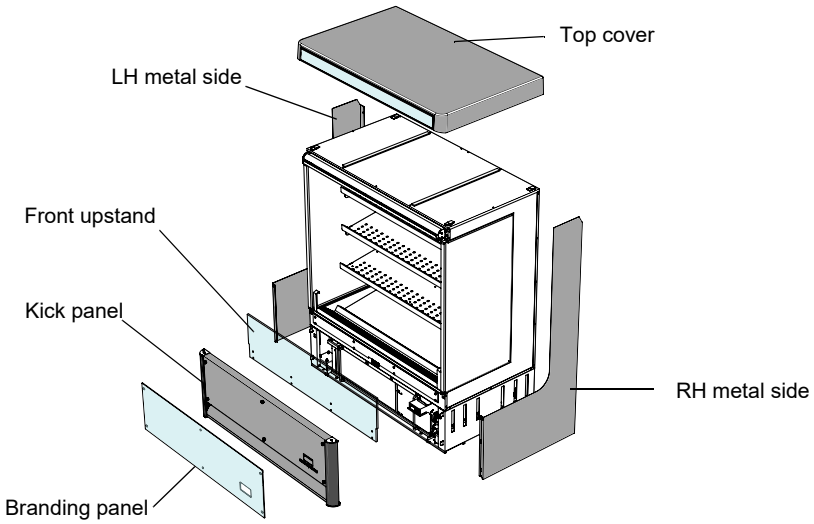


To refit the kick panel

1. Lift the kick panel over and on to the retainer.
2. Fasten the two screws to the bottom of the front cover.

Cladding

The cooler is clad with a metal kick panel and branding panel, top cover, front upstand and painted metal sides. All cladding is removable and replaceable.



When changing the cladding, remove the kick panel, top cover and side cladding before fitting new cladding. The instructions over the page detail the procedure for removing a complete set of existing cladding, and for fitting a complete set of cladding. If you only need to remove a single cladding component, follow the steps sequentially until the specific component has been removed, and then reassemble.

IMPORTANT

Do **not** expose the cabinet to direct sunlight as this may cause distortion of plastic parts.

Removing and Refitting the Cladding

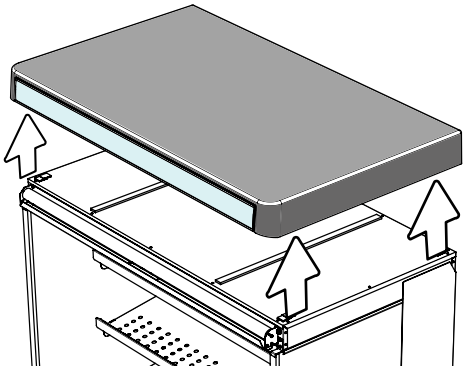
Follow the steps below to remove the cladding. The cladding should be removed in the following order:

1. Kick Panel (see page 25).
2. Top cover
3. LH side / RH side

To remove the cabinet lid

1. Unplug the cooler from the power supply.

2. Remove the top cover by lifting it up and off the cabinet.



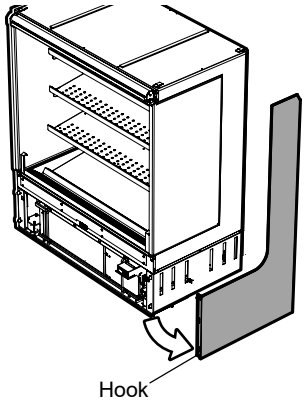
To remove the front upstand

1. Remove the kick panel (see page 25).
2. Undo the fixing screws from the front upstand and remove the upstand.

To remove the side cladding

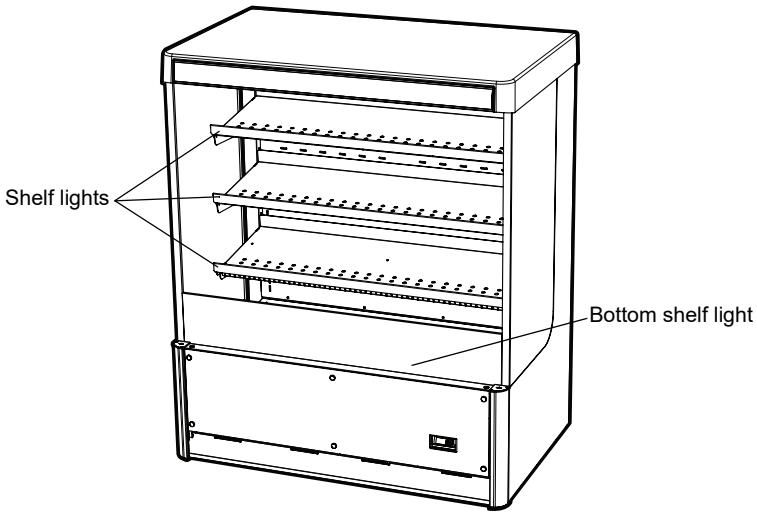
1. Remove the kick panel (see page 25) and the top cover (see above).

2. Undo the fixing screws from the back of the side cladding panel, and lift the panel off the cabinet.



Lighting

The cooler is fitted with shelf lights. The lights turn on and off automatically when the night blind is opened or closed. The lights can also be switched on and off manually by pressing the light button on the electronic controller faceplate (see “Controller Faceplate” on page 8).



Shelf Lights

The shelves are fitted with lights at the front of each shelf. The lights are connected to the power supply by cables which run under the RH side of each shelf. The cables are fitted with plugs which must be disconnected when moving or replacing the shelves or lights.

To replace a shelf light

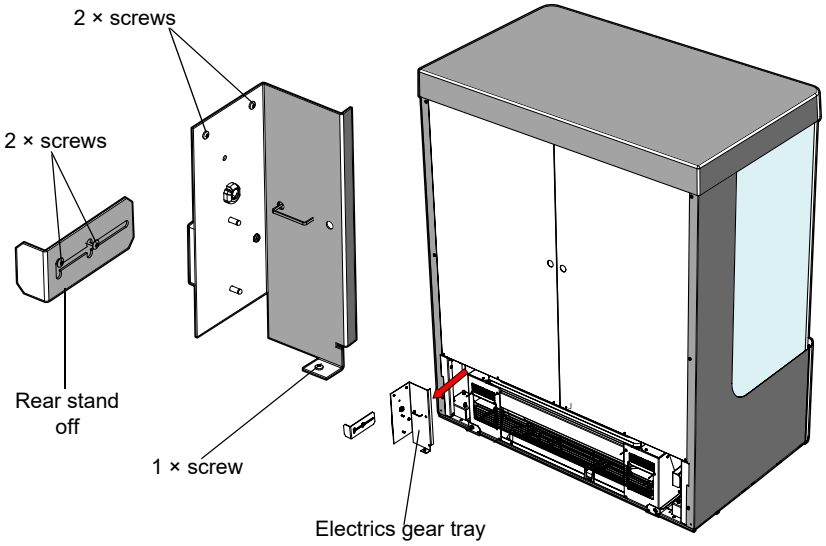
1. Unplug the cooler from the power supply.
2. Remove product and gravity feed matting from the shelf.
3. Unplug the light and remove the shelf from the cabinet (see page 23).
4. Replace the light by sliding it out of the side of the shelf, and slide the new light into the shelf.
5. Refit the shelf and connect the light cable plug.
6. Refit the gravity feed matting.
7. Test and tag as per standard procedure.
8. Reconnect to the power supply, check for correct operation and reload product.

