



**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 064A RF AC

## 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 1m<sup>3</sup> 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:**

Do not use **electrical appliances** inside the refrigerated storage compartment, unless they are of a type recommended by the manufacturer

### **WARNING:**

Do not expose the appliance to rain, and secure not splashing water when cleaning the floor.

### **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:**

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:**

Sharp edges on cabinet, compressor compartment, evaporator, ventilation cover and on internal equipment can occur. Please be aware to avoid injury.

**WARNING:**

The condenser on the back of the appliance will in some cases have a hot surface. Please be aware to avoid injury.

**WARNING:**

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



# Contents

WARNING .....	2
Periodic preventive maintenance checks ...	5
Complete spare part list VLS 064A RF AC 230V .....	6
Complete spare part list VLS 064A RF AC 115V .....	8
Vital components .....	10
Health and safety guidance – Warning!....	11
Required basic tools .....	12
Wire diagram 230V .....	13
Wire diagram 115V .....	14
Thermostat replacement .....	16
Thermostat adjustment .....	20
Thermostat sensor replacement .....	21
Relay replacement .....	23
Starting device replacement .....	25
Run capacitor replacement.....	28
Thermometer replacement .....	29
Magnetic valve replacement.....	32
Diode replacement .....	33
On-site checklist .....	36
Trouble shooting.....	37
Technical support.....	38
Recycling procedures .....	39

# Periodic preventive maintenance checks

## **Daily Check:**

Monitor Temperature  
Internal lid is placed properly  
Lid fits and lock tight to cabinet  
Lid gasket not faulty.  
Condensation build up in vaccine compartment.

## **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.

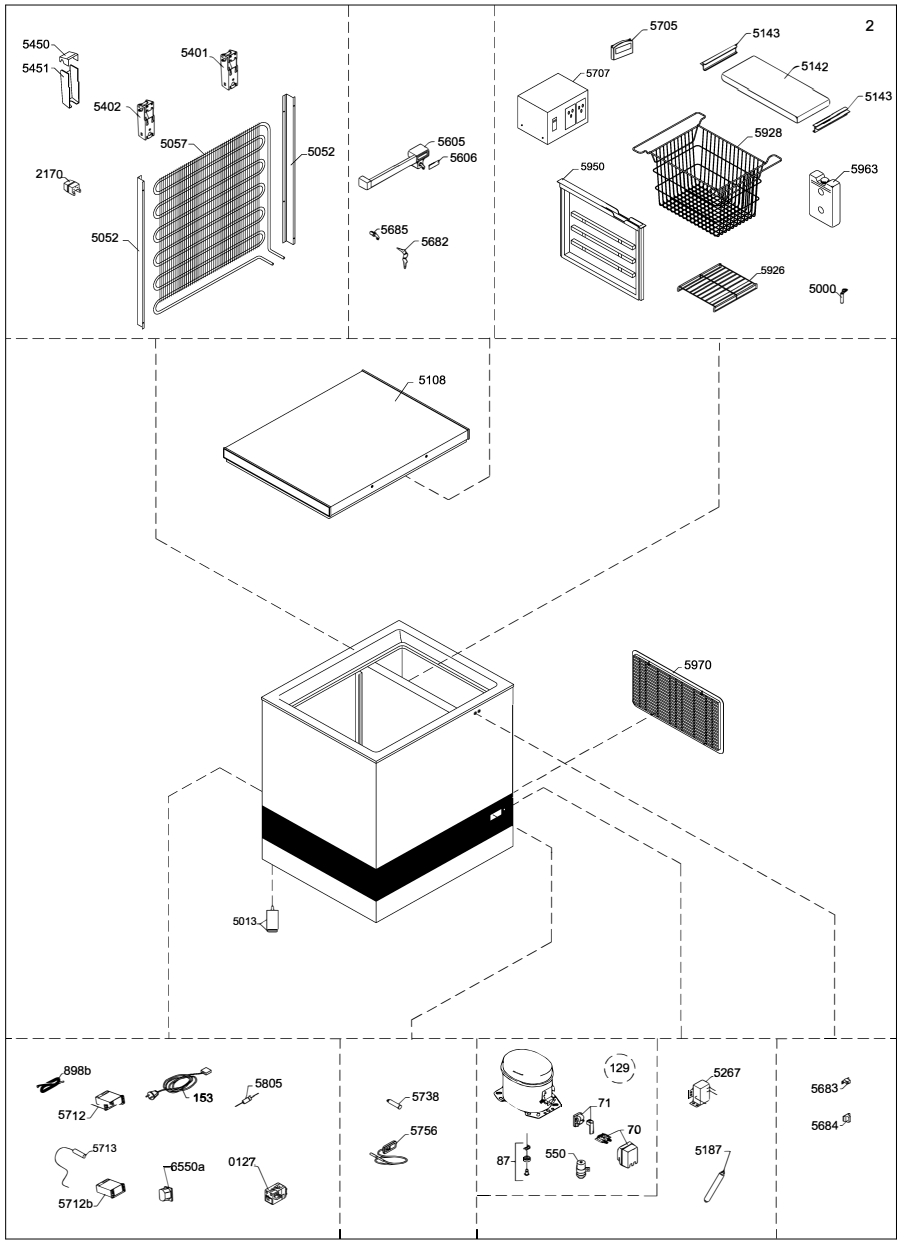
## **Yearly maintenance:**

Check electrical connections and components.

# Complete spare part list VLS 064A RF AC 230V

Position	Item number	Item name
0070	A921001	Cover + wiring clamp
0071	A921115	Starting device, 103N0021
0087	0-6038175	Base plate fittings, complete
0127	7060107	Relay
0129	8-036038255	Compressor - NLE 9KTK 105H6848 , Complete, R600a
0153	7535254	Power cord EU H05VV-F 3G1 C13 jack 90° black 2500mm EU-plug
0550	6520317	Run cap. 117-7119 4uF/4,8 receptacles
0898b	7020974	Sensor NTC S2, Freeze 1500mm
2170	0-A9301260103	Distance piece
5000	3010049	Drain plug
5013	3040400	Adjustable foot
5052	2041300	Fittings for condenser
5057	6010084	WOT condenser
5108	5000917680	Lid foamed without handle/hinges
5142	5020725	Lid for fast freeze compartment
5143	3021010-23	Handle
5187	6530068	Filter drier
5267	6530067	Magnetic valve Sanhua
5401	1510133	Hinge
5402	1510136	Hinge with spring
5450	3011135-01	Top part for hinge cover
5451	3010032-01	Bottom part for hinge cover
5605	304090501	Handle with lock (push and turn)
5606	8090342-94	Inlay for handle,
5682	1510046	Key, set - 2pc.
5683	2040145	Catch for handle
5684	3010265-01	Cover for catch
5685	600098801	Lock with keys,(push and turn)
5705	7020406	Temperature monitoring device
5707	7020408	Voltage stabiliser
5712a	7095229	Electronic controller ERC 112C COOL
5712b	7095209	Electronic controller ERC 112C Freeze
5713	7020961	Sensor NTC S1, 1500 mm
5738	7010138	Pilot lamp, green
5756	7020382-03	Thermometer, solar
5805	7090364	Diode 3A
5926	3510032	Bottom grating
5928	3510040	Basket
5950	3010155-01	Plastic partition
5963	A93010357	ICE-PACK 0,6 L
5970	3010308-01	Motor screen
6550	7080143	Connector
XXXX	1006486	Wire diagram

Subject to changes without prior notice.

