

# VF Series

## SKOPE Vertical Freezer

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VF1000



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Thank you for purchasing a SKOPE refrigeration product.

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# 1 Installation

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**Safety First** Always observe safety precautions when using any electrical appliance. Read these instructions carefully and retain them for future reference.

- When the appliance is used by or near young children or infirm persons, close supervision is necessary, especially to ensure children do not play with it.
- Do **not** use this appliance for other than its intended use.
- Do **not** cover the grilles or block the entry or exhaust of airflow by placing objects up against the refrigeration cassette.
- Do **not** probe any opening.
- Do **not** store explosive substances such as aerosol cans with a flammable propellant in this appliance.
- Only use this appliance with the voltage specified on the cabinet rating label affixed to the refrigeration cassette.
- Ensure the appliance has adequate ventilation as this is essential to economical, high performance.
- Be careful not to touch moving parts and hot surfaces.
- For your own safety and that of others, ensure that all electrical work is done by authorised personnel.
- If the power supply flexible cord becomes damaged, it must be replaced by an authorised service agent or similarly qualified person in order to avoid a hazard.
- Ensure all necessary safety precautions are observed during installation or removal of the refrigeration unit.
- This appliance is not designed to be stable while in motion. Use extreme caution when moving or transporting the appliance.

### **WARNING**

**Always** isolate the freezer from the mains power supply before attempting any maintenance.

### **WARNING**

Twin unit freezers have two separate power supplies. Ensure both supplies are disconnected before undertaking any service or maintenance work.

### **CAUTION**

**Never** overload the power supply, which could damage the freezer and product. See the rating label inside the cabinet for the safe power supply and current draw.

## Positioning the Cabinet

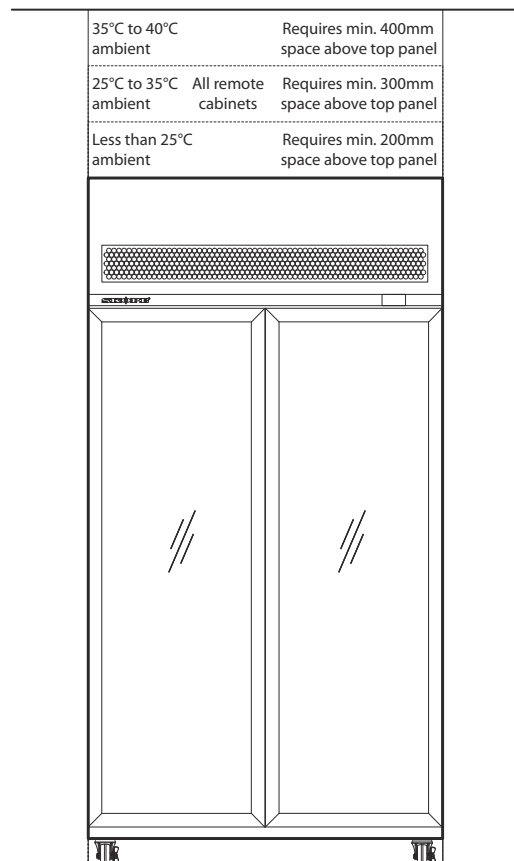
**Power Cord** The power cord exits from the top rear of the cabinet and is fitted with a 3-pin plug. Pull the power cord around so that it's not trapped before you position the cabinet. **Note:** Single unit freezers are fitted with one power cord. Twin unit freezers are fitted with two power cords, one for each refrigeration unit.

**Freezer Location** The location of the freezer may be the single most important decision that will extend its life and ensure economical, high performance. We recommend that you put the freezer in the coolest place possible because it will use less power and last longer. Although the freezer operates in environs up to 40°C (104°F), we suggest that you not constantly run it at the upper end.

Avoid direct sunlight, warm draughts etc. Allow adequate space for doors to open and close properly. Self-closing doors have internal torsion bars pretensioned at the factory, and must be unobstructed. Ensure the cabinet sits on a level surface so that the doors shut and correctly seal. Level footing also prevents the condensate tray from overflowing.

