



12 RESPONSIBLE
CONSUMPTION
AND PRODUCTION



Vestfrost Solutions is working towards reaching the UN - Global Sustainable Development Goals by 2030.

The Sustainable Development Goals are the blueprint to achieve a better and more sustainable future for all. In order to implement Goal no 12 "Responsible Consumption and Production", this manual has been printed on recycled paper.



Technical manual VLS 054A / 094A / 154A SDD
New Controller

WARNING

As the appliance contains flammable refrigerant, as stated on nameplate, it is essential to ensure that the refrigerant pipes are not damaged.

The quantity and type of the refrigerant used in your appliance is indicated on the rating plate.

Standard EN378 specifies that the room in which you install your appliance must have a volume of 1m³ per 8 g of hydrocarbon refrigerant used in the appliances. This is to avoid the formation of flammable gas/air mixtures in the room where the appliance is located in the event of a leak in the refrigerant circuit.

WARNING:

Ventilation openings in the appliance or in built-in structures must be kept clear.

WARNING:

Do not use other mechanical devices or means to accelerate the defrosting process or to remove rime other than those recommended by the manufacturer.

WARNING:

Do not damage the refrigerant system.

WARNING:

The appliance may not be exposed to rain.

WARNING:

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack experience and knowledge, unless they have been given supervision or instructions concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

WARNING:

Children must not play with, on, or around the appliance.

WARNING:

Children must not clean the appliance or carry out general maintenance unless they are at least 8 years old and are being supervised.

WARNING:

Always, keep the keys in a separate place and out of reach of children.

WARNING:

Before servicing or cleaning the appliance, switch off circuit breaker.

**WARNING:**

Danger risk of fire or explosion. Flammable refrigerant used, as stated on nameplate. To be repaired only by trained personnel.

WARNING:

Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.

WARNING:

When positioning the appliance, ensure the power cord is not trapped or damaged.

WARNING:

Do not locate multiple portable socket-outlets or portable power supplies at the rear of the appliance.

WARNING:

Appliance use flammable insulation blowing gas. For information about safe disposal, please contact your local disposal service. See section for Disposal.



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Periodic preventive maintenance checks

Maintenance at refrigerator

Daily Check:

Monitor Temperature
Internal lid is placed properly
Lid fits and lock tight to cabinet
Lid gasket not faulty.

Weekly maintenance:

Remove any water at the bottom of the refrigerator with a cloth.
Wipe of water droplets on the inside wall.

Monthly maintenance::

Clean grille for compressor compartment.
Clean the refrigerator with lukewarm water and mild detergent.

6 Month maintenance:

Clean condenser coils.

Yearly maintenance:

Check electrical connections and components.

Maintenance of the solar panels

Weekly maintenance:

The solar panels are to be cleaned for dust once each week – or as required. Cleaning must be carried out with water using a soft cloth or wash rag.

Monthly maintenance:

Avoid shading.
It should be regularly monitored that shades do not come up such as new towering trees, as this will decrease the amount of energy produced by the system.

Yearly maintenance:

Electric connections and components are to be checked and cleaned at least once a year or more often if required. Because of risk of fire, it is necessary to remove dust and dirt.

Checking that PV panels are clean, free of fractures, scratches, corrosion, moisture penetration and browning.

Cabling should be checked to ensure it is secure.

Checking the mounting hardware to ensure it is in good condition and ensuring the earth connection is continuous

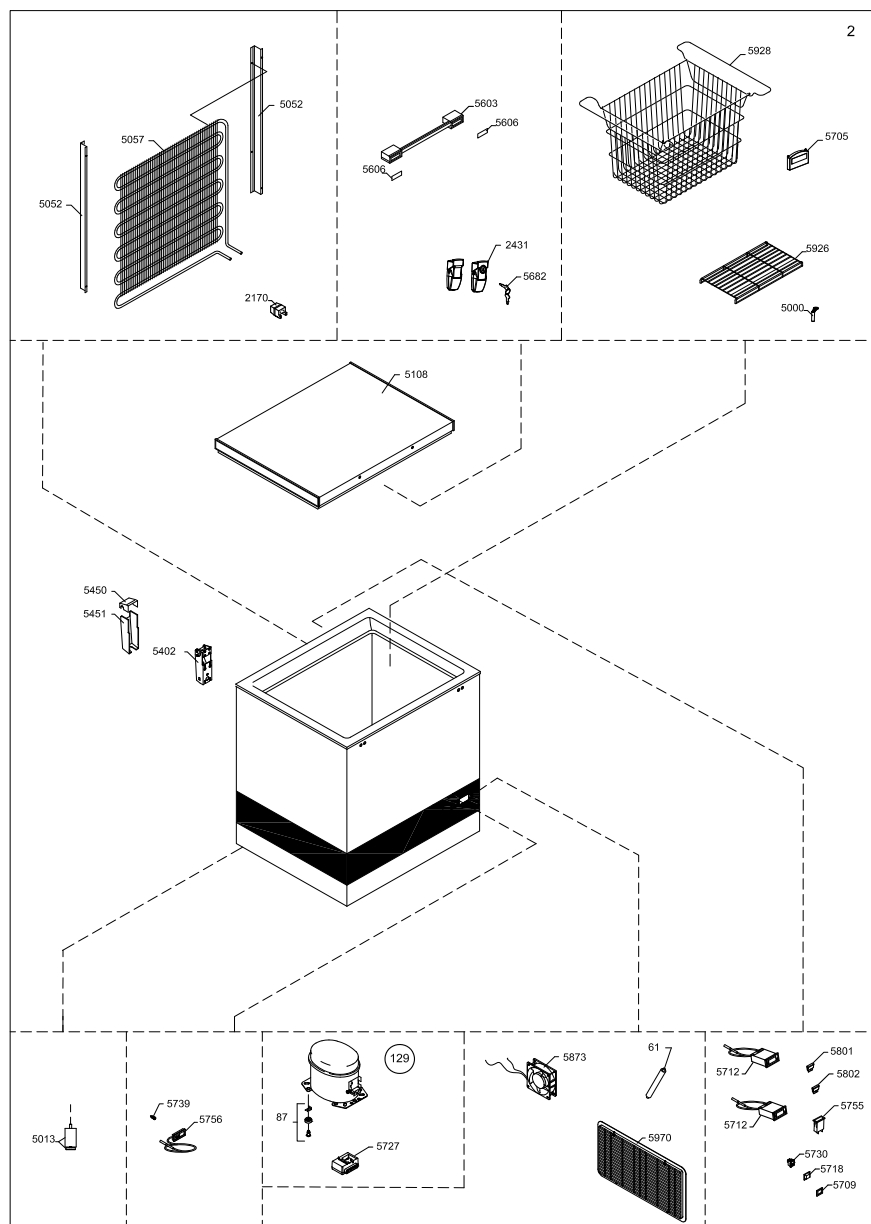
Checking of junction boxes to ensure there is no water accumulation and that the integrity of lid seals, connections and clamping devices is intact.