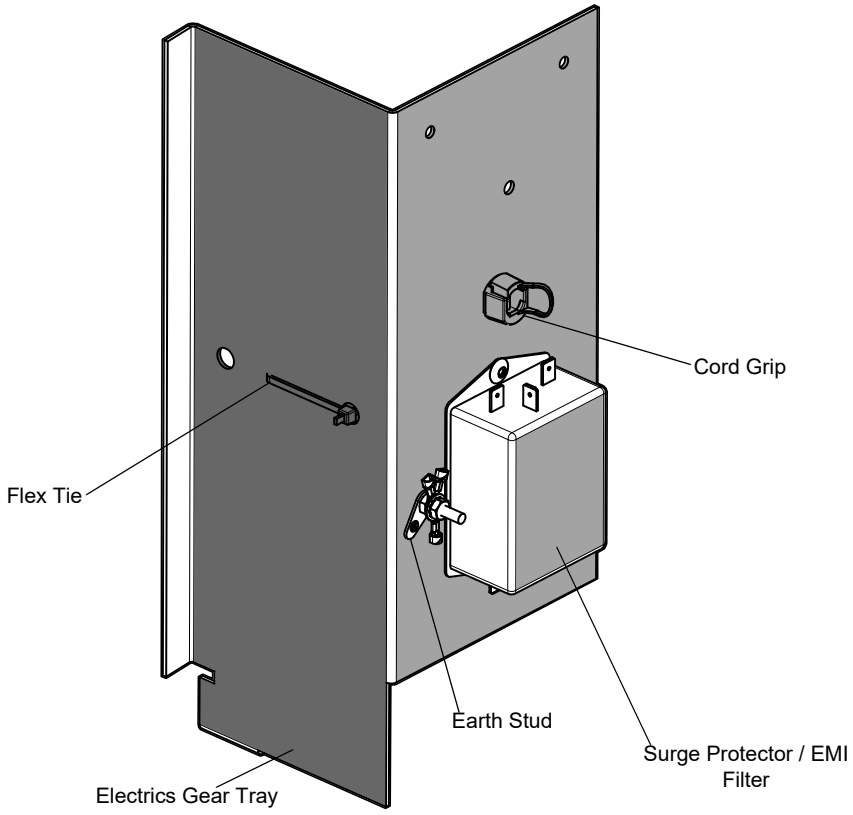
Cabinet Electrics Gear Tray

Cabinet Electrics Gear Tray

The cabinet is fitted with an electrics gear tray which houses the surge protector/EMI filter.

The surge protector/EMI filter protects the cooler from voltage spikes and eliminates possible electromagnetic interference, and regulates the supplied voltage before feeding it into the refrigeration cassette.



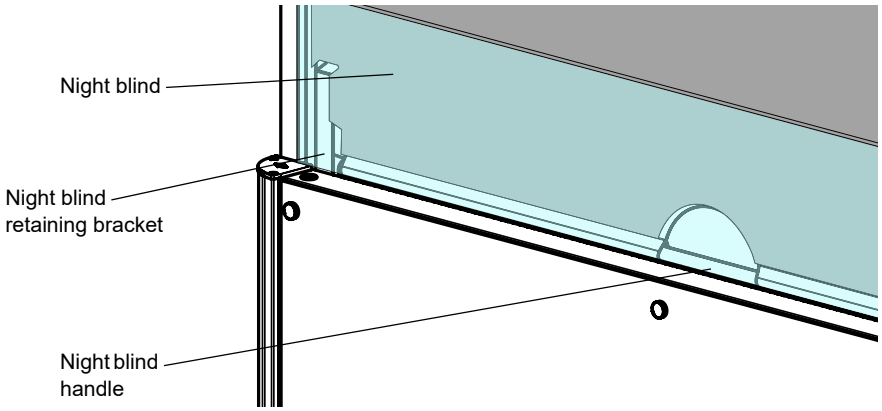


Night Blind

The cooler is fitted with a manual night blind which should be pulled down into the closed position during store closing hours to save power. The night blind has a switch which automatically tells the electronic controller to run the cooler in night mode (with the lights off) when the blind is in the closed position, or day mode (with the lights on) when in the open position.

The night blind is located under the top cover and is not visible when in the open position.

To close the night blind, use the handle pull the blind down and hook it under the night blind retaining brackets at the bottom of the cabinet opening. To open, use the handle to release the blind from the retaining brackets and control the blind as it opens.

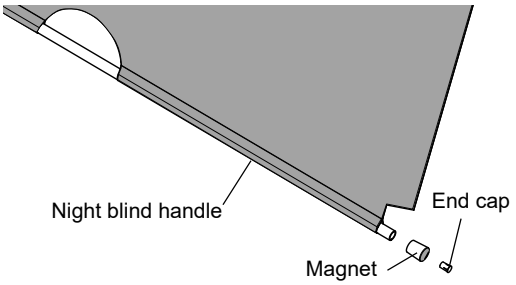


Night Blind Switch

The switch mechanism is made up of a magnet in the night blind handle and a switch fitted to a bracket at the bottom RH side of the cabinet opening. The switch cable is connected to the unit.

To replace the night blind magnet

1. Free the night blind handle from the cabinet opening to gain access to the RH end of the handle, and remove the end cap to access the magnet.



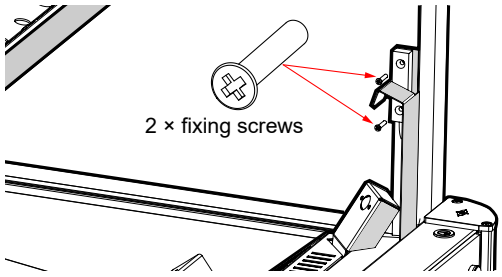
2. Remove and replace the magnet.
3. Refit the end cap and position the night blind back inside the cabinet.

To replace the night blind switch

1. Unplug the cooler from the power supply.
2. Remove the kick panel (see page 35) to access the cassette.
3. Disconnect the night blind switch cable from unit
4. Undo the night blind switch cable from the connector block on the RH cabinet electrics panel, and withdraw the cable up into the cabinet.

Continued over the page

5. Remove the RH night blind bracket (with night blind switch fitted) by undoing the two fixing screws at the bottom of the bracket.



6. Remove the night blind switch from the bracket.
7. Fit the new night blind switch.
8. Run the new night blind switch cable back and reconnect the unit.
9. Reassemble the cooler and check for correct operation.