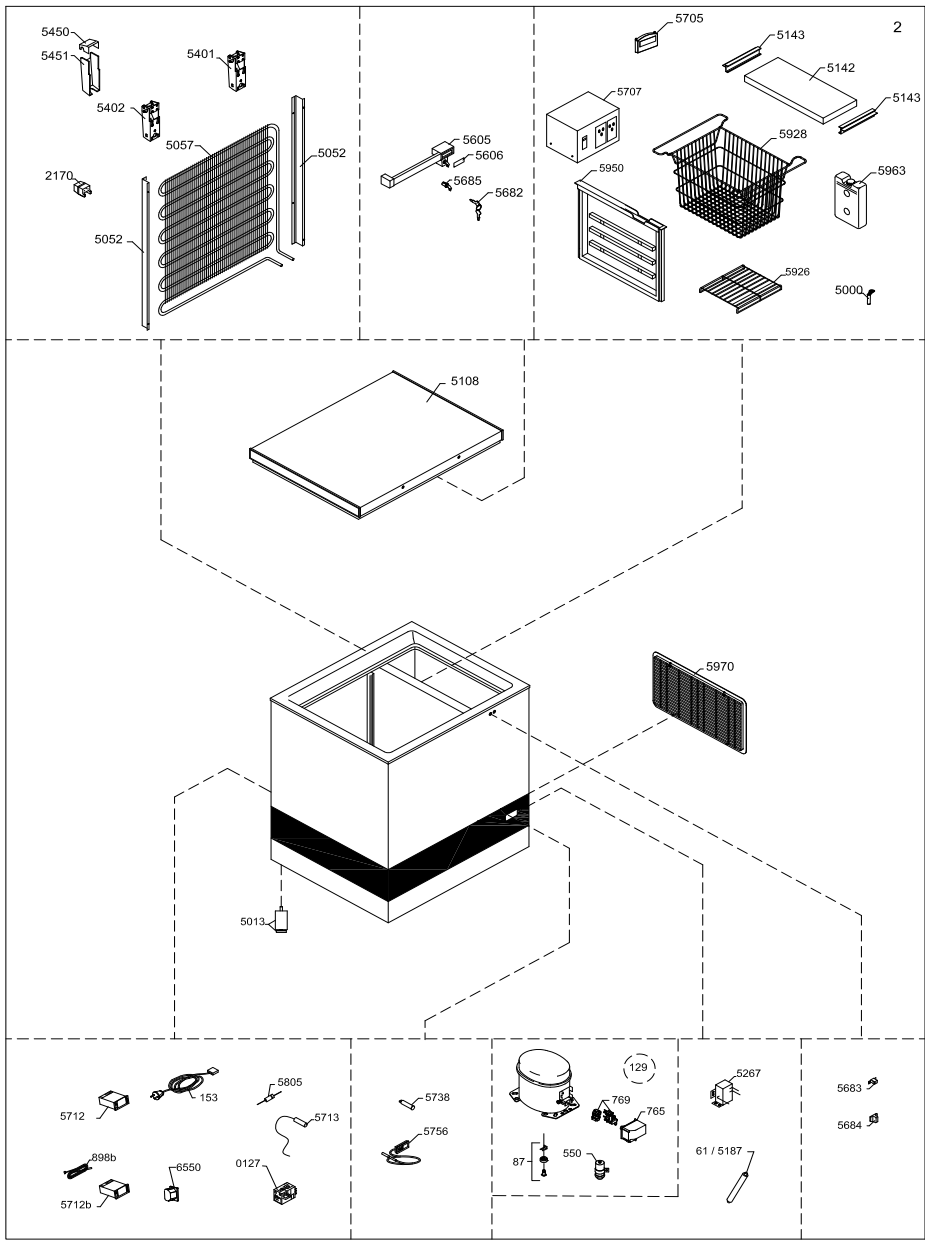


# Complete spare part list VLS 064A RF AC 115V

Position	Item number	Item name
0087	0-6038175	Base plate fittings, complete
0127	7060106	Relay
0129	8-036510308	Compressor - Embraco EMX3113Y
0153	7535400	Mains lead
0550	6520507	Run capacitor
0765	6520508	Cover
0769	A921505	Starting device, for EMX3113Y
0898b	7020974	Sensor NTC S2, Freeze 1500mm
2170	0-A9301260103	Distance piece
5000	3010049	Drain plug
5013	3040400	Adjustable foot
5052	2041300	Fittings for condenser
5057	6010084	WOT condenser
5108	5000917680	Lid foamed without handle/hinges
5142	5020725	Lid for fast freeze compartment
5143	3021010-23	Handle
5187	6530068	Filter drier
5267	6530101	Magnetic valve Sanhua
5401	1510133	Hinge
5402	1510136	Hinge with spring
5450	3011135-01	Top part for hinge cover
5451	3010032-01	Bottom part for hinge cover
5605	304090501	Handle with lock (push and turn)
5606	8090342-94	Inlay for handle,
5682	1510046	Key, set - 2pc.
5683	2040145	Catch for handle
5684	3010265-01	Cover for catch
5685	600098801	Lock with keys,(push and turn)
5705	7020406	Temperature monitoring device
5707	7020400	Voltage stabiliser
5712	7095229	Electronic controller ERC 112C COOL
5712b	7095209	Electronic controller ERC 112C Freeze
5713	7020961	Sensor NTC S1, 1500 mm
5738	7010138	Pilot lamp, green
5756	7020382-03	Thermometer, solar
5805	7090364	Diode 3A
5926	3510032	Bottom grating
5928	3510040	Basket
5950	3010155-01	Plastic partition
5963	A93010357	ICE-PACK 0,6 L
5970	3010308-01	Motor screen
6550	7080143	Connector
XXXX	1006487	Wire diagram

Subject to changes without prior notice.