Check all bolts and nuts are properly tightened.

Complete spare part list VLS 054A SDD

Position	Item number	Item name
0061	0-6538001	Filter drier,
0087	0-6038175	Base plate fittings, complete
0129	8-036510223	Compressor - BD35K 101Z0211 10-45V - ECU 6520845
2170	0-A9301260103	Distance piece
2431	A915010	Lock complete snap locks
5000	3010049	Drain plug
5013	3040400	Adjustable foot
5052	2041300	Fittings for condenser
5057	6010479	WOT condenser
5108	5000901675054	Lid foamed without handle/hinges
5402	1510135	Hinge with spring
5450	3011135-01	Top part for hinge cover
5451	3010032-01	Bottom part for hinge cover
5603	8471782	Handle
5606	8090054	Inlay for handle,
5606	8090342-94	Inlay for handle,
5682	1510255	Nikel-plated Key
5705	7020406	Temperature monitoring device Fridge-Tag 2E
5709	7060104	Frame for cover rocker switch bezel
5712	702090043	Safety,Thermostat XR10CH incl. sensor VLS054/094
5712	702090044	Thermostat XR30CH incl. sensor
5718	7060105	Rocker Switch Cover
5727	6520845	Electronics for BD35K compressor
5730	7020245	"on-off" switch
5739	7010139	Status indicator
5755	7060062	Fuse holder
5756	7020382-03	Thermometer, solar
5801	8470156	Fuse 15A
5802	7060097	Fuse T1A
5873	7090486	Fan
5926	3510032	Bottom grating
5928	3510029	Basket
5970	3010308-01	Motor screen

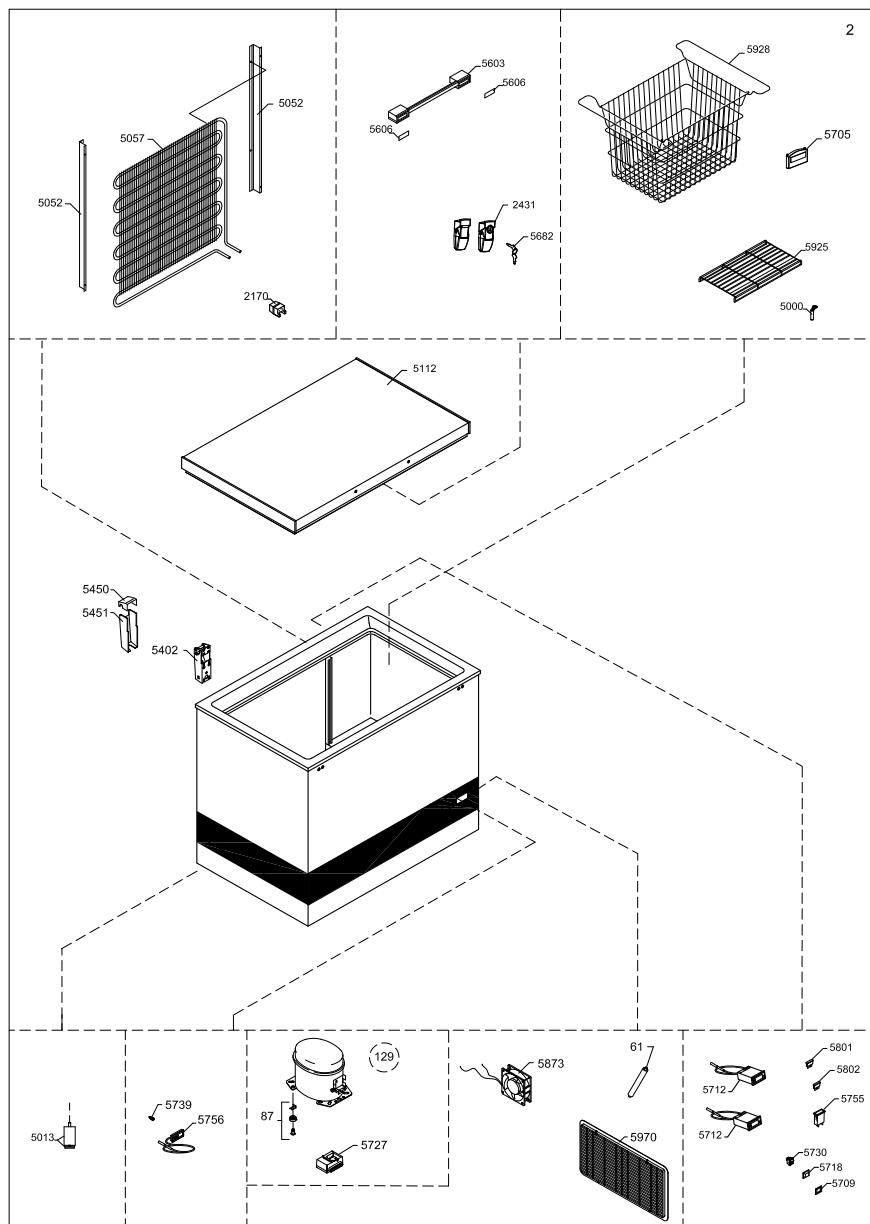
VLS 054A SDD



Complete spare part list VLS 094A SDD

Position	Item number	Item name
0061	0-6538001	Filter drier,
0087	0-6038175	Base plate fittings, complete
0129	8-036510223	Compressor - BD35K 101Z0211 10-45V - ECU 6520845
2170	0-A9301260103	Distance piece
2431	A915010	Lock complete snap locks
5000	3010049	Drain plug
5013	3040400	Adjustable foot
5052	2041300	Fittings for condenser
5057	6010479	WOT condenser
5112	5000901675094	Lid foamed without handle/hinges
5402	1510136	Hinge with spring
5450	3011135-01	Top part for hinge cover
5451	3010032-01	Bottom part for hinge cover
5603	8471782	Handle
5606	8090054	Inlay for handle,
5606	8090342-94	Inlay for handle,
5682	1510255	Nikel-plated Key
5705	7020406	Temperature monitoring device Fridge-Tag 2E
5709	7060104	Frame for cover rocker switch bezel
5712	702090043	Safety,Thermostat XR10CH incl. sensor VLS054/094
5712	702090044	Thermostat XR30CH incl. sensor
5718	7060105	Rocker Switch Cover
5727	6520845	Electronics for BD35K compressor
5730	7020245	"on-off" switch
5739	7010139	Status indicator
5755	7060062	Fuse holder
5756	7020382-03	Thermometer, solar
5801	8470156	Fuse 15A
5802	7060097	Fuse T1A
5873	7090486	Fan
5925	3510031	Bottom grating
5928	3510036	Basket
5970	3010308-01	Motor screen