Refrigeration Cassette

Before Servicing

Overview

Ensure you have read and understand this manual before commencing with any servicing.

Important. Ensure the following before servicing:

- SKOPE hydrocarbon refrigeration systems must only be serviced by appropriately skilled refrigeration technicians.
- Servicing of sealed refrigeration system must be completed at a hydrocarbon workshop/service area with dedicated hydrocarbon equipment and personal protective equipment.
- All local hydrocarbon storage and handling regulations and procedures must be adhered to at all times.

Ensure all electronic controller alarms diagnostics and refrigeration system diagnostics are performed to confirm a refrigeration system fault is present. Check all components such as the electronic controller and electrical systems.

IMPORTANT

Use only dedicated hydrocarbon SKOPE OEM spare parts.

DO NOT use alternative parts.

For safety compliance, only SKOPE supplied components specified for the appliance shall be used for repairs.

Safety hazards

The main hydrocarbon safety hazards are:

- Flammable refrigerant.
- Venting of hydrocarbon and compressor oil.
- Asphyxiation.

Refrigerant identification

The cabinet rating label (located in the upper inside of the cabinet) states the refrigerant type. In addition to this, warning labels are fitted to hydrocarbon refrigeration coolers to indicate the use of R290 refrigerant.

Personal Protective Equipment

Ensure all required P.P.E is used correctly during servicing.

Service equipment

All refrigeration service tools must be hydrocarbon compliant and any electrical equipment that could be exposed to the refrigerant must be intrinsically safe. ONLY dedicated hydrocarbon service equipment may be used.

In addition to standard tools for accessing and removing parts, specialist tools are required when completing refrigeration system service tasks detailed in this manual:

- Intrinsically safe vacuum pump.
- Dedicated hydrocarbon gauges.
- Intrinsically safe hydrocarbon combustible gas leak detector.
- Intrinsically safe scales to 1gram accuracy.
- Well ventilated work area.

Gas Detector

A gas detector is required and must be used when servicing HC units. A gas detector is a safety device for hydrocarbon gas to warn the technician that hazardous flammable gas is present.

Leak Detector

A leak detector is recommended for servicing HC units. It is used to track and locate the source of hydrocarbon gas leaks.

On-Site Work

The service technician must have required knowledge, skills and tools to proceed with on-site refrigeration sealed system diagnostics.

Minimum knowledge and skills

- Experience and qualifications suitable for work on a flammable refrigeration system.
- Performs no unsafe activity.

Minimum tools and equipment

- Hydrocarbon gas detector
- Safety signage - suitable to create a safe work zone 1.5m around the cabinet.
- Refrigeration gauge set - suitable for R290 flammable refrigerant.
- Bullet valves/line piercing valves suitable for 6mm tube.

Service vehicle

- Suitable for transporting flammable gas (being HC refrigeration systems). Vehicle storage area must be well ventilated externally, and not ventilated into the vehicle. There must be no ignition sources in the storage area, nor any areas where the gas may pool.
- Must be able to transport swap units.
- Should carry minimum SKOPE HC service parts.

Hydrocarbon Workshop

The following tools and equipment are required in the hydrocarbon workshop:

- Hydrocarbon Leak Detector.
- Dedicated Hazardous workshop Area - suitable for servicing and release of flammable refrigerant.
- Refrigeration Gauge set - suitable for R290 flammable refrigerant.
- Dry Nitrogen - suitable for purging and high pressure testing.
- Refrigeration Vacuum pump rated as suitable for use with R290 (by Vacuum pump supplier).
- Charging scales rated as suitable for use with R290 (by scales supplier), accuracy to 1 gram.
- R290 refrigerant supply cylinder.

Refrigeration Cassette Assembly

The refrigeration cassette is a bottom mounted, electronically controlled removable cassette.

For safety and compliance, only SKOPE supplied parts specifically for this appliance may be used for repairs. Other parts may appear to be suitable, but may not be approved or safe for use in an appliance with hydrocarbon refrigerant.

The electronic controller assembly is located in front of the refrigeration cassette, but is matched to the cabinet.

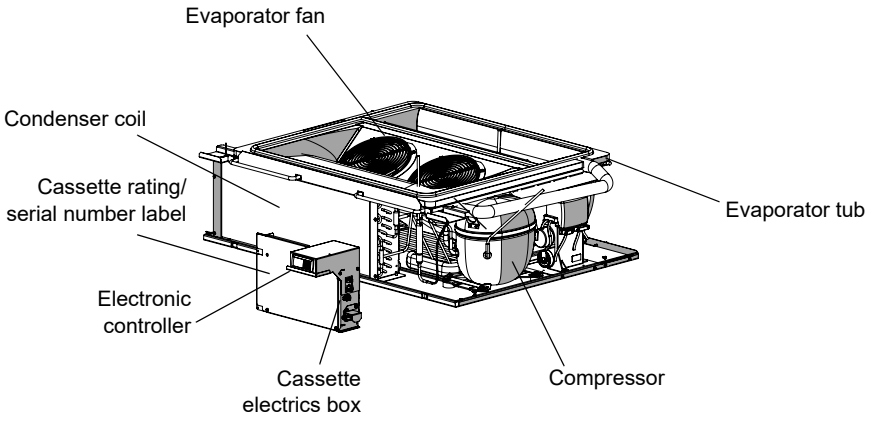
For servicing or transportation, the refrigeration cassette unplugs and pulls out of the cabinet.

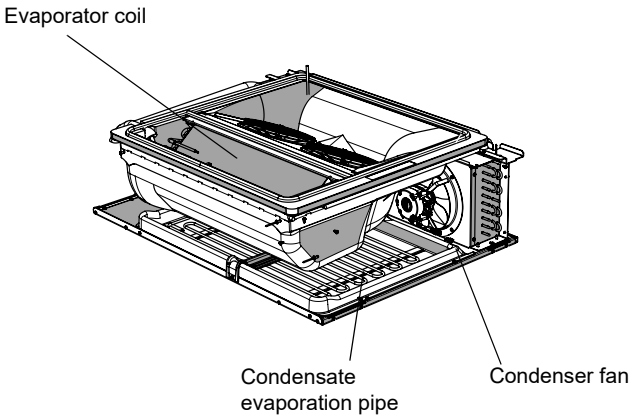
The model and serial number are both printed on the cassette rating/serial number label attached to the front of the cassette. Before ordering spare parts, take note of the model and serial numbers.

Specifications for the model are in the following table. Verify model and basic requirements before servicing.