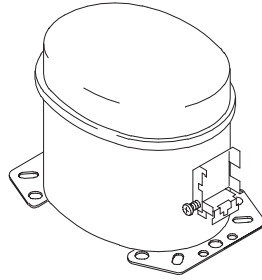


# Vital components

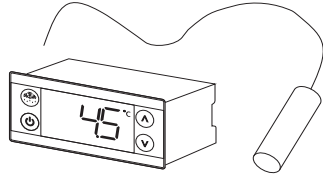
**Position    Item no                    Description**

0129    8-036038255(230V)    Compressor

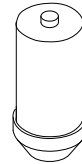
0129    8-036510308(115V)    Compressor



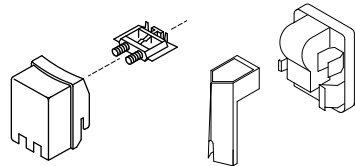
5712a    7095229                ERC 112C for Cooling  
 5712b    7095209                ERC 112C for Freezing  
 5713    7020961                Sensor NTC Cool  
 0898b    7020974                Sensor NTC Freeze



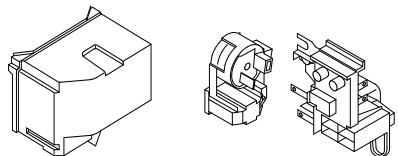
0550    6520317 (230V)    Run capacitor  
 0550    6520507 (115V)    Run capacitor



(230V)  
 0070    A921001                Cover + wiring clamp  
 0071    A921115                Starting device



(115V)  
 0765    6520508                Cover  
 0769    A921505                Starting device



## 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.



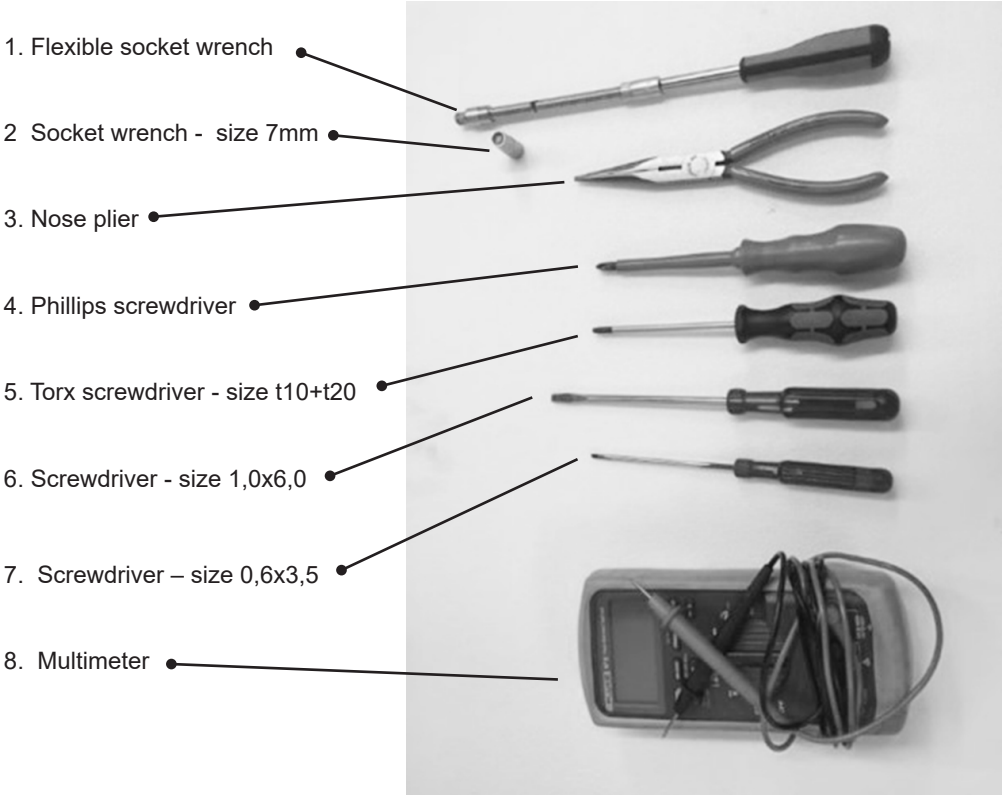
**WARNING:**

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

(R600a)