**Ventilation** See diagram below for ventilation guidelines. When positioning the freezer, ensure there is at least a 200mm space above the top panel. Adequate ventilation around the refrigeration unit is essential for efficient operation. The air surrounding the refrigeration unit must not exceed 40°C. Keep the ventilation slots at the top of the cabinet clear at all times and **never** store cardboard cartons or other objects on top of the freezer.

**Note:** Remote cabinets require a minimum of 300mm clearance above the top panel to allow for service access.



## Shelves

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The freezer is supplied with five wire shelves which may be positioned at different heights to suit various products. Always ensure that the shelf clips are securely engaged in each of the shelf support strips. Support strips are marked '+' for easy location of shelf clips.

### To fit the wire shelves

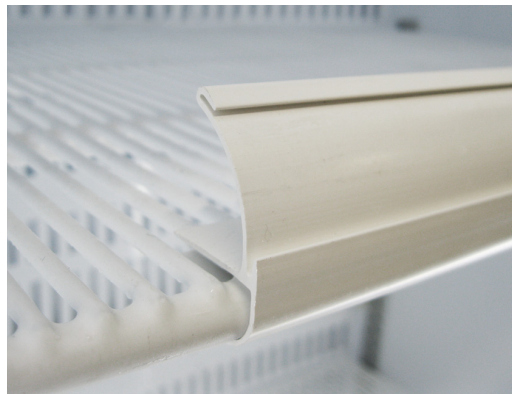
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1. Unpack the shelves and shelf clips from inside the cabinet.
  2. Establish the desired position for the shelves and securely engage a shelf clip in each of the shelf support strips.
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3. Sit the shelves on the shelf clips.



4. The ticket strips clip into place on the front of each shelf.



## Optional Door Lock

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Cabinets fitted with optional door locks have a key barrel type lock at the top each door. Use the supplied keys to lock and unlock the door as necessary.

## 2 Operation

### Automatic Start-Up

After the cabinet has been positioned in a suitable place, plug it in and check the following activity.

Item	Activity
Condenser Fan	The condenser fan starts and runs at a slow speed. When the compressor starts, the condenser fan will run at full speed.
Lighting	The lights that illuminate cabinet interior and top sign (where applicable) will come on when the freezer is turned on. The light/s can be switched on and off via the electronic controller (see over page). Cabinets fitted with solid doors use an automatic light switch to turn the light on and off with door openings.
Electronic Controller	An electronic controller runs the freezer and is visible on the control panel above the door/s. The electronic controller display panel shows the cabinet temperature.  <b>Note:</b> Twin unit freezers are fitted with two electronic controllers, one for each refrigeration unit. Only one electronic controller is visible.
Compressor	The compressor starts about one minute after the lights go on. The compressor turns off when the product temperature reaches around $-21^{\circ}\text{C}$ and turns on again when it reaches about $-18^{\circ}\text{C}$ .
Evaporator Fan	The evaporator fan will not operate until the evaporator probe senses a temperature of $-8^{\circ}\text{C}$ on the evaporator coil. When the evaporator coil is below $-8^{\circ}\text{C}$ , the evaporator will run at slow speed or fast speed as required.

### Loading Product

Let the freezer run for 30 minutes before loading it with product the first time. When loading the freezer:

- ▣ Allow adequate air space around each item to ensure even cooling and efficient operation of the freezer.
- ▣ Do not exceed a maximum load of 20kg per shelf.
- ▣ Remove some product if the shelves are flexing.
- ▣ Do not let anything overhang the shelves because this might stop the doors from shutting or even break something.
- ▣ Do not load product above the load limit indicators shown on the cabinet interior sides (see image below).