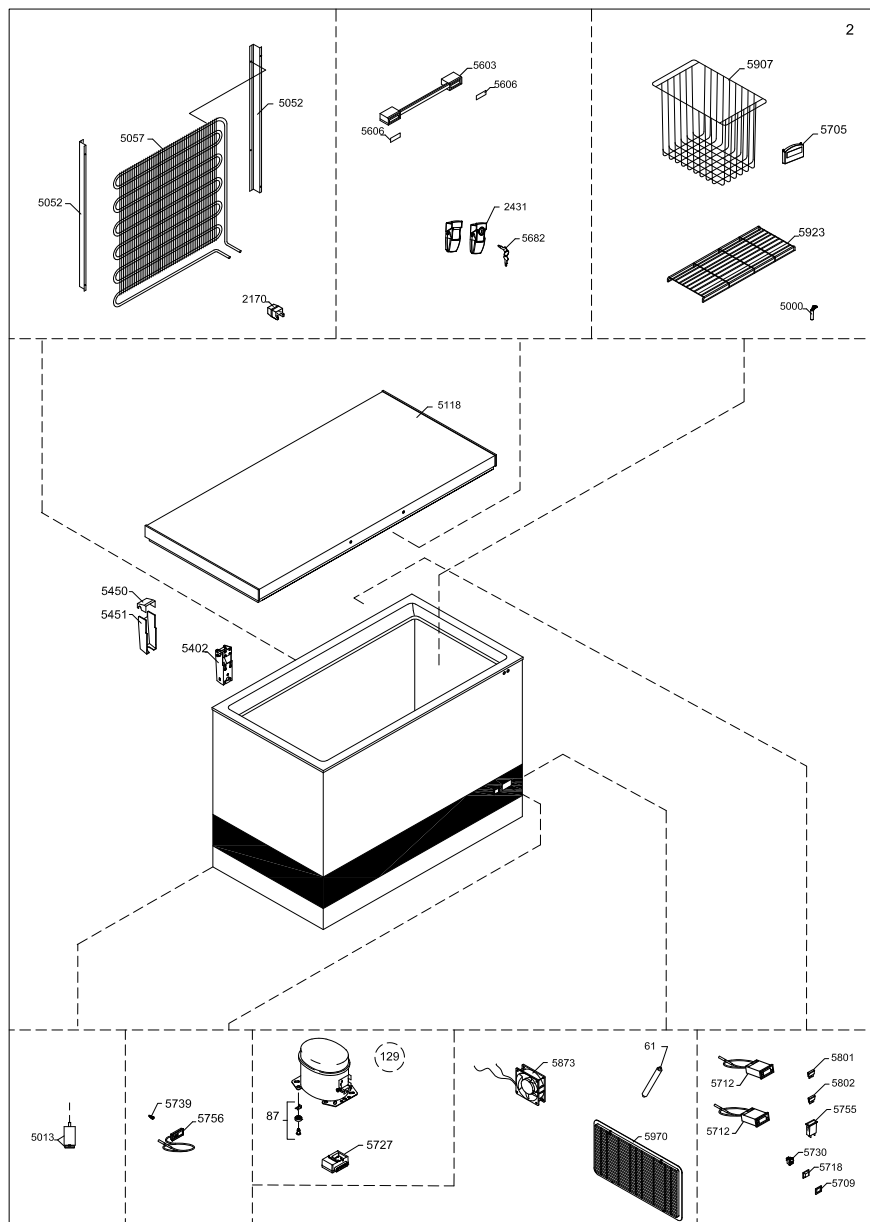
VLS 094A SDD



Complete spare part list VLS 154A SDD

Position	Item number	Item name
0061	0-6538001	Filter drier,
0087	0-6038175	Base plate fittings, complete
0129	8-036510223	Compressor - BD35K 101Z0211 10-45V - ECU 6520845
2170	0-A9301260103	Distance piece
2431	A915010	Lock complete snap locks
5000	3010049	Drain plug
5013	3040400	Adjustable foot
5052	2041300	Fittings for condenser
5057	6010184	WOT condenser
5118	5000901675154	Lid foamed without handle/hinges
5402	1510136	Hinge with spring
5450	3011135-01	Top part for hinge cover
5451	3010032-01	Bottom part for hinge cover
5603	8471782	Handle
5606	8090054	Inlay for handle,
5606	8090342-94	Inlay for handle,
5682	1510255	Nikel-plated Key
5705	7020406	Temperature monitoring device Fridge-Tag 2E
5709	7060104	Frame for cover rocker switch bezel
5712	702090049	Safety, Thermostat XR10CH incl. sensor VLS154
5712	702090050	Thermostat XR30CH incl. sensor VLS154
5718	7060105	Rocker Switch Cover
5727	6520845	Electronics for BD35K compressor
5730	7020245	"on-off" switch
5739	7010139	Status indicator
5755	7060062	Fuse holder
5756	7020392-03	Thermometer, solar
5801	8470156	Fuse 15A
5802	7060097	Fuse T1A
5873	7090486	Fan
5907	3510015	Basket 236 mm
5923	3510028	Bottom grating
5970	3010308-01	Motor screen

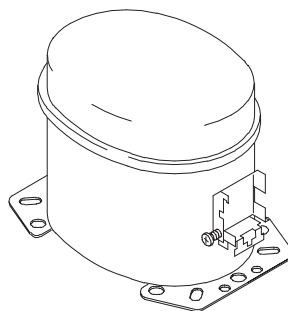
VLS 154A SDD



Vital components

Position	Item no	Description
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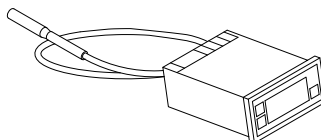
0129	8-036510223	Compressor
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VLS 054/094A SDD 5712	702090043	Safty Thermostat
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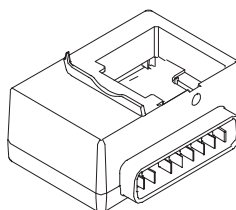
VLS 154A SDD 5712	702090049	Safty Thermostat
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VLS 054/094A SDD 5712	702090044	Thermostat
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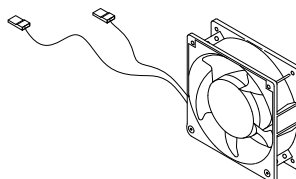


VLS 154A SDD 5712	702090050	Thermostat
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5727	6520845	Starting Device ECU
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5873	7090486	Fan
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Health and safety guidance – Warning!