# Required basic tools



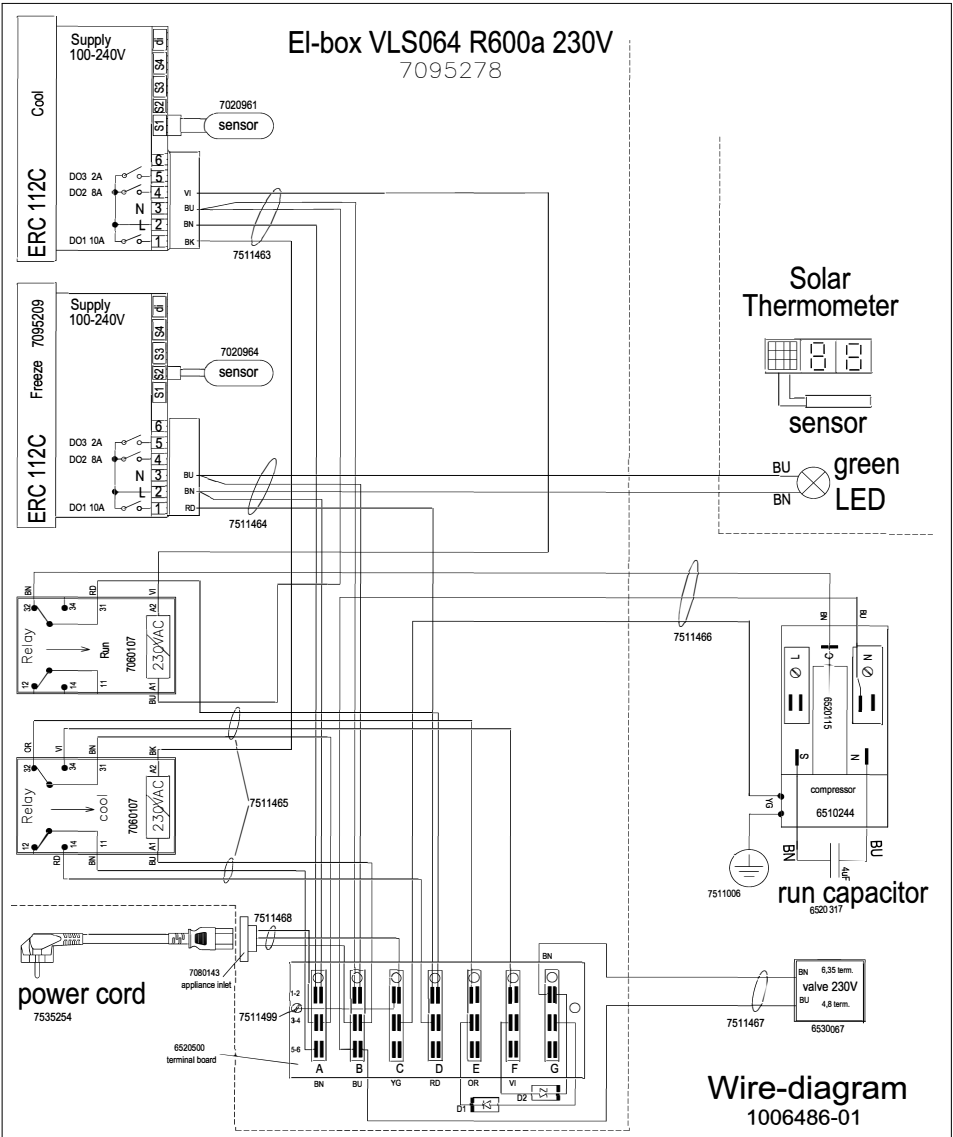
Proposed additional service kit/items

Sealing kit

Tar tape

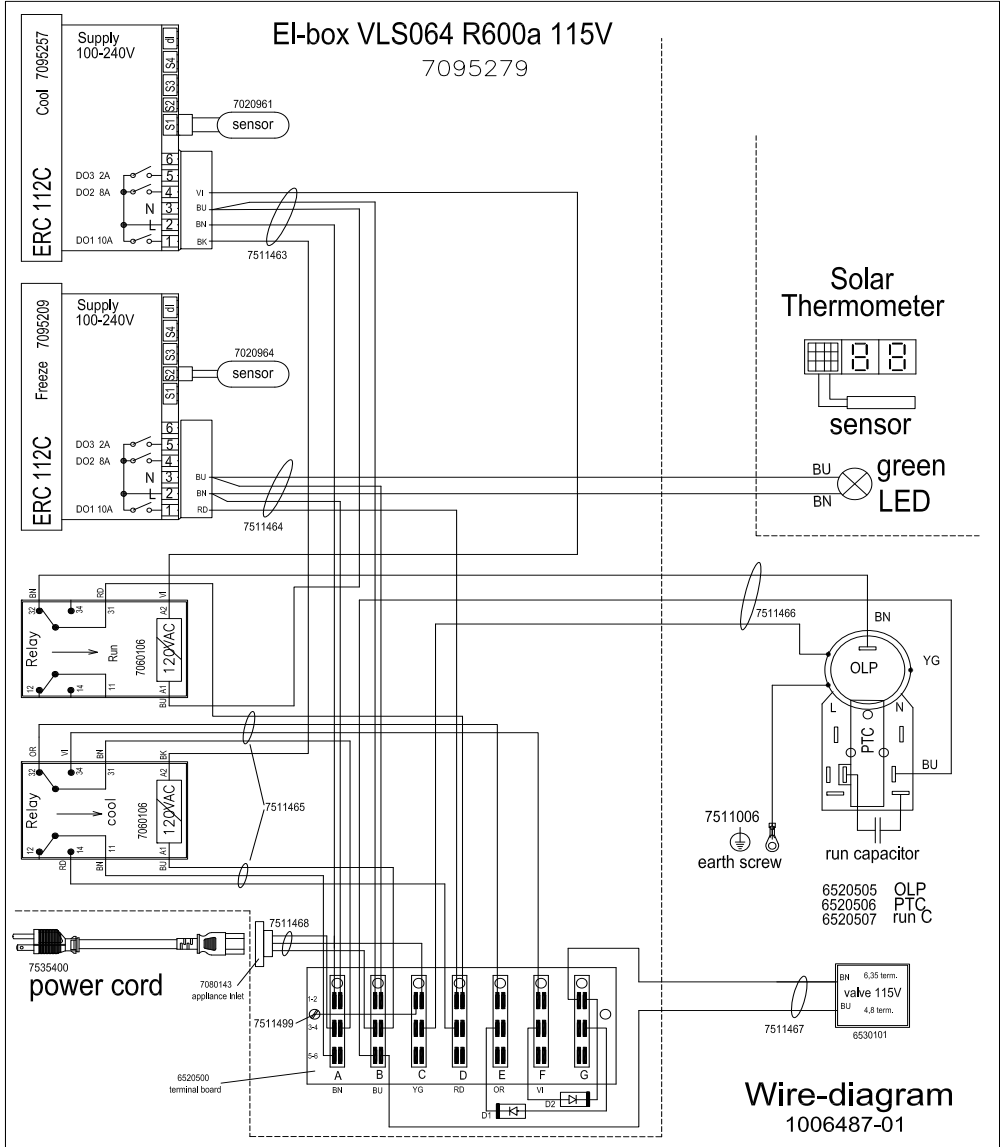
Extra self-tapping screws

# Wire diagram 230V



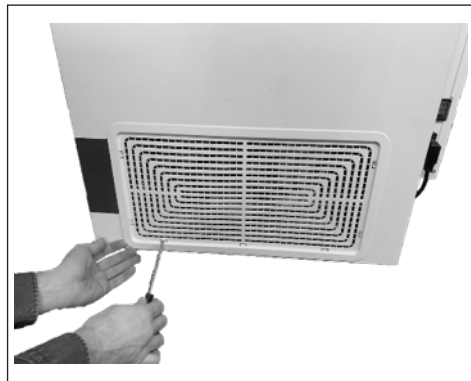
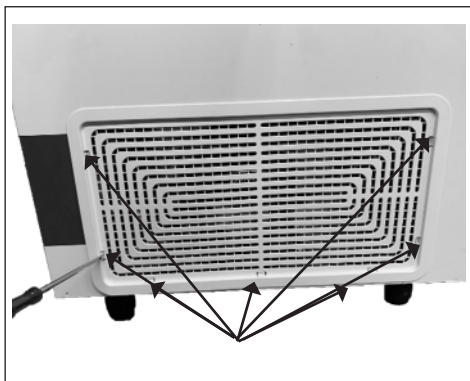


# Wire diagram 115V



## Motor compartment

How to get access to the motor compartment.



1. Use a screwdriver to unlock all 7 clamps.



2. Unlock all 7 clamps



3. Gently pull the compressor grille.

# Thermostat replacement

2 x Danfoss controllers  
 One for refrigerator  
 compartment one for  
 freezer compartment.

Appliance socket for  
 power cord.

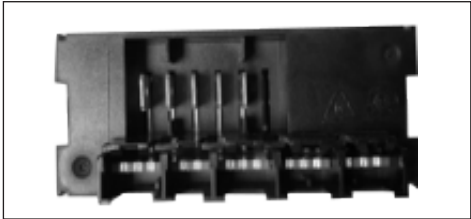


Electric junctionbox

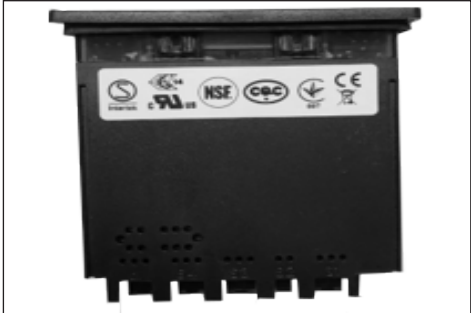
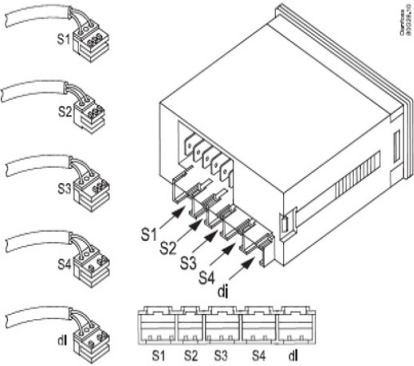
Placed at the rear of  
 VLS 064A RF AC