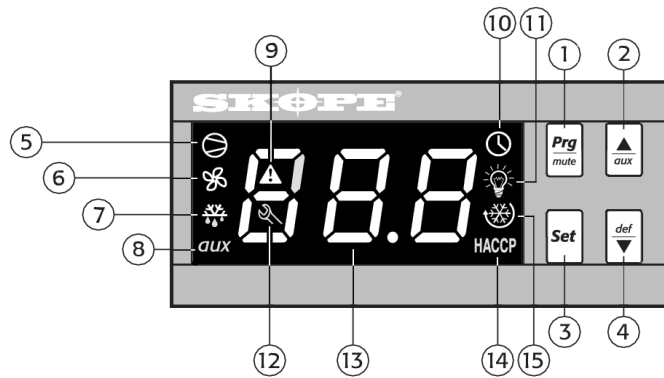


## Electronic Controller

**Introduction** The electronic controller controls the freezer, displays the freezer temperature and signals temperature alarms. It uses temperature probes to collect data and runs the freezer accordingly. The electronic controller is pre-programmed and usually requires no initial setup or additional programming. SKOPE does not recommend that the settings be changed unless necessary.

**Note:** Twin unit freezers are fitted with two electronic controllers, one for each refrigeration unit.

**Faceplate** Because the electronic controller plays such an important role, it's helpful to know the parts of the faceplate you may use.



No.	Item	Description
1		<b>Prg / mute:</b> To initiate program sets, press for 5 seconds. Mutes the audible alarm (buzzer).
2		<b>UP / aux:</b> To switch light/s on and off. To scroll settings <b>UP</b> (in program mode).
3		<b>Set:</b> If pressed for more than 2 seconds displays and / or enables changing the temperature setpoint (see page 9).
4		<b>DOWN / def:</b> To scroll settings <b>DOWN</b> (in programme mode).
5		<b>COMPRESSOR:</b> ON when the compressor and condenser fan starts. Flashes when activation of the compressor is temporarily delayed.
6		<b>FAN:</b> Shows when fan is operational.
7		<b>DEFROST:</b> ON when the defrost is activated. Flashes when the activation of the defrost is temporarily delayed due to procedures in progress.
8	<b>aux</b>	<b>AUX:</b> n.a.
9		<b>ALARM:</b> Flashes in the event of alarms.
10		<b>CLOCK:</b> On when real time clock is enabled.
11		<b>LIGHT:</b> On when the cabinet lighting is activated.
12		<b>SERVICE:</b> Flashes in the event of malfunctions.
13		<b>DISPLAY:</b> Shows the cabinet temperature.
14	<b>HACCP</b>	<b>HACCP:</b> n.a.
15		<b>CONTINUOUS CYCLE:</b> On when freezer is running in continuous run mode.



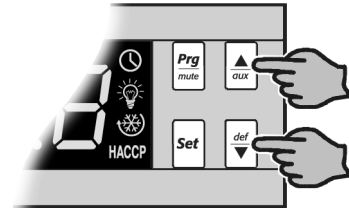
**Defrost** To ensure efficient operation, the electronic controller forces a defrost cycle when required. During a defrost cycle, the compressor stops, **DEF** and the ❄️ will display on the electronic controller faceplate. The freezer will resume normal operation once the defrost cycle has finished. A manual defrost can also be initiated by pressing and holding the  $\frac{def}{\nabla}$  button.

**Continuous Cycle** The continuous cycle can be used to pull down the temperature of product inside the freezer quickly. During a continuous cool down the compressor runs continuously for a set time.

#### To start a continuous cycle

1. While the freezer is switched on and running, press and hold the  $\frac{aux}{\blacktriangle}$  and  $\frac{def}{\blacktriangledown}$  buttons for five seconds.

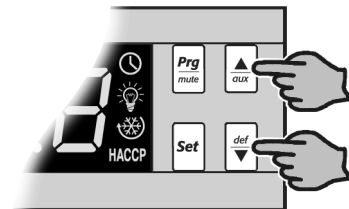
The ❄️ symbol will display during a continuous cycle.



#### To stop a continuous cycle

1. The electronic controller will automatically stop the continuous cycle after a period of time.

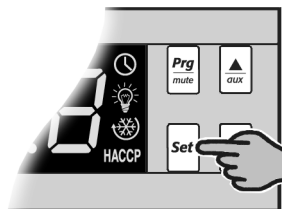
The continuous cycle can be stopped by pressing and holding the  $\frac{aux}{\blacktriangle}$  and  $\frac{def}{\blacktriangledown}$  buttons for five seconds.