Before any repair job be aware of following!

WARNING:

Before servicing or cleaning the appliance, disconnect it from power source.



WARNING:

Danger risk of fire or explosion. Flammable refrigerant used. To be repaired only by trained personnel.



Required basic tools

1.Flexible socket wrench - size 7+13mm



2.Nose plier



3.Screwdriver - size 1,0x6,0 + 0,6x3,5



4.Phillips screwdriver



5.Torx screwdriver - size T10 + T20



6.Clamp meter



7.Multimeter



Proposed additional service kit/items

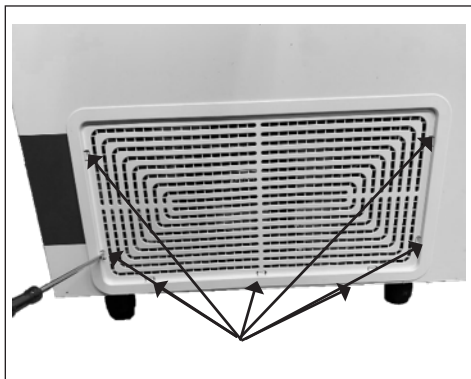
Sealing kit

Tar tape

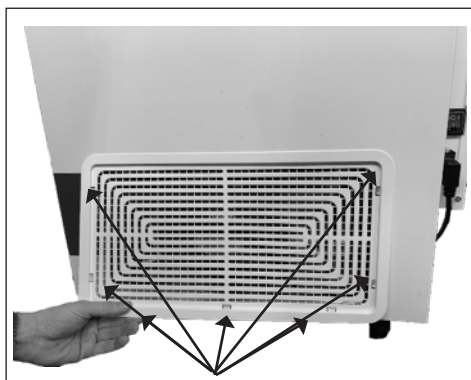
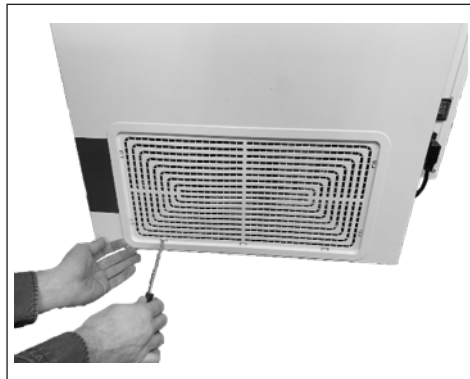
Extra self-tapping screws

Motor compartment

How to get access to the motor compartment.



Use a screwdriver to remove ventilation.



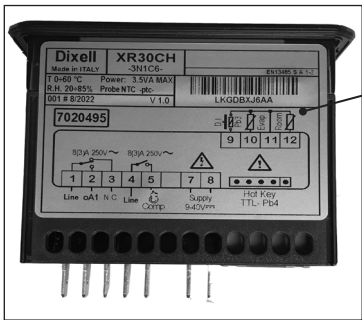
Unlock all 7 clamps and pull the compressor grille downwards.



Thermostat replacement



The thermostats is placed on the back.



Top

Side

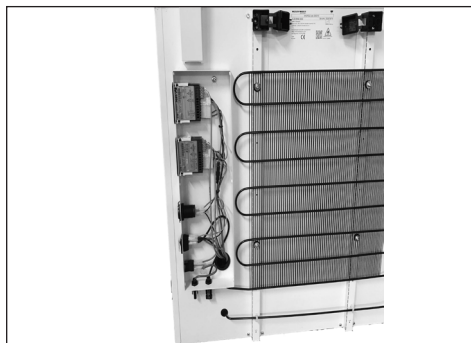
Front/Screen

Back

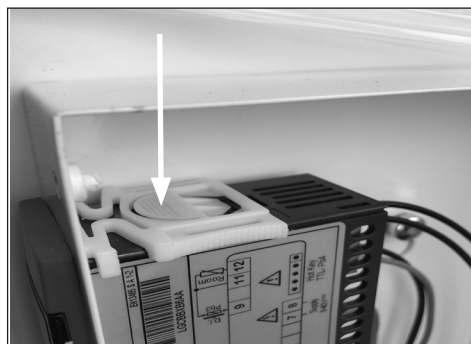




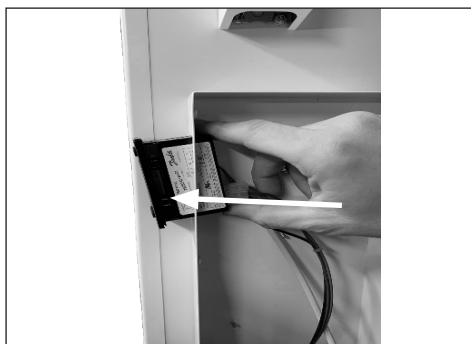
1. Dismount 6 x Torx 20 screws



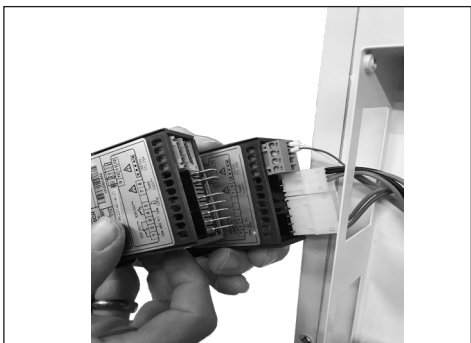
2. Open junction box lid, dismount earth wire and remove lid.



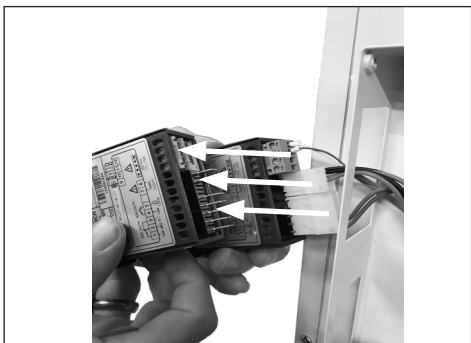
3. Push clip on both sides.