Danfoss controller:  
 Front with display and adjustments buttons



Back with electrical sockets



Top view

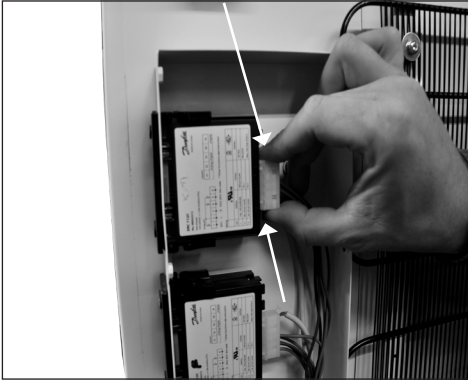




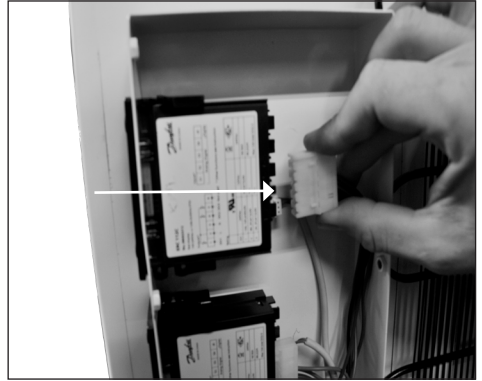
1. Access to electrical components  
Dismount 6 x Torx 20 screws and unmount the junction box lid



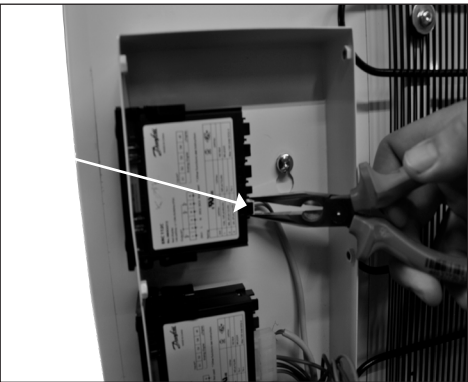
2. Remove grounding cable from junction box by unscrewing bolt with a wrench 6mm.



3. Remove power wires



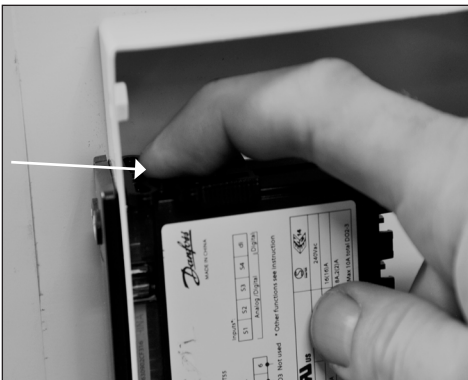
4. Pull the power wire plug from the socket



5. Remove sensor wires



6. Pull out sensor wire from the socket



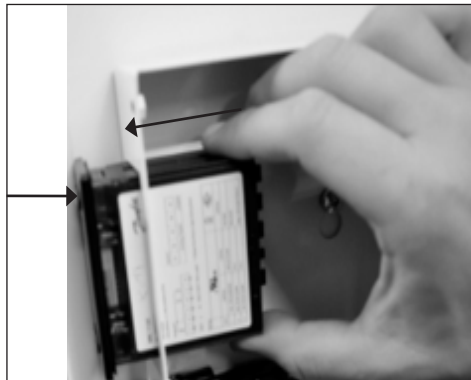
7. Remove 2 fixing clamps from thermostat body



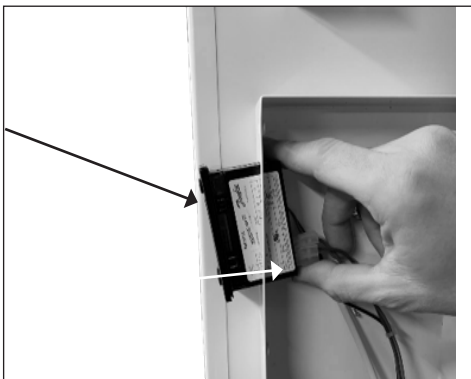
Fixing clamp



8. Slide the fixing clamps backwards



9. Push out the thermostat



10. Put the thermostat back in place



11. Use your finger to press and slide the upper clamp back in place to secure fixture of the thermostat



12. Use your finger to press and slide the upper clamp back in place to secure fixture of the thermostat

# Thermostat adjustment

Thermostats are default factory set at:




Refrigerator: 3.7°C



Freezer: -7.0°C



QR codes to tutorial videos

1. Press < > "up/down" and hold 5 seconds to access the menu.
2. Press on/off button  x 2 times till you see numbers flashing.
3. Push either < for adjusting lower or > for adjusting higher.
4. To save press on/off button  x 1 time then freezing symbol  1 time

### IMPORTANT:

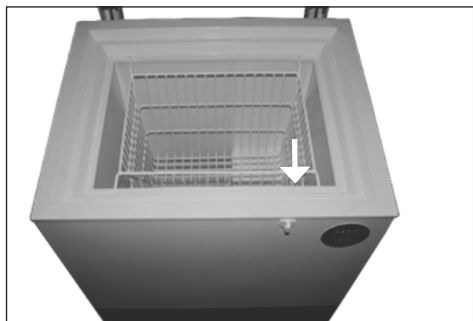
Incorrect parameter settings can lead to unsatisfactory cooling, risking damage to stored vaccines.

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

## Thermostat sensor replacement



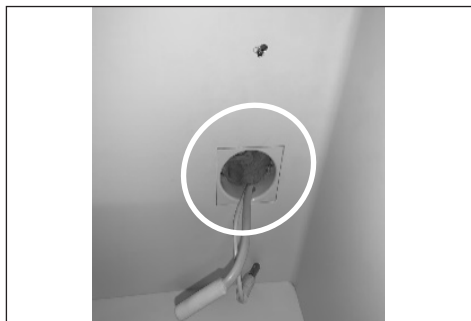
The thermostat sensor is placed inside the compartment of the appliance.



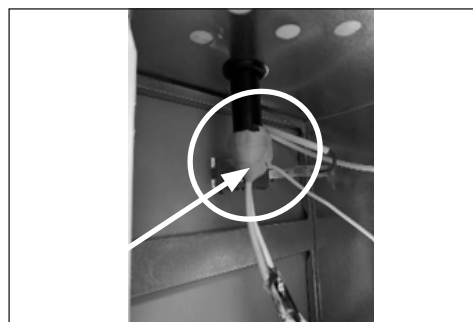
1. Dismount the sensor cover by loosen the 2 x torx screws – size 10.