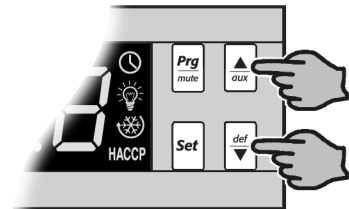
**Temperature Setpoint** The VF Freezer Range is manufactured with a pre-set control temperature set point of -21°C. If this set point does not match your required storage temperature it is recommended that you change the set point accordingly. The set point can be adjusted between -26°C and -16°C.

#### To view and adjust the temperature setpoint

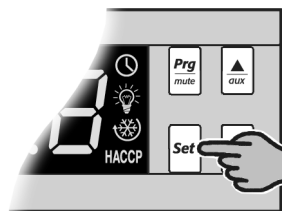
1. To view the setpoint: press and hold the **Set** key for 2 seconds, until the setpoint value flashes



2. To adjust the setpoint: press either the  $\frac{aux}{\blacktriangle}$  and  $\frac{def}{\blacktriangledown}$  keys to display the required setpoint value.



3. Press the **Set** key again to memorise the new setpoint value. If this is not done within 60 seconds, changes will be lost and you will need to repeat the above procedure.

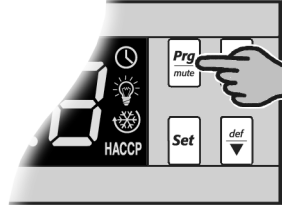


**Controller Reset** To delete program modifications and reset the controller to SKOPE default program or when a replacement controller is being fitted, a 'Controller Reset' must be performed.

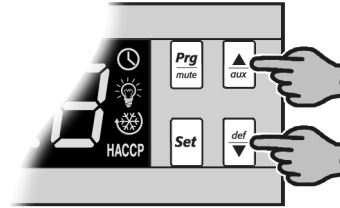
**To reset the controller**

1. Disconnect the freezer from the power supply.

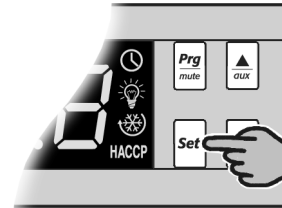
2. Press and hold the **Prg mute** key while plugging the freezer into the power supply (this may require two people). After a few seconds the controller is reset and program mode 'bn0' is displayed. The controller must never be left in program mode 'bn0' as failure will occur.



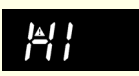





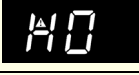









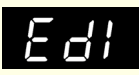
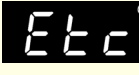





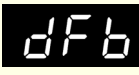

3. Press the  $\frac{\Delta}{aux}$  or  $\frac{def}{\nabla}$  keys to select 'bn1' for SKOPE default program.



4. Immediately press the **Set** key to confirm the preferred program. If not confirmed within 60 seconds the freezer will remain in program mode 'bn0' (and cause failure). If this occurs, repeat the above procedure.



**Alarms** The following table explains messages that the electronic controller displays and related alarms. Alarms signal unexpected operational changes in the freezer and stop when action is taken to resolve the problem.

Code	Display Icon	Alarm Description	Initial Action
	 Flashing	Product HIGH temperature alarm	1. Check the cabinet product loading to ensure ventilation slots are not blocked and that product does not overhang the shelves. 2. Ensure the cabinet is installed with good refrigeration unit ventilation. 3. Check and clean the condenser coil (see page 12). 4. Unplug cabinet from the power supply for 1 minute, then reconnect to power supply. If problems persist, contact SKOPE
	 Flashing	Product LOW temperature alarm	
	 Flashing	Door open alarm	Check door is closed.
	 Flashing	High ambient alarm	Check ventilation and operating conditions (see page 5).
	 Flashing	High pressure alarm	Check and clean the condenser coil (see page 12).
	 Flashing	Control probe fault	Contact an authorised service agent to replace probe.
	 Flashing	Evaporator probe fault	
	 Flashing	Ambient probe fault	
	None	Defrost over-time limit	Unplug cabinet from the power supply for 1 minute, then reconnect to power supply.
	 Flashing	Real-time clock fault	
	 Flashing	Controller E prom error	
	 Flashing	Controller E prom error	If problems persist, contact an authorised service agent.
	None	Start defrost request	None
	None	End defrost request	

## 3 Servicing

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### Cleaning

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Ensure the freezer is disconnected from the power supply before cleaning.