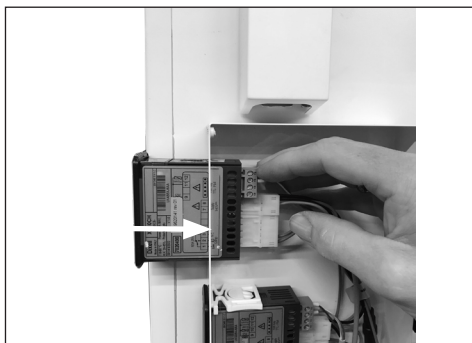
4. Push the thermostat out of the junction box.



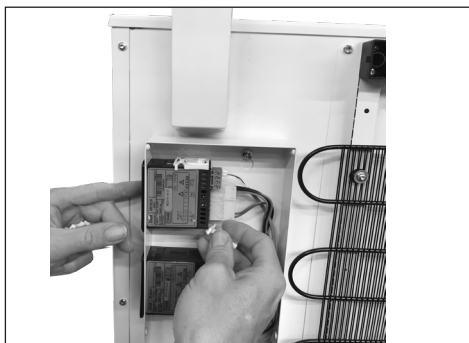
5. Get the new thermostat



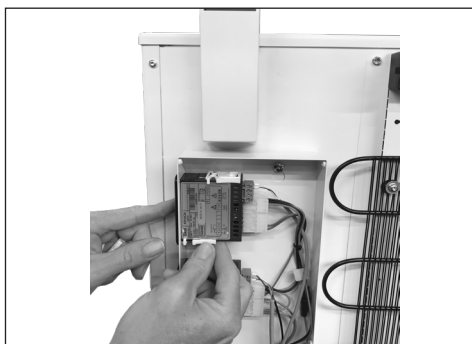
6. Uncrew wires from socket



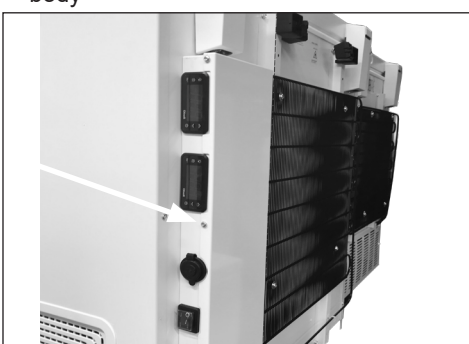
7. Place the thermostat back in place of the junction box



8. Use your finger to press/slide the back the fixing clamps to fasten the thermostat body



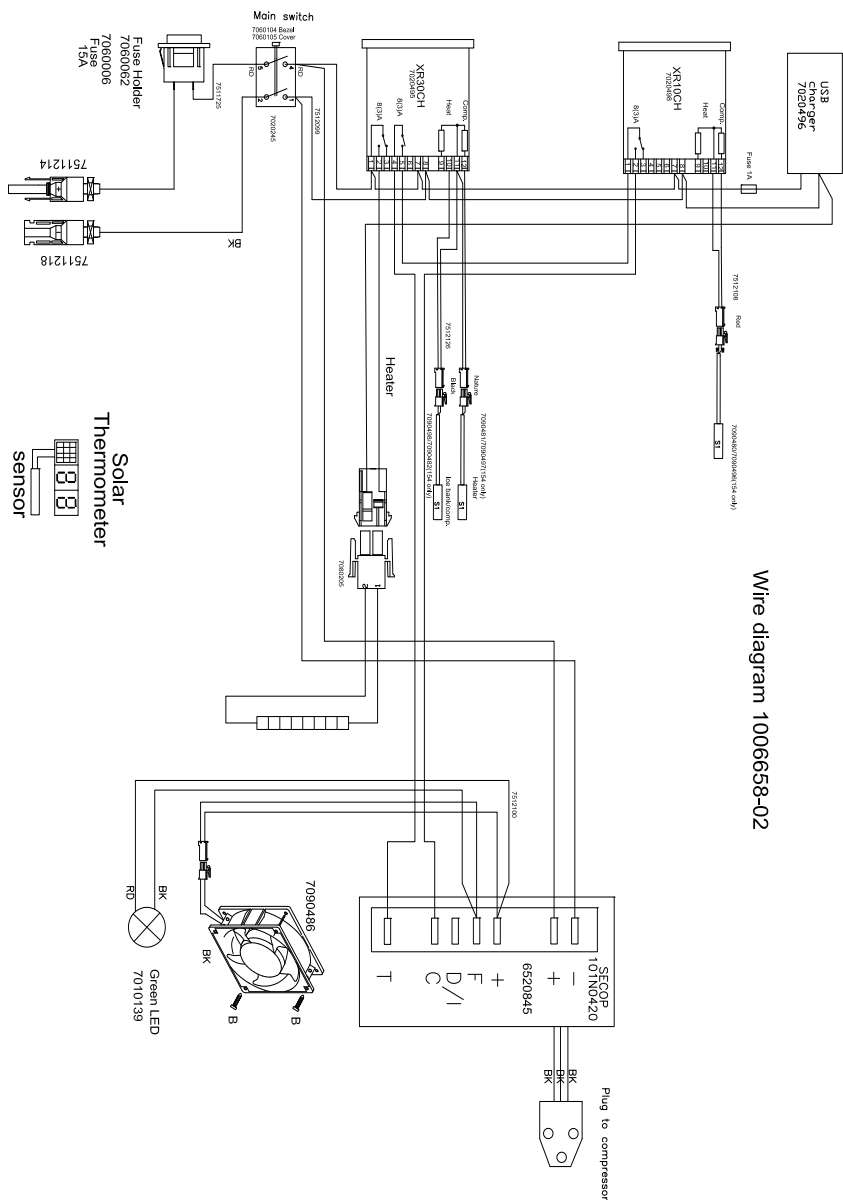
9. Use your finger to press/slide the back the fixing clamps to fasten the thermostat body



10. Remount grounding wire and junction box lid



Wire diagram

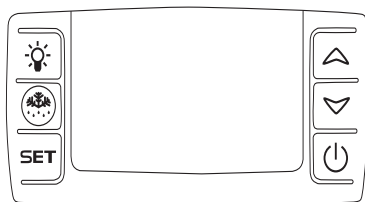


Thermostat adjustment






Safety thermostat

Thermostat



SET To display target set point in programming mode it selects a parameter or confirm an operation.


 (DEF) To start a manual defrost
 (UP) To see the max. stored temperature, in programming mode in browses the parameter codes or increases the displayed value.