Cassette specifications

Unit Model:	UBQENI-0034
Compressor:	Embraco NT6224U
Nominal capacity:	1700 Watts
Refrigerant:	R290
Charge:	135 g





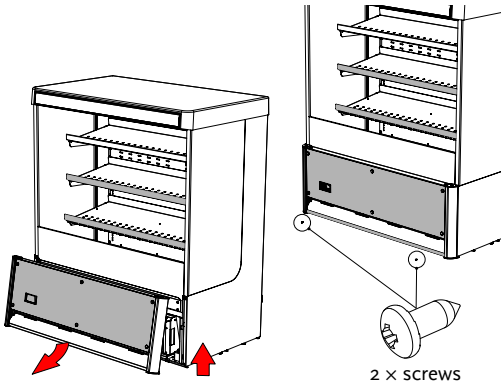
Cassette Removal

Follow the steps below to remove the refrigeration cassette.

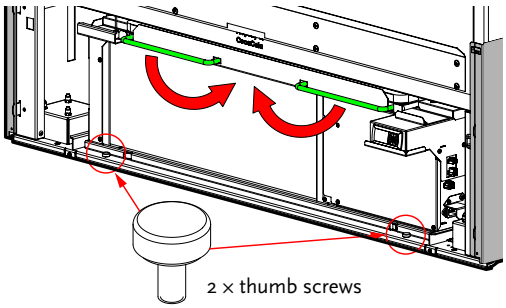
To remove the refrigeration cassette

1. Switch off and unplug the cooler from the mains power supply.

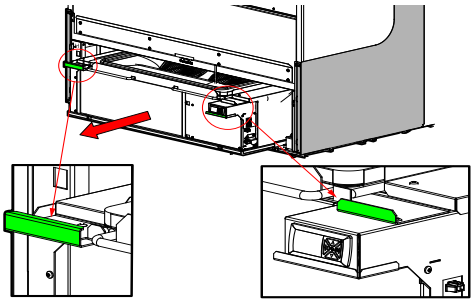
2. Remove the kick panel: Unscrew the two bottom screws, then pull out the bottom of the kick panel gently and lift vertically off the cabinet.



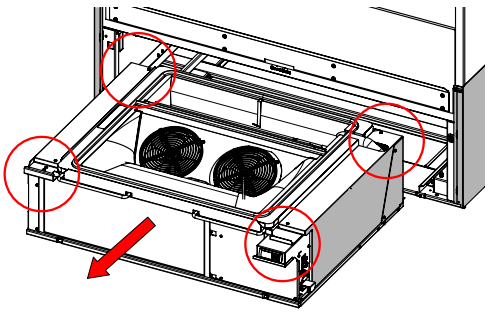
3. Pull the two cassette lifting levers and rotate inwards to a horizontal position to lower the refrigeration cassette evaporator tub. Remove 2 × thumb screws from plinth cross member.



4. Pull the unit out approximately 200 mm using handles (see drawing details) Unplug all electrical connections.



5. Using the hand holds remove the unit from the cabinet. When removing take care of loose plugs, cables and the unit sealing gasket.
   Important: Ensure the unit remains level when it is removed from the cabinet to avoid damage to the unit seals.



6. When refitting the refrigeration cassette, ensure:
   - The unit sealing gasket on top of the cassette is in good condition.
   - All plugs are securely re-connected.
   - The refrigeration cassette evaporator lifts and seals correctly.
   - The front panel is refitted.

Cassette Junction Box

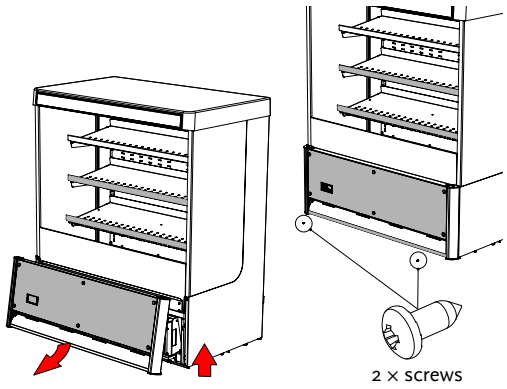
The cassette junction box assembly contains the electronic controller, the mains supply socket, the LED power supply, and panel mount socket connectors. The light, night blind switch, and PIR sensor sockets are external to the electrics box. The probe and condenser fan sockets are visible behind the electrics box front cover. The compressor and evaporator fan sockets are behind the electrics panel and require removing the side cartridge side cover.

Due to the confined space within the cassette electrics box, plugs may come loose as a result of movement and vibrations. Take care when refitting to ensure all plugs are securely attached to the correct sockets.

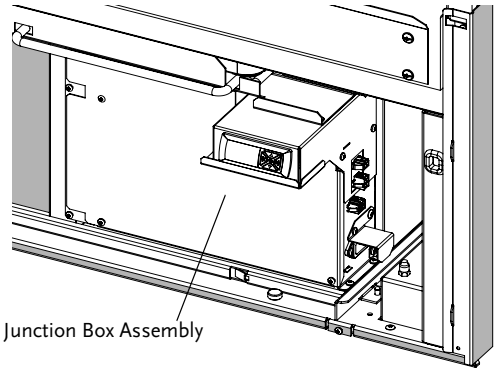
To access the cassette junction box interior

1. Switch off and unplug the cooler from the mains power supply.

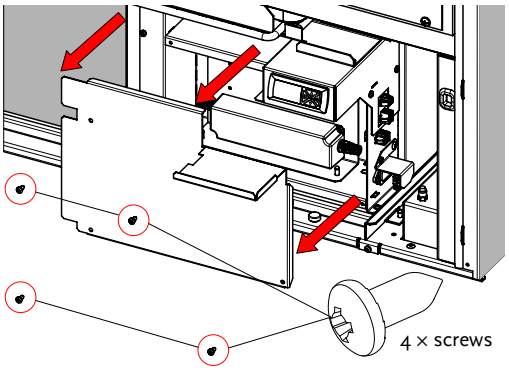
2. Remove the front panel: Unscrew the two bottom screws, then pull out the bottom of the kick panel gently and lift vertically off the cabinet.



3. The cassette junction box can be accessed or removed.



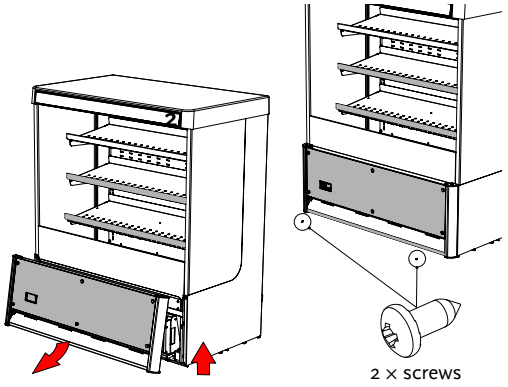
4. Remove 4 × screws from junction box lid. The lid can be removed for internal access.



To remove the junction box

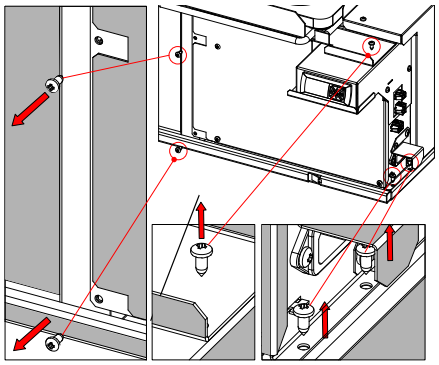
1. Switch off and unplug the cooler from the mains power supply.