**WARNING**

Twin unit freezers have two separate power supplies. Ensure both supplies are disconnected before undertaking any service or maintenance work.

**Cabinet** Periodically wipe the inside and outside of the cabinet with a damp cloth, taking care to keep moisture away from electrical parts.

**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 recommended every six months, by qualified service personnel. The condenser coil **must** be kept clean for efficient and reliable operation.

**WARNING**

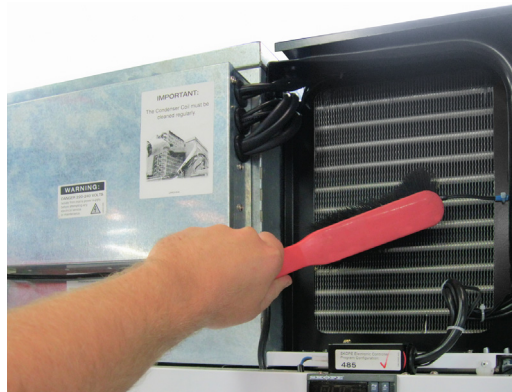
Disconnect the freezer from the power supply before cleaning the condenser coil.

#### To clean the condenser coil

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1. Disconnect the freezer from the power supply.
  2. Remove the sign assembly. Lift the assembly up and off the sign sides and if necessary unplug it from the cabinet.
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3. Clean the condenser coil with a soft brush.



4. Refit the sign assembly and reconnect the freezer to the power supply.
- 
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## Lighting

This freezer is designed for use with LED tubes and is not compatible with fluorescent tubes.

As with any maintenance, ensure the freezer is disconnected from the power supply before cleaning.

### WARNING

Twin unit freezers have two separate power supplies. Ensure both supplies are disconnected before undertaking any service or maintenance work.

### IMPORTANT

**DO NOT** use fluorescent tubes.

**Interior Light** The cabinet interior is lit by one side light or one centre pillar light (see table below for details), which can be replaced without moving shelves or removing product.

#### Interior light specifications

Model	LED Tube Specification
VF650	1 x side light: 22 Watt T8 LED tube (Ø26mm x 1500mm)
VF1000/VF1300	1 x pillar light: Twin 22 Watt T8 LED tube (Ø26mm x 1500mm)
VF1500	2 x pillar lights: Twin 22 Watt T8 LED tube (Ø26mm x 1500mm)

#### To replace the cabinet interior side light (model VF650)

1. Disconnect the freezer from the power supply.
2. Remove the diffuser by squeezing it until it is released from the aluminium housing, and then push the diffuser out of the way.
3. Rotate the LED tube until the pins on the ends of the tube align with the slots, then slide it out.
4. Fit a new LED tube. Ensure the LED tube is fitted with the power end at the top.



5. Refit the diffuser by slipping the back section into the housing, then squeezing and snapping the front section of the diffuser into place as you work down the length of the light.

#### To replace the cabinet interior pillar light (model VF1000/1300/1500)

1. Disconnect the freezer from the power supply.
2. Remove the diffuser by squeezing it until it is released from the housing, and then push the diffuser out of the way.
3. Rotate the LED tube until the pins on the ends of the tube align with the slots, then slide it out.
4. Fit a new LED tube. Ensure the LED tube is fitted with the power end at the top.

**Sign Light** Not as standard - lit sign freezers only. The sign unit is lit by one LED tube (see table below for details) which can be replaced by removing the front sign panel.