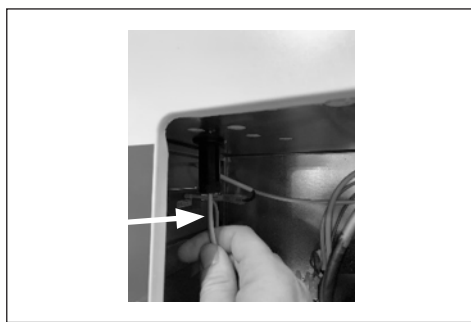
2. Open the 3x clamps fixing the temperature sensors



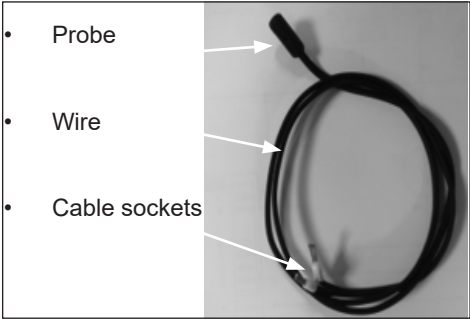
3. Remove sealing kit



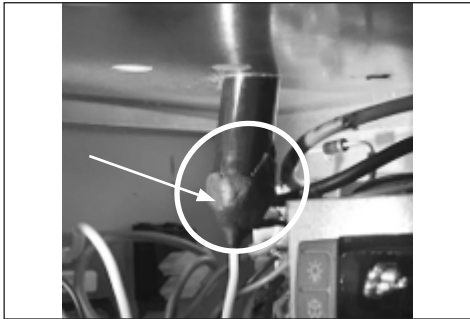
4. Remove sealing kit



5. Gently pull the wire down



7: The thermostat sensor comes with



8: IMPORTANT!  
When re-mounting the new thermostat remember to properly seal the wire feed-through in compressor compartment



9: IMPORTANT!  
When re-mounting the new thermostat remember to properly seal the wire feed-through in vaccine compartment

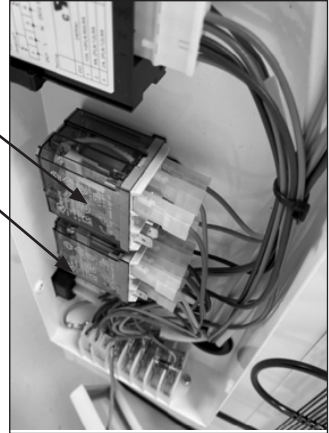
# Relay replacement



1. The two relays are placed inside the junction box.

Relay 1

Relay 2



2. Unscrew the left relay fixing bolt with an 8mm socket wrench.



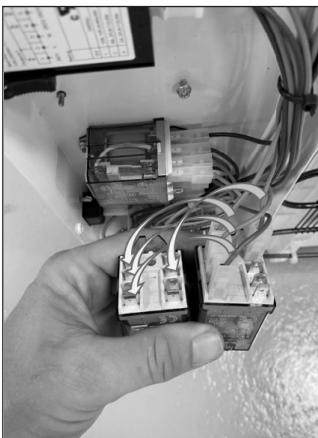
3. Only loosen the right relay fixing bolt with an 8mm socket wrench.



4. Turn the relay out from the left fixing bracket. Then slide it out from the right fixing bracket.



5. The relay is now loose.



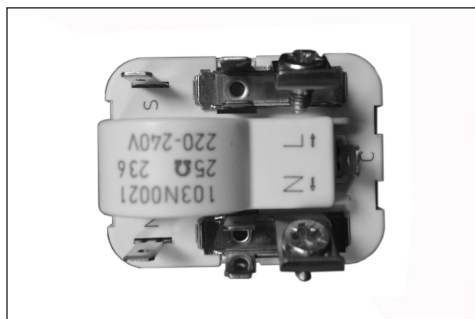
6. Place the new relay next to the one that needs to be replaced.  
Exchange the wires 1/1 from the old relay to the new one.



7. Use a plier to unmount and remount the lugs in the new relay.



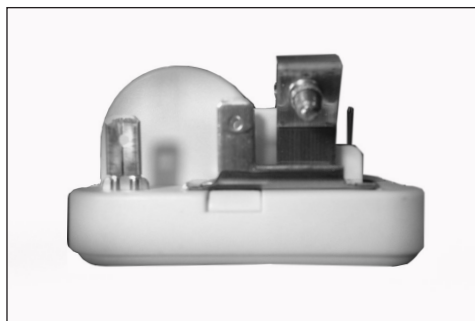
## Starting device replacement



Front with terminals.



Back with connection plug.



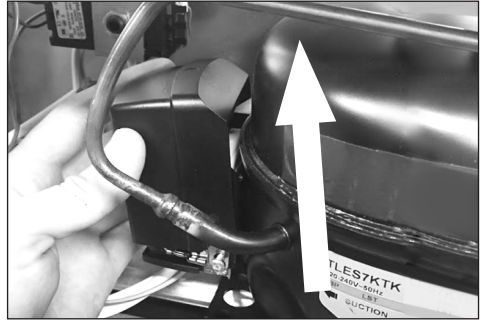
Side view.



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



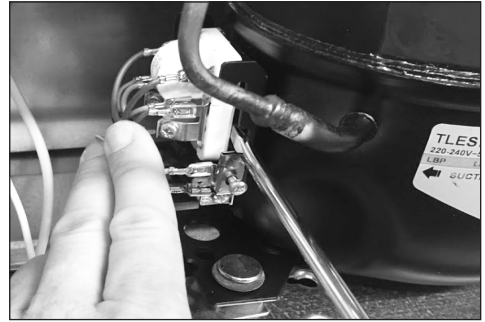
1. Dismount the cover for starting device by loosen the phillips screw.



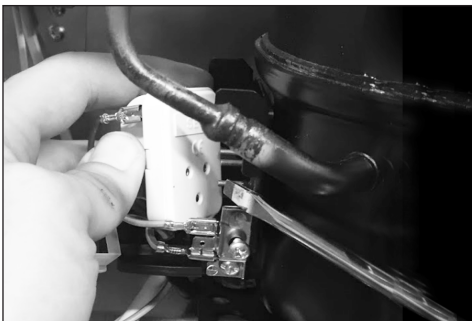
2. Push the plastic cover up.



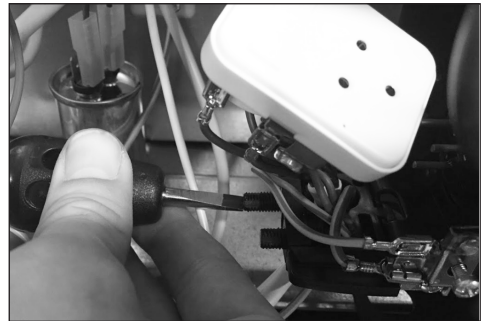
3. Pull the cover back to loosen.



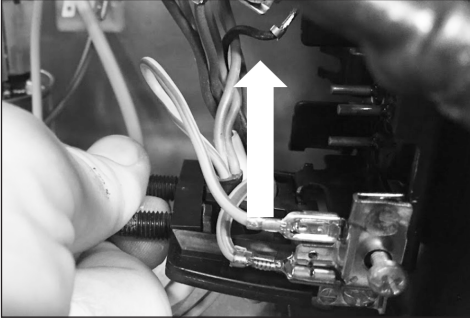
4. Use a screw driver and gently remove the starter from the socket of compressor.