2. Remove the front panel: Unscrew the two bottom screws, then pull out the bottom of the kick panel gently and lift vertically off the cabinet.

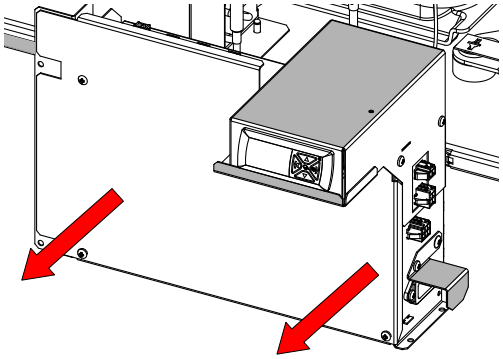


3. Remove the cassette from the cabinet (see page 35).

4. Remove 5 × screws from the junction box. Two screws on the left side of the junction box. One screw to the rear of controller and two screws on the right side.



5. Carefully lift the tub to access electrical sockets. Disconnect four sockets on the top left of the junction box and two on the rear side. The electrics junction box can now be removed.



Condenser Fan

The condenser fan assembly is made up of two high speed EC fan motors, fan blades and mounting brackets which can be replaced if necessary.

If the fan stops for any reason, check all connections to ensure no plugs have come loose.

The fan motor, fan blade and mounting brackets are removed from the refrigeration cassette as a complete assembly. The fan blade, fan motor and mounting brackets can then be replaced.

IMPORTANT

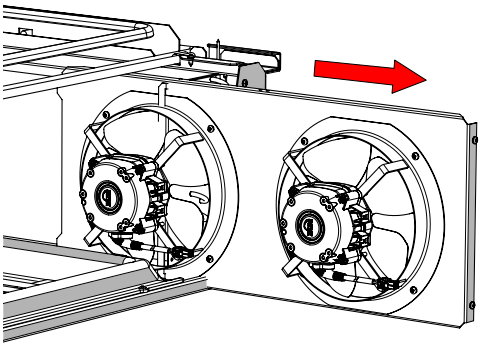
Replace the motor with the same SKOPE OEM part.

DO NOT use alternative parts.

It is important that the fan blade and/or fan motor is replaced with the same part to ensure safety, and correct alignment and refrigeration performance. Fan blades should be tightened to 1.5 Nm.

To access the condenser fan assembly

1. Unplug the cooler from the power supply and remove the refrigeration cassette (see page 35).
2. Remove the cartridge left side panel.
3. Remove the fan assembly (fan motor, fan blade, mounting brackets) from the cassette by unplugging the fan motor cable connectors, removing the two screws from the fan mounting plate, and pulling the fan mounting plate sideways out of the cartridge.



To replace the fan blade

1. Remove the condenser fan assembly (see above).
2. Remove the screw and washer from the centre of the fan blade, and lift the blade from the motor.
3. Replace new blade and fix with 12 mm flat washer and serrated head screw. Tighten the blade to 1.5 Nm.
4. Reassemble cassette and test.

To replace the fan motor

1. Remove the condenser fan assembly and the fan blade (see above).
2. Detach the fan motor from the fan mounting brackets by removing the four nuts and spring washers from the mounting bracket.
3. Fit new motor and reattach fan blade with 12 mm flat washer and serrated head screw. Tighten the blade to 1.5 Nm.
4. Reassemble cassette and test for correct operation, and test and tag as per standard procedure on completion.

Evaporator Fan

The evaporator fan assembly is made up of two high speed EC fan motors and fan blades, both of which can be replaced if necessary (see image below). The evaporator fan flexible cord has a red plug.

Before replacing fan parts, check all connections to ensure no plugs have come loose.

The fan motor and fan blade are fixed to the evaporator shroud via the brackets. The shroud (complete with fan motor and fan blade) can be lifted off the evaporator tub.

IMPORTANT

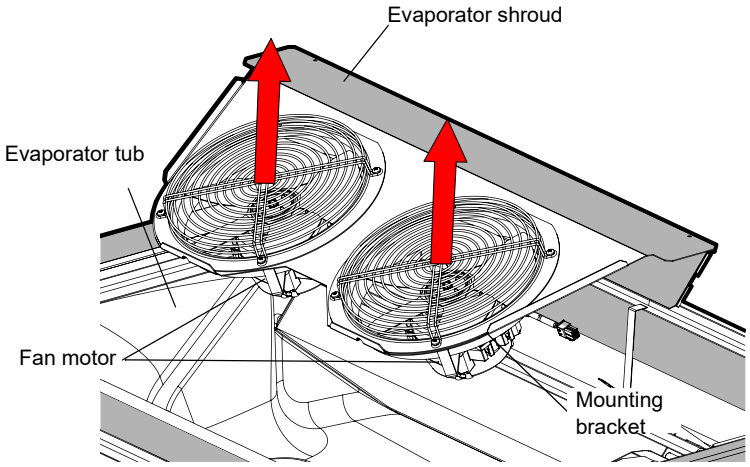
Replace the motor with the same SKOPE OEM part.

DO NOT use alternative parts.

It is important that the fan blade and/or fan motor is replaced with the specified part to ensure safety, and correct alignment and refrigeration performance. When refitting or replacing fan motors, ensure the blade screw is tightened to 1.5 Nm.

To access the evaporator fan assembly

1. Unplug the cooler from the power supply and remove the refrigeration cassette (see page 35).
2. The evaporator fan assembly can now be accessed.



To replace the fan blade

1. Unplug the cooler from the power supply and remove the refrigeration cassette (see page 35).
2. Remove fan guard.
3. Remove the screw and washer from the centre of the fan blade, and lift the blade from the motor.
4. Fit new blade, ensuring it is centred within the evaporator shroud, and fix with 12 mm flat washer and serrated head screw. Tighten the blade to 1.5 Nm.
5. Reassemble cassette and test.

To replace the fan motor

1. Follow the above steps to access the evaporator fan assembly and remove the fan blade.
2. Unscrew and remove cartridge right hand side panel to access fan motor cable connectors.
3. Lift the evaporator shroud (complete with fan motor) from the evaporator tub. **Note:** The evaporator and control probe flexible cords may restrict movement when lifting the shroud from the evaporator tub.
4. Free the fan flexible cord by cutting the cable ties and removing from the evaporator tub edge putty.
5. Remove the four nuts and spring washers from the fan mounting brackets and lift the fan motor from the bracket.
6. Attach the replacement fan motor to the fan mounting brackets using the nuts and spring washers.
7. Reattach the fan motor so that the flexible cord will point towards the right side of the evaporator tub once reinstalled. Re-cable tie the fan cord back onto the mounting bracket (to prevent high frequency vibration).
8. Place back into the evaporator tub, and ensure there is no interference between the fan motor and evaporator tub (to prevent high frequency vibration). Trace flexible cords back through the evaporator tub edge transition putty and back into the electrical box area. Ensure that the putty fills all gaps around the evaporator tub edge transition.
9. Reattach fan blade and tighten to 1.5 Nm. Ensure the correct fasteners are used (serrated head screw and 12 mm flat washer). Refit the fan guard.
10. Reassemble cassette and test for correct operation, and test and tag as per standard procedure on completion.