**Sign light specifications**

Model	LED Tube Specification
VF650	1 x 9 Watt T8 LED tube (Ø26 x 600mm)
VF1000	1 x 12 Watt T8 LED tube (Ø26 x 900mm)
VF1300	1 x 20 Watt T8 LED tube (Ø26 x 1200mm)
VF1500	1 x 22 Watt T8 LED tube (Ø26 x 1500mm)

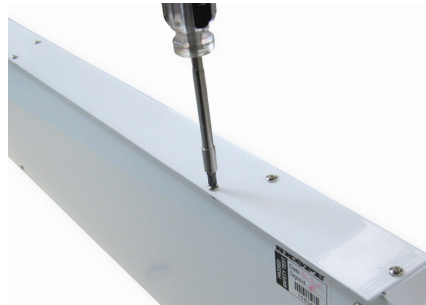
**To replace the sign light**

1. Disconnect the chiller from the mains power supply.
2. Remove the sign assembly. Lift the assembly up and off the sign sides and unplug it from the cabinet.

3. Separate the light sign assembly from the sign panel by undoing the two fixing screws on each side of the sign panel.

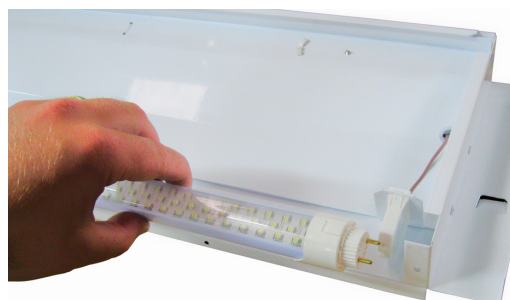


4. Remove the top of the sign light assembly by undoing the four fixing screws on the top of the sign light assembly.



5. Remove the plastic sign panel (and artwork if present) from the sign light assembly.

6. Rotate and remove the failed LED tube.



7. Fit the new LED tube.
8. Refit the clear front panel (and artwork if present) and screw the sign top cover back onto the top of the sign assembly.
9. Refit and fix the sign light back onto the sign panel assembly.
10. Plug the sign assembly back into the cabinet and slot the assembly back onto the sign sides.

## Troubleshooting

For questions about the electronic controller, see page 11. For problems with the cabinet and refrigeration cassette, use the following table.

<b>Problem</b>	<b>Possible Cause</b>	<b>Suggestions</b>
<ul style="list-style-type: none"> <li>• Cabinet not operating</li> <li>• No controller display</li> </ul>	<ul style="list-style-type: none"> <li>• Loss of power supply</li> </ul>	<ul style="list-style-type: none"> <li>• Check mains power supply.</li> </ul>
<ul style="list-style-type: none"> <li>• Interior light not on</li> </ul>	<ul style="list-style-type: none"> <li>• Failed LED tube</li> <li>• Blown cabinet fuse</li> </ul>	<ul style="list-style-type: none"> <li>• Replace LED tube (see page 13).</li> <li>• Contact an authorised service agent to replace it.</li> </ul>
<ul style="list-style-type: none"> <li>• Power consumption is higher than expected</li> </ul>	<ul style="list-style-type: none"> <li>• Unit operating too hot</li> <li>• Cabinet doors are opened excessively</li> </ul>	<ul style="list-style-type: none"> <li>• Clean the condenser coil (see page 12).</li> <li>• Ensure the cabinet has good ventilation around the refrigeration unit (see page 5).</li> <li>• Ensure the cabinet is in a cool spot.</li> <li>• Ensure doors are closed more often.</li> </ul>
<ul style="list-style-type: none"> <li>• Product is too warm</li> </ul>	<ul style="list-style-type: none"> <li>• Restricted airflow to cabinet</li> </ul>	<ul style="list-style-type: none"> <li>• Ensure product is not blocking airflow slots.</li> <li>• Ensure there is space around individual product pieces.</li> </ul>
<ul style="list-style-type: none"> <li>• Warm cabinet temperatures</li> <li>• Compressor operating for long periods (more than 1 hour)</li> </ul>	<ul style="list-style-type: none"> <li>• Blocked condenser</li> <li>• Poor ventilation around refrigeration unit</li> </ul>	<ul style="list-style-type: none"> <li>• Clean the condenser coil (see page 12).</li> <li>• Ensure the cabinet has good ventilation around the refrigeration unit (see page 5).</li> </ul>

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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

Notice of the above contractual obligations passes to:

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

VF Series  
SKOPE Vertical Freezer  
User Manual

MAN10521  
Rev. 3.2 Feb. 2015

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