5. Starting device loose from socket



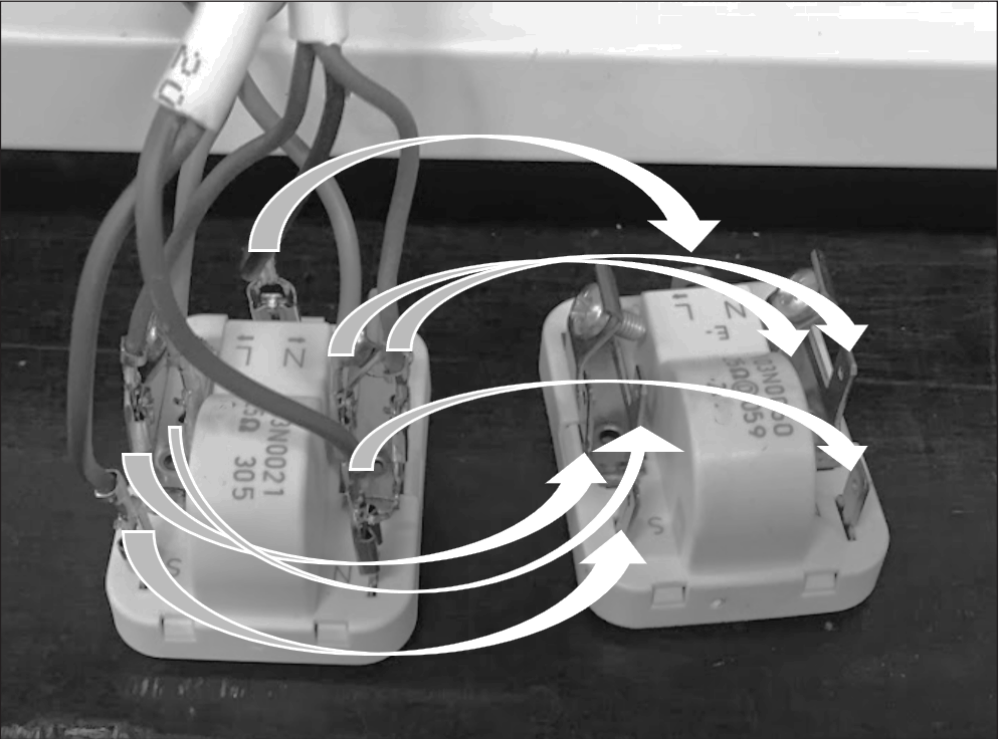
6. Use a small screwdriver or a wrench size 6 – to unmount the wire fastener



7. Push the plastic bracket up.



8. Use a nose plier to unmount the wire sockets from starting device.



9. Exchange the wires 1/1 from the old starting device to the new one.

## Run capacitor replacement



The run capacitor is placed in the left side of the compressor compartment, on the bottom frame.



1. Loosen the bolt that secures the capacitor from the bottom of appliance by using a wrench or a socket wrench M13.



2. The run capacitor is loose



3. Unmount the 2 wires by using a nose plier.

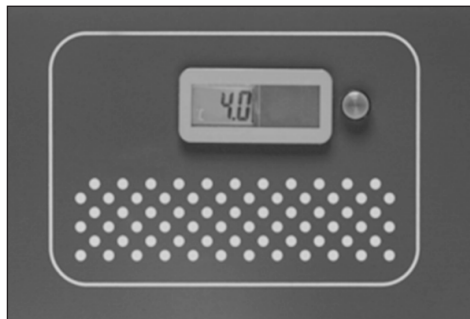


4. Exchange the wires 1/1 from the old capacitor to the new one

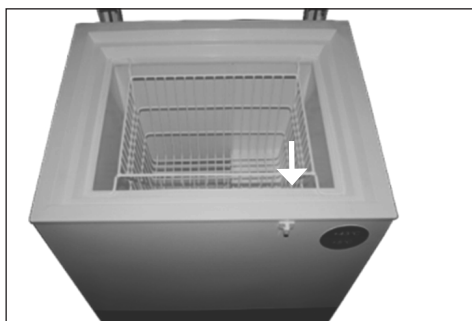
## Thermometer replacement



The thermometer is placed in at the front of the appliance



Thermometer display



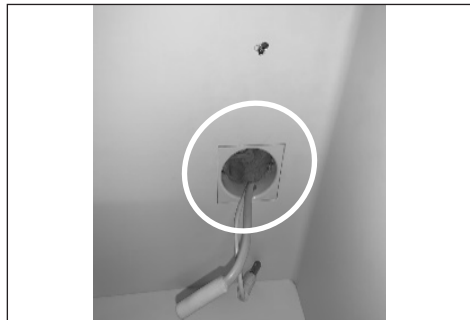
The temperature probe is placed inside the compartment of the appliance.



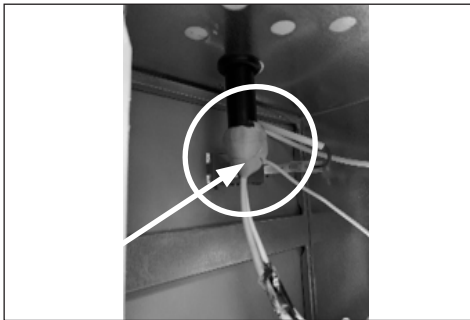
1. Dismount the temperature sensor cover by loosen the 2x torx screws – size 10



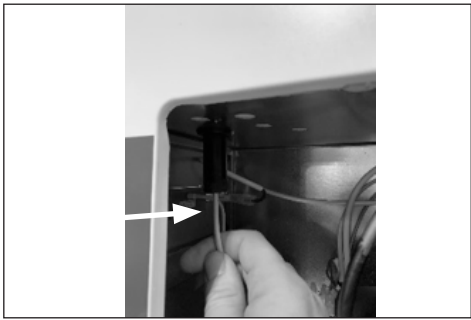
2. Open the 3x clamps fixing the temperature sensors



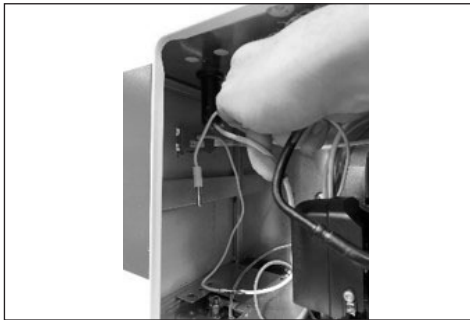
3. Remove sealing kit



4. Remove sealing kit



5. Gently pull the wire down



6. Temperature sensor is loose from refrigeration compartment



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



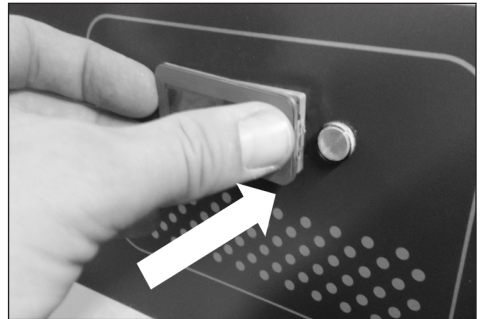
8. Temperature monitor is loose from cabinet



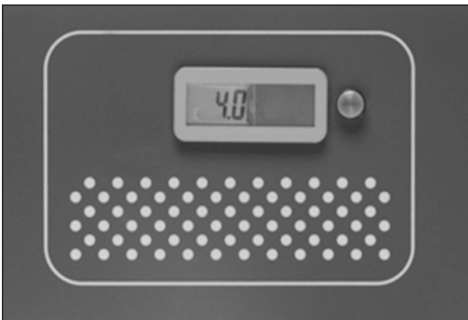
9. Thermometer comes with wire, PV solar cell, display and sensor