Compressor

The cassette is designed for use only with the specified compressor. If the compressor must be replaced, ensure that the SKOPE specified compressor is used as a replacement. Do not use other compressors within this refrigeration cassette.

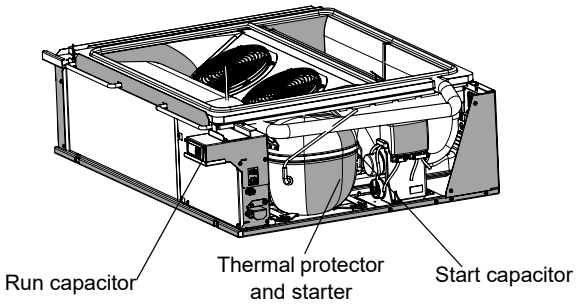
IMPORTANT

Replace the compressor with the same SKOPE OEM part.

DO NOT use alternative parts.

The compressor is located at the front of the refrigeration cassette, beside the condenser coil. If the compressor is causing excessive noise, check the mountings to ensure there is no damage to the rubber or the washers, nuts and screws.

Before replacing the compressor, check all plug connections and ensure the compressor electrics are operating correctly. The compressor must be supplied with consistent voltage over 220 volts, ensure the voltage does not drop at start-up. If the voltage does drop, ensure the unit has a direct power supply (not from a multi-box or extension cord).



IMPORTANT

To eliminate possible vibration noise, ensure no pipes touch the evaporator tub bottom surface, evaporator tub support legs, plastic base, and condenser coil assembly.

Refrigeration System

Cassette Removal

For detailed instructions on removing the cassette, refer to cassette removal instructions available on the instruction sheet attached to the back of the cabinet, or on page 35 of this service manual.

Diagnostics

The following diagnostic test is useful for workshop diagnosis of a short of gas situation. Perform the test before opening the refrigeration system.

It is beneficial to have a correctly operating unit running beside the unit being serviced to compare behaviour.

Note: These diagnostic procedures are indicative only.

Refrigeration system diagnostic test (perform in suitable workshop)

1. Unplug the cooler from the power supply, remove the refrigeration cassette, and remove the cassette cover.
2. Place cassette on bench and disconnect the evaporator probe (black plug) from the top of the cartridge electrics and the evaporator fan motor (red plug) from the back of the unit electrics box.
3. Connect the refrigeration cassette to the power supply and allow to run for approximately 10 minutes until the evaporator temperature stabilises.
4. Refer to table below as a guideline to determine if the system charge is correct.
   A system with the correct refrigerant charge will frost back to the compressor. If the frost does not go back to the point shown there may be a capillary blockage or compressor fault. The point where the frost stops is affected by the ambient temperature.
   The table below shows system characteristics at different charge and ambient conditions for a cassette running on the bench.

OD720N Series (cassette UBQENI-0034)

Observation	50% charged 67g	75% charged 101g	100% charged 135g
Suction pipe at compressor	Cold sweat up to compressor stub	Frosty suction up to compressor shell	Palm size frost on compressor shell
Evaporator coil	30% frosted	30% frosted	30% frosted
Unit power	460 W 2.1 amps	490 W 2.2 amps	520 W 2.2 amps
Evaporator temperature	>-17°C	-19 to -21°C	<-22°C

5. Determine whether the system is short of refrigerant, blocked capillary or compressor fault.
   A dry suction could indicate either short of gas, blocked capillary or compressor fault, and further analysis may be required. If there is no frost present at the evaporator coil inlet pipe a blocked capillary is likely. If frost is forming at evaporator coil inlet pipe system, and suction/compressor is behaving as shown in table above at 50% or 75%, the system is likely short of gas.

Diagnosis	Frost back (after 10 mins)
Blocked capillary	None
Normal operation	Refer to table above

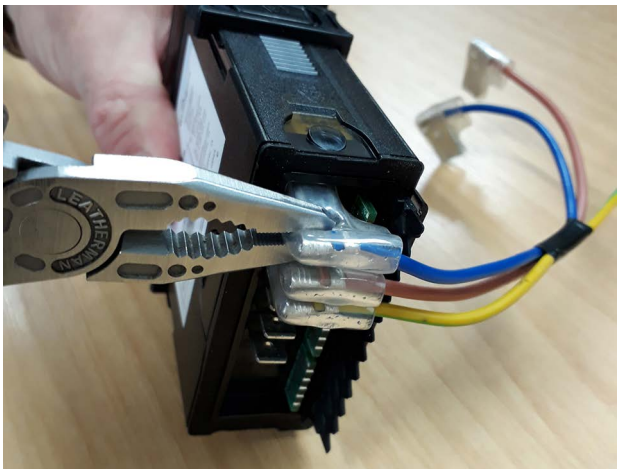
6. After fault has been diagnosed and repaired, reassemble the refrigeration system and test run.

Electronic Controller

QC Terminals

The terminals at the back of the controller are locking QC terminals, which cannot be pulled off without pressing in the locking tabs.

Use needle nose pliers to unlock and gently remove the terminals.



Electronic Controller Location

The electronic controller is located within the cassette electrics box assembly, which is attached to the front of the refrigeration cassette.

Replacing the Controller

To access and replace the controller

1. Unplug the cooler from the power supply.
2. Remove the front kick panel. (see page 25)
3. Remove the unit electrics box (see page 35)
4. Remove the fixing screws from the electronic controller mounting, and pull the faceplate and controller from the spacer.

