VESTFROST SOLUTIONS



+43°C
+5°C
A

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 204A/304A/354A/404/504A AC

Internal Voltage Stabilizer 115V

GB Instructions for use

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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:
Keep 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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PQS Code	**Model**	**PQS Performance specifications** Specification