 (DOWN) To see the min. stored temperature, in programming mode in browses the parameter codes or decreases the displayed value.

 To switch the instrument off, if onF=off.

 Not enabled.

 +  To lock & unlock the keyboard.

SET +  To enter in programming mode.

SET +  To return to the room temperature display.

Default Set Points

Safety thermostat	SP = 2,5
Cooler thermostat	SP1= 5 /SP2= -5

IMPORTANT:

Incorrect parameter settings can lead to unsatisfactory cooling, risking damage to stored vaccines. If adjustment is required **ONLY** to be performed by trained technicians.

Adjust the controller max. 1°C at a time.

After adjustment monitor appliance carefully for min. 24 hours.

Main functions

How to see the setpoint

1. Push and immediately release the SET key the display will show the Set point value.
2. Push and immediately release the SET key or wait for 5 seconds to display the probe value again.

How to change the setpoint

1. Push the SET key for more than 2 seconds to change the Set point value
2. The value of the set point will be displayed and the °C or °F LED starts blinking
3. To change the Set value push the up or down arrows within 10s
4. To memorise the new set point value push the SET key again or wait 10s.

Starting device ECU replacement



Starting device: Back, Front with terminal board.



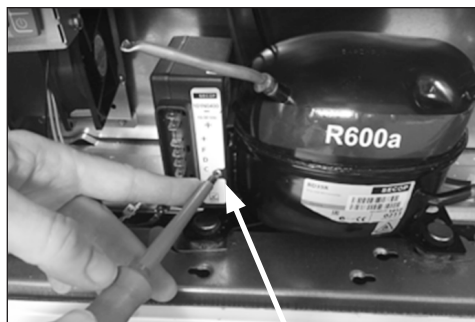
The starting device is mounted to the left side of the compressor.



1. Dismount the 6 wires from ECU.



2. Grab the wire socket and pull gently.



3. Loosen the Phillips screw a couple of turns.



4. Place a screwdriver in the small vent in the plastic cover.

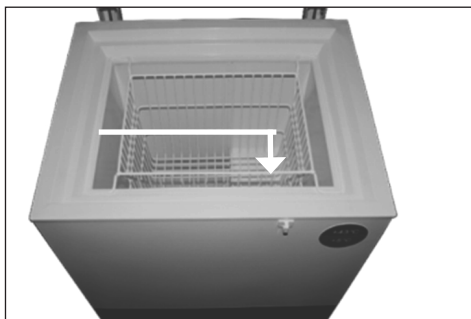


5. Unclick plastic cover/starting device from compressor bracket.



6. Use a screwdriver to disconnect the socket from compressor.

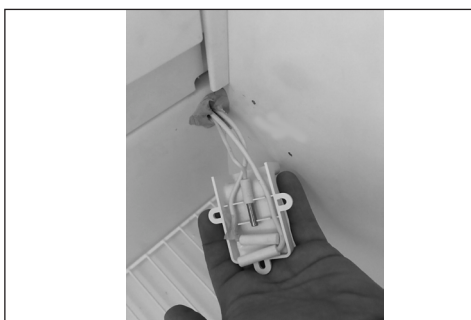
Thermostat sensor replacement



The thermostat sensor is placed inside the compartment of the appliance.



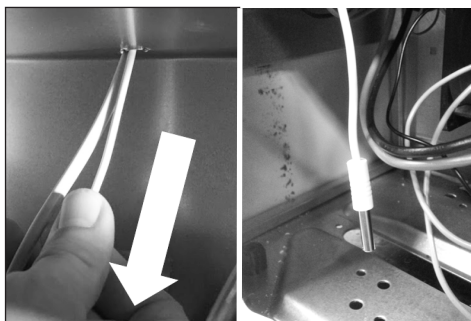
1. Dismount the sensor cover by loosen the 2 x torx screws – size 10.



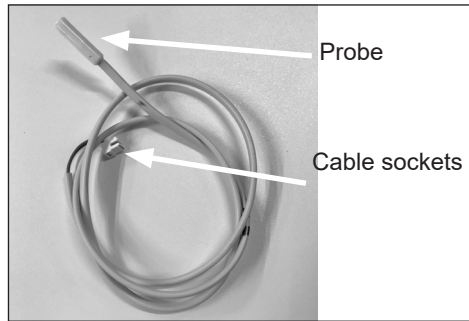
2. Take it out gently, remove the wire and the sensor from the cover.



3. In Compressor compartment, remove black sealing, and gently pull the white wire until the probe is visible.



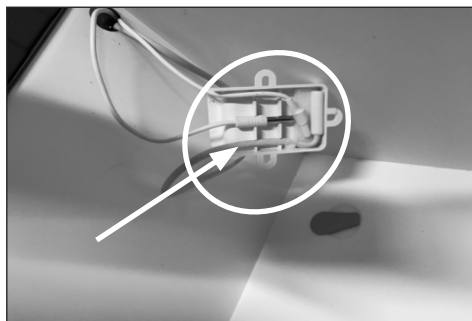
4. Gently pull the white wire until the probe is visible.



5. The thermostat sensor comes with probe, wire and cable socket.

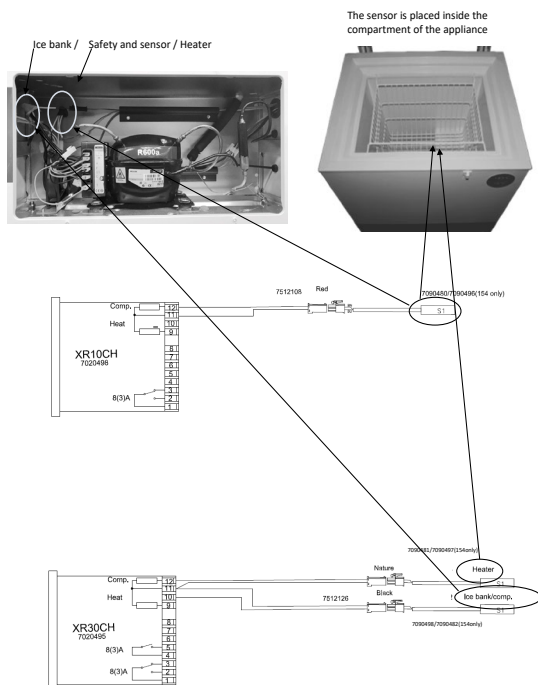


6. **IMPORTANT!** When re-mounting the new thermostat sensor remember to properly seal the wire feed through.