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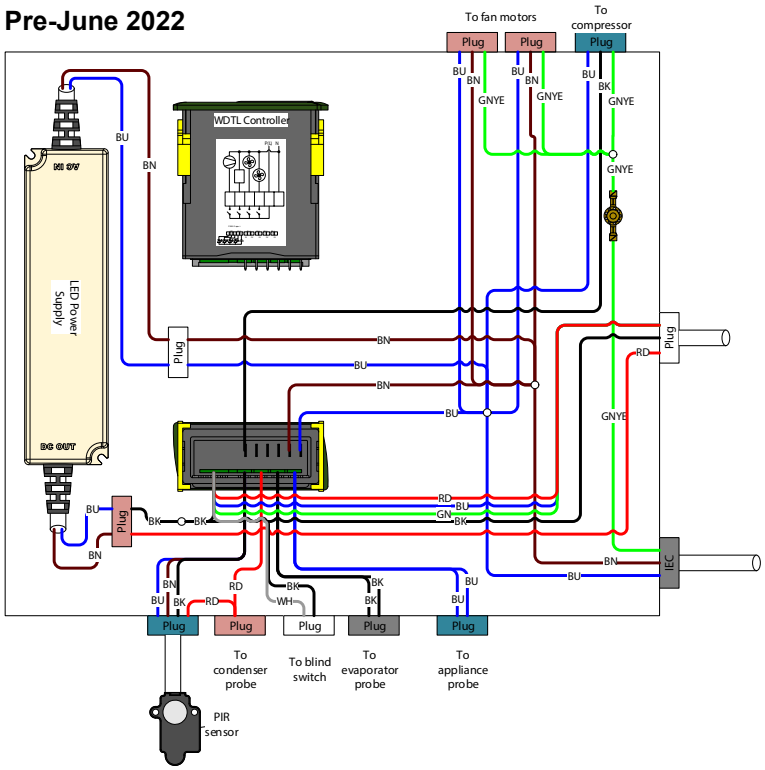
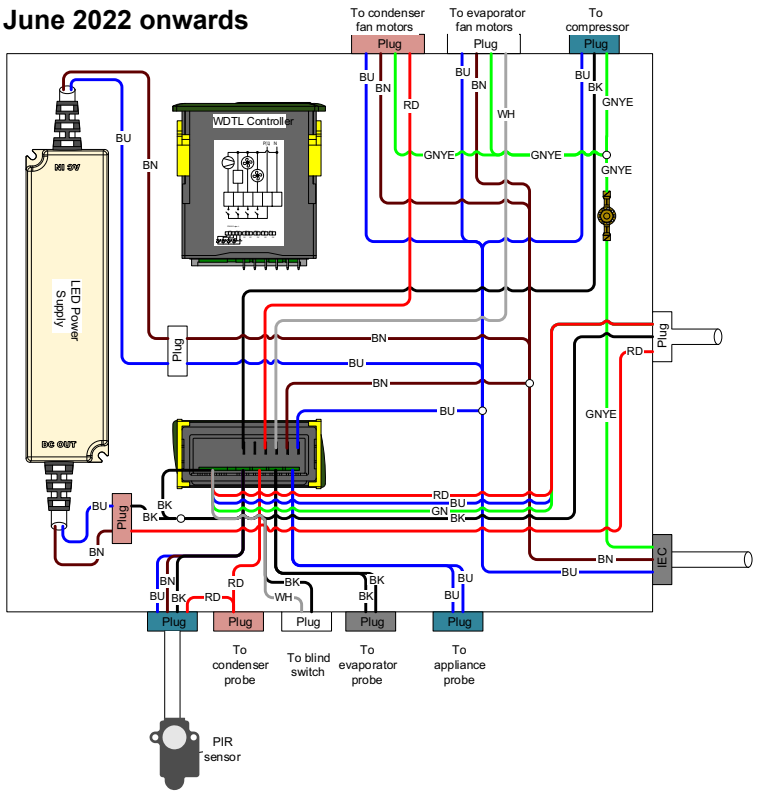
5. Fit the new electronic controller based on the cassette's wiring:

Pre-June 2022



June 2022 onwards



6. Reassemble.

7. Perform electrical safety test.

Continued over the page

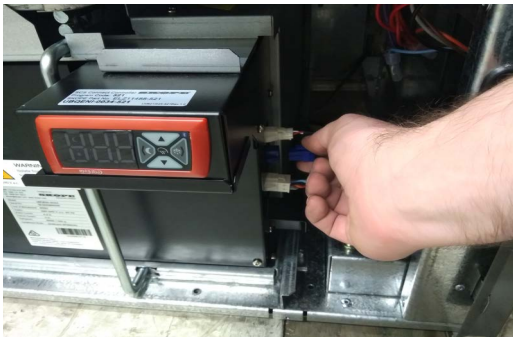
8. Reconnect the cooler to the power supply, and use a mobile device to connect to the controller with the SCS Connect Field app (see “SCS Connect Field App” on page 10).
9. Navigate to the LOAD PARAMETER FILE menu.
10. Select the appropriate parameter file from LOCAL. If not available in LOCAL, search for the parameter file in SERVER (internet access required), and download to LOCAL.
11. Confirm correct file and WRITE TO SCS.
12. After WRITE TO SCS is complete, select MENU DISCONNECT to save parameter set on SCS.
13. Power cycle the controller and check that correct parameter set has been applied
14. Open the SCS Connect Field app and re-connect to the controller.
15. Follow CCEP procedure for “Field SCS Change Over Process” to assign the controller to the outlets details.

PIR Sensor

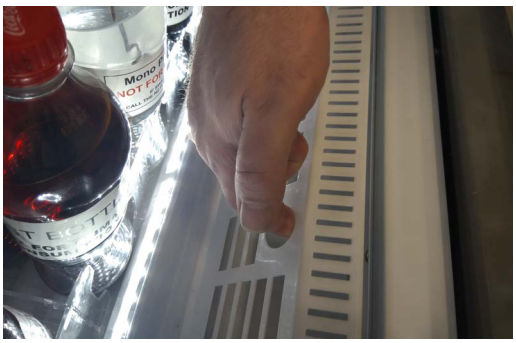
The electronic controller is fitted with a PIR sensor to monitor activity inside the cooler. The PIR sensor is located at the bottom of the cabinet opening.

To replace the PIR sensor

1. Unplug the cooler from the power supply and remove the kick Panel (see page 25).
2. Unplug the PIR sensor from the electrics box (blue plug).



3. Move to the cabinet interior, and lift the return air grille out of the cabinet.



4. Unscrew the PIR sensor bracket from the cabinet and detach the PIR sensor from the bracket.

5. Unscrew the front upstand (to allow PIR sensor plug removal).

6. To remove the PIR sensor from the cabinet: Pull the cable and up through the cabinet corner.

7. Following the same path as the original cable, fit the replacement PIR sensor assembly, connect to the electrics box, and attach the sensor to the bracket and the bracket to the cabinet.

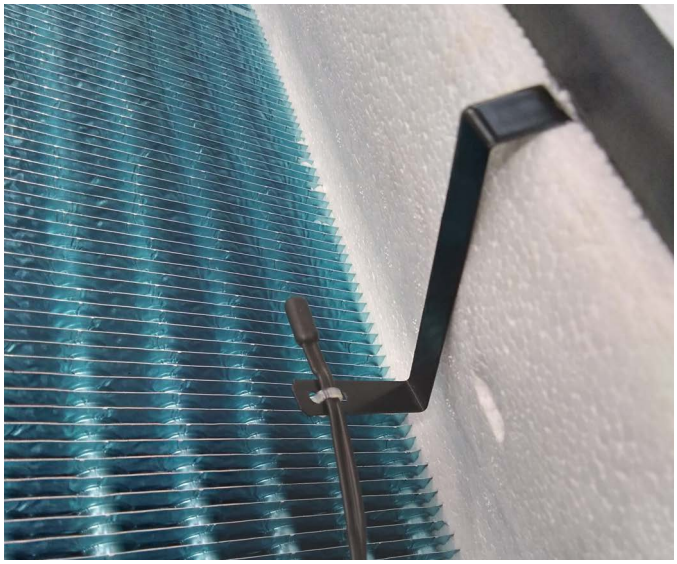
8. Reassemble the cabinet and check for correct operation: Connect to the cooler with the SCS Field App and confirm ‘Motion’ appears when waving in front of the PIR sensor, and ‘No Motion’ appears when there is no motion.