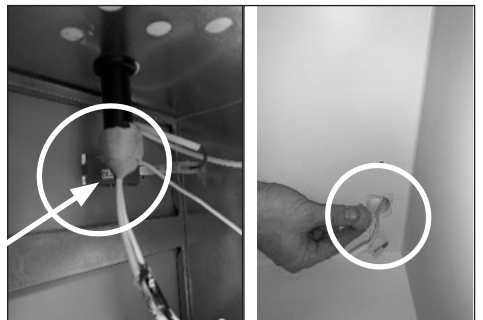
10. Installation of thermometer display



11. Push until display is fixed to cabinet



12. Thermometer display is in place

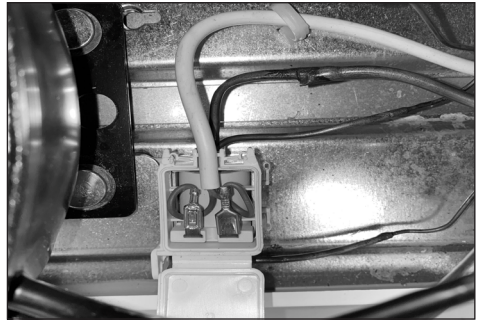


13. **IMPORTANT!**  
When re-mounting the new thermometer remember to properly seal the wire feed-through with sealing kit  
Inside vaccine- as well as in compressor compartment.

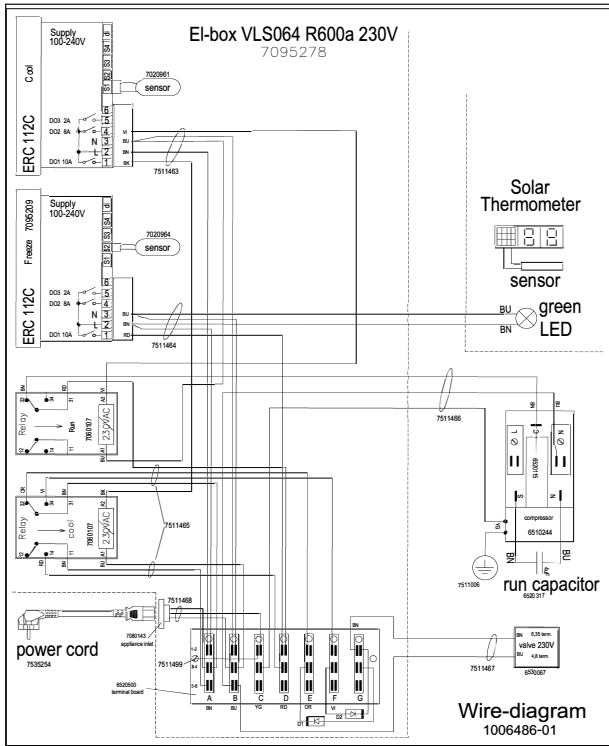
# Magnetic valve replacement



Valve to be replaced



Valve to be replaced

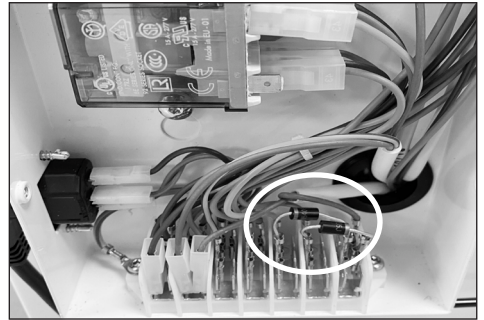




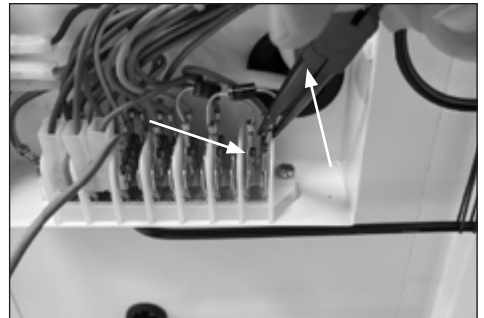
# Diode replacement



1. Junction Box and connection board



2. Two diodes are placed on connection board  
Diodes to be replaced!



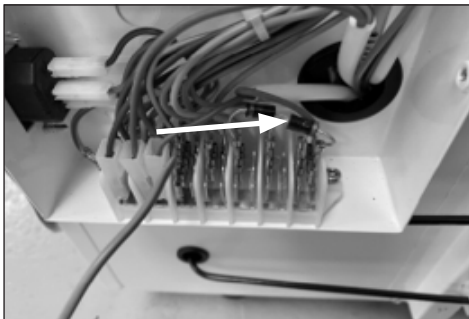
3. Use a nose plier to pull off 2 x diode spade connectors from the connection board



4. The diode is loose from the connection board

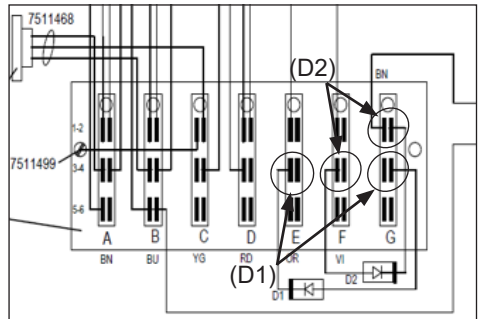


5. Remount the new diode with a nose plier by pushing the 2 x spade connectors on to the spades on the connection board



6. IMPORTANT!  
Make sure the legs of the diodes are not touching each other, risking short circuit.

The new diode/s is/are in place



7. IMPORTANT!  
Make sure diode 2 (D2) is connected to the right spade terminals (F/G), here marked with red circles on the wiring diagram.

Make sure diode 1 (D1) is connected to the right spade terminals (E/G), here marked with blue circles on in the wiring diagram.

# 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

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

**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)
- 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
- Is there condensation on electric parts (water condensation)?
- Over all condition of the cabinet –internal and external: any corrosion, rusting, cracks?
- Condition of the cables from the panel to the compressor including the lightning protection
- Inspection of the refrigeration line (the condenser, evaporator, the whole refrigeration circuit/line)

## 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.	If this is not the case, check the following: - 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 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>Shield the appliance against direct sun light and ensure more ventilation to the room.</p>
No temperature is displayed.	<p>The Thermometer is broken.</p> <p>There is not enough light for the solar sensor.</p>	<p>Change the thermometer.</p> <p>Turn on the light.</p>

# Technical support

When contacting Vestfrost Solutions technical support please supply below information:

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



Rating plate

Model: VLS 400A AC      Serial no.: 20180601602

WHO/PQS Code: E003/065

Made in Denmark  
Gross vol.: 235 L Vaccine storage capacity: 145 L  
220-240V~ 50/60Hz 130 W 0,8 A Climate class T

Polyurethane foam with Cyclopentane  
www.vestfrostolutions.com  
Service phone: +45 79142250

Type : VLS400

R600a 0,063 kg

1-N24367358910914  
Prod nr.:400646

### Contact:

#### Vestfrost Solutions

Tel. +45 75142250

[cce-service@vestfrostolutions.com](mailto:cce-service@vestfrostolutions.com)

Or visit our service-center webpage:

<http://www.vestfrostolutions.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.