7. **IMPORTANT!** When re-mounting the new thermometer make sure the wire is placed properly.

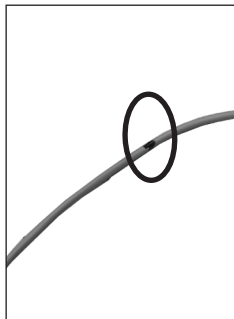
Sensor explanation



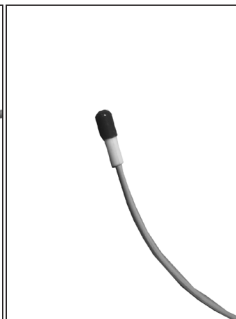
Sensor replacement for Icebank



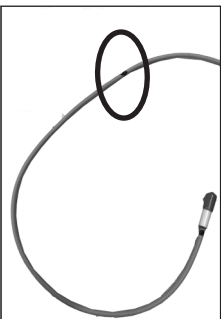
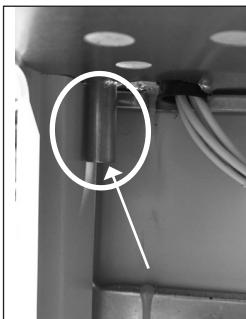
The icebank sensor is placed in the corner



Mark on wire



End cap on wire



1. Put the wire into the pipe with the cap end. Pull it into where the mark on the wire

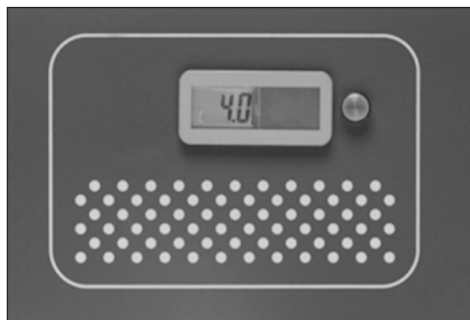


2. Tie it up with strips and cover with tar kit

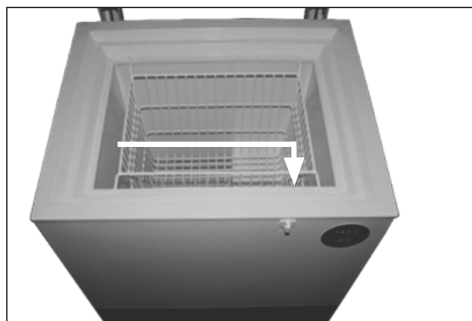
Thermometer replacement



The thermometer is placed in at the front of the appliance.



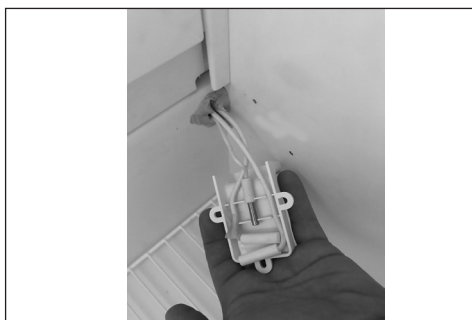
Thermometer display.



The thermometer sensor is placed inside the compartment of the appliance.



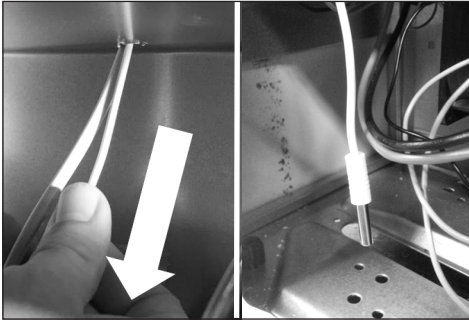
1. Dismount the temperature sensor cover by loosen the 2x torx screws – size 10



2. Sensor probe / Grab the wire and pull it out gently



3. In Compressor compartment, remove black sealing, and gently pull the white wire until the probe is visible.



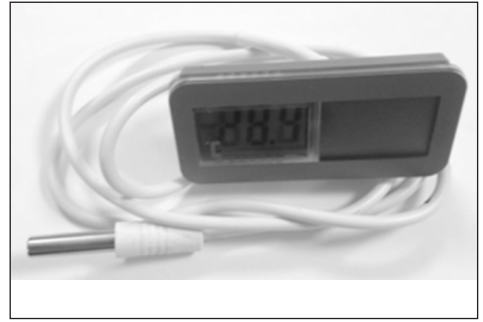
4. Gently pull the white wire until the probe is visible.



5. Use a screw driver to gently push the socket of the thermometer.



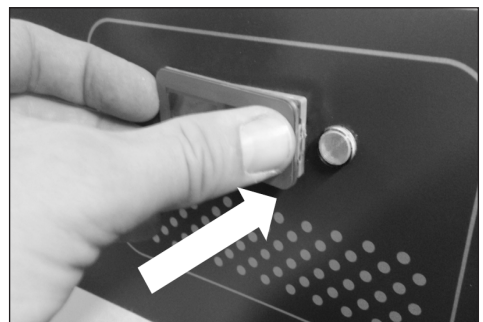
6. Temperature monitor is loose from cabinet.



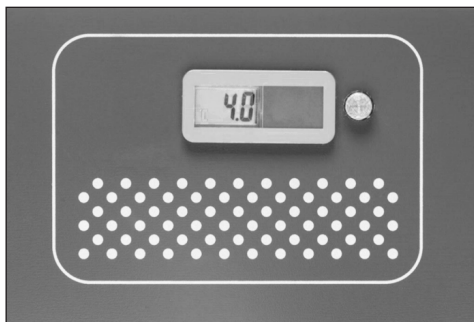
7. Thermometer comes with wire and sensor.



8. Installation of thermometer display.



9. Push until display is fixed to cabinet.



10. Thermometer display is in place.



11. **IMPORTANT!** When re-mounting the new thermometer remember to properly seal the wire feed through.



12. **IMPORTANT!** When re-mounting the new thermometer make sure the wire sealing plug is placed properly.