Control and Evaporator Probe

The control probe is located on a bracket at the rear of the evaporator tub. The evaporator probe is located on the right hand side of the evaporator pipe bends.

To replace the control probe

1. Unplug the cooler from the power supply.
2. Remove the refrigeration cassette (see “Cassette Removal” on page 35).
3. Remove the cartridge right side panel.
4. Remove the electrics junction box (see “Cassette Junction Box” on page 35).
5. Unplug the control probe from the electrics box (blue socket).
6. Remove the control probe from the cartridge. Cut cable ties where necessary.
7. Following the same path as the original probe, run the new probe to the original location and secure with cable ties.
8. Reassemble cassette and test for correct operation.



To replace the evaporator probe

1. Unplug the evaporator probe from the electrics box (black socket).
2. Remove the cork tape and cable tie from the evaporator probe. Remove the evaporator from the cartridge, cut cable ties where necessary.
3. Following the same path as the original probe, run the new probe to the original location and secure with cable ties. The evaporator probe needs to be covered with insulating cork tape.
4. Reassemble cartridge and test for correct operation.

Condenser Probe

The condenser probe is located on the side of the condenser coil (see image above).

To replace the condenser probe

1. Unplug the cooler from the power supply and remove the refrigeration cassette.
2. Remove the electrics box cover, detach the electrics box, unscrew the four fixing screws from the side of the cassette cover and lift the cover from the cassette. Place aside.
3. Detach the probe from the condenser coil. Trace the probe cable to the cassette junction box and unplug it.
4. Following the same path as the original probe, run the new probe to the condenser coil and secure with cable ties. Use cork tape to insulate the probe. Ensure the probe cable is securely plugged into the rear of the cassette junction box.
5. Reassemble.

Cleaning

Cabinet

Periodically wipe the inside and outside of the cabinet with a damp cloth, taking care to keep moisture away from electrical parts. As with any maintenance, ensure the chiller is isolated from the power supply before cleaning.

Air Filter and Condenser Coil

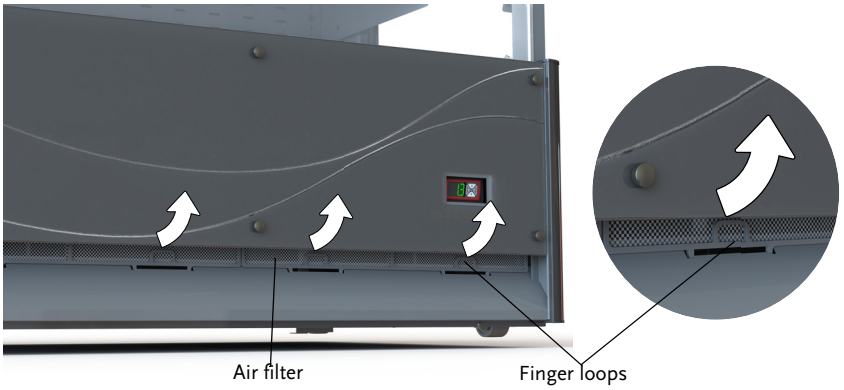
To ensure trouble-free performance, we strongly urge monthly cleaning with a soft brush to remove dust and fluff. A more thorough cleaning is required by qualified service personnel every six months. The condenser coil and air filter **must** be kept clean for efficient and reliable operation.

WARNING

Unplug the cooler from the power supply before cleaning the condenser coil.

To remove and clean air filter and clean condenser coil

1. To remove the filter, use the finger loops to pull the filter up and detach from the front panel.



2. Clean the filter with a vacuum cleaner, wash with cold water and shake excess water off before refitting. Do not apply hot water, blow dry or place in dishwasher. If necessary, discard and refit new air filter.
3. To refit the filter, insert it up into the locating bracket on the top face of the front panel vent with the finger loops facing out. Then clip into the slots on the bottom face of the front panel vent.

7 Troubleshooting

Electronic Controller

Alarms signal unexpected operational changes in the cooler. When an alarm is activated, use the electronic controller app to assist with fault diagnosis and service as necessary. See page 10 for information.

Cabinet

For problems with the cabinet and refrigeration cassette use the following table.

Problem	Possible Cause	Repair
• Cabinet not operating • No controller display	• Loss of power supply	• Check mains power supply.
	• Loose plug	• Check all plugs are connected correctly.
• Lights not on.	• Electronic controller is in 'Night' mode	• Switch the light on while keeping the chiller in night mode by pressing the light button on the electronic controller faceplate. • Change the chiller into 'day' mode by pressing and holding the Day-Night button on the electronic controller faceplate, or hold the door open for ten seconds.
	• Light switched off / Night blind closed	• Switch light on via button on the electronic controller faceplate (see"Controller Faceplate" on page 8). • Open night blind.
	• Electronic controller displays alarm indicating a refrigeration system error.	• Diagnose and repair.
	• Failed LED light	• Service light.
• Excess noise vibration	• Refrigeration pipes transferring vibration into cassette	• Re-align pipes.
• Frozen evaporator coil	• Evaporator probe fault	• Replace evaporator probe.
	• Controller fault	• Replace controller.
	• Short of refrigerant	• Perform refrigeration system diagnostics (see page 42) and service as required.
• Power consumption is higher than expected	• Cassette operating too hot	• Clean the condenser. • Ensure the cabinet has good ventilation around the refrigeration cassette. • Ensure the cabinet is within the maximum operating temperature.
	• Product too cold	• Raise set point
• Product is too warm.	• Refrigeration cassette operating too hot. • Excessive door opening or refrigeration heat load	• Ensure the cabinet has good ventilation around the refrigeration cassette. • Ensure the cabinet is within the maximum operating conditions.
	• Electronic controller is in night mode	• Switch the chiller to day mode via button on electronic controller faceplate.
	• Set point is to high	• Lower set point.
• Moisture build up on cabinet exterior.	• High humidity.	• Check ambient operating temperature and reposition chiller if necessary.
• Warm cabinet temperatures • Compressor operating for long periods (more than 1 hour)	• Blocked condenser coil	• Clean the condenser coil.
	• Poor ventilation around refrigeration cassette	• Ensure the cabinet has good ventilation around the refrigeration cassette. • Ensure the cabinet is within the maximum operating temperature.

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