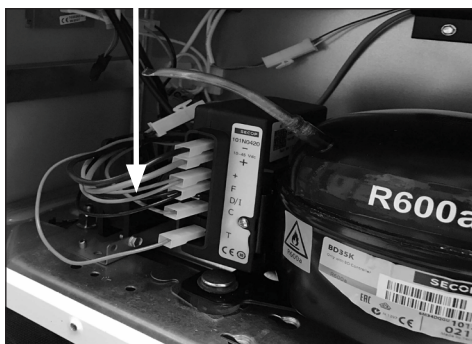
Fan replacement



1. Dismount the fan bracket. The fan is placed in the motor compartment on the fan bracket.



2. Remove the wires from ECU



2. Loosen the 2 screws with a torx 20.

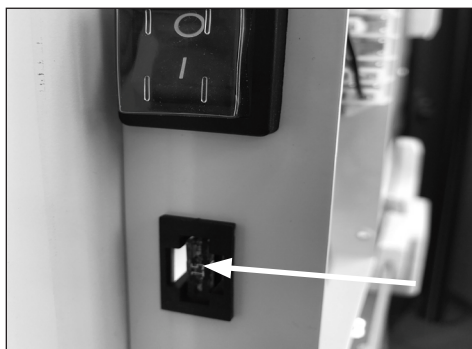
Fuse replacement



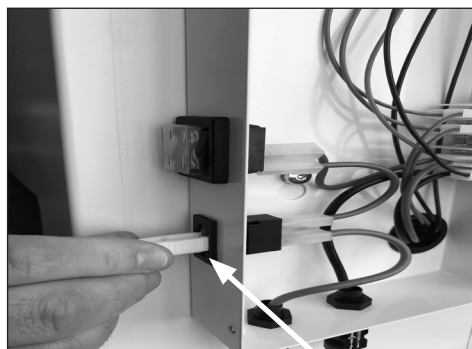
1. If the fuse is burned. It need to be replaced. The fuse is placed



2. Use the small fuse- tool supplied together with spare fuses in the small plastic bag together with appliance.



3. Pinch the tool to the fuse



4. Pull the tool and fuse

USB fuse replacement



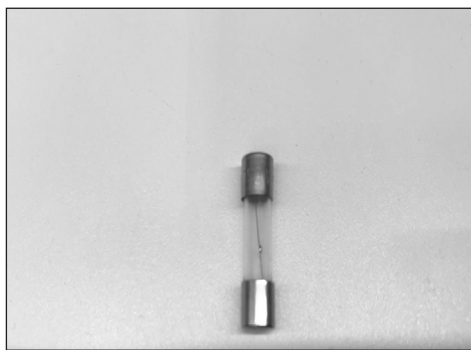
USB charger



1. Open the fuse holder



2. Take the old fuse out, and replaced with a new one



Fuse

Compressor replacement

Procedure of compressor switch.

1: **WARNING!** Drain coolant R600a from refrigeration system by vacuum suction.

2: **IMPORTANT!** Blow refrigeration system with NO/Nitrogen

3: Cut

A: Suction and pressure tube

B: Capillary tube

C: Dry filter

4: Dismount starting device ECU

5: Dismount old compressor

6: Insert new compressor

7: Solder

A. Suction and pressure tube

B. Capillary tube

C. Dry filter

8: Install starting device ECU

IMPORTANT! When solder copper tubes to iron tubes use silver tin

Filling of new refrigerant

9: Drain refrigeration system by vacuum suction

10: Check type sticker for required amount of R600a to fill on refrigerant system

On-site checklist

- Is the green diode in the control panel on (Power check)
- Temperature records (manual records, FT2 data)
- Is the internal temperature inside the acceptable range of +2° to +8°
- Is the vaccine compartment clean and without condensation (water)
- Is the Compressor running
- Is baskets used and in place
- Is the appliance placed according to instruction in the manual.
- Does the lid close tight to cabinet and is the lid gasket in good condition
- Is the grille for compressor compartment clean
- Is the condenser coils on the backside clean
- Is all electrical components working properly
- Over all condition of the cabinet –internal and external: any corrosion, rusting, cracks
- PV Panels clean and mounted according instructions
- PV Panel installation/condition
- Check if any risk of shading on the PV Panels
- Condition of the cables from the panel to the compressor including the lightening protection

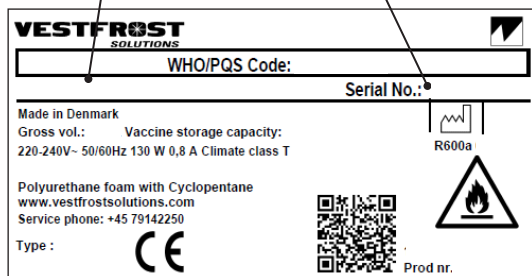
Trouble shooting

Fault	Possible cause	Remedy
Compressor is not running.	Be patient, it is most likely that the compressor will start within a few minutes.	<p>If this is not the case, check the following:</p> <ul style="list-style-type: none"> - Check that power is connected and that the wire from the solar panel to the appliance is intact. - Check the fuse and replace it if necessary. - If the above is OK, call technical supervisor.
Compressor is running, and the temperature is too high.	<p>The ventilation grille is blocked.</p> <p>The lid is not closed properly.</p> <p>The fan in the compressor compartment is blocked or defective.</p> <p>The temperature in the room in which the appliance is installed is too high.</p>	<p>Ensure unhindered air circulation.</p> <p>Ensure that the lid is closed properly.</p> <p>Check that the fan is running, if not it should be replaced.</p> <p>Shield the appliance against direct sun light and ensure more ventilation to the room.</p>
Temperature in VLS SDD is too low.	To low set point on digital controller.	Turn to page 23/24 in terms of getting details on how to adjust thermostat setpoint.
No temperature is displayed.	There is not enough light for the solar sensor.	Turn on the light.
No light in green diode during day time.	Switch is turned OFF	Turn on the switch.
	Fuse is burned	Replace the fuse.
	Diode is defect	Replace diode.

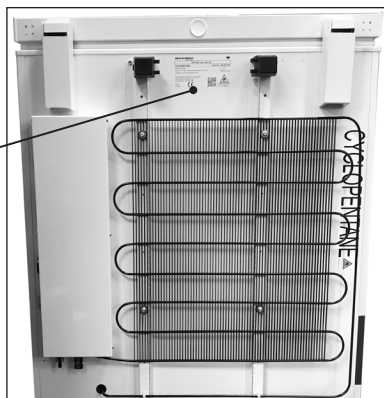
Technical support

When contacting Vestfrost Solutions technical support please supply below information:

1. Model
2. Serial number
3. What is the issue



Rating plate



Contact:

Vestfrost Solutions

Tel. +45 75142250

cce-service@vestfrostsolutions.com

Or visit our service-center webpage:

<http://www.vestfrostsolutions.com/service-center/>

Recycling procedures

Information for Users on Collection and Disposal Old Equipment and used Batteries



This symbol on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2012/19/EU and 2006/66/EC.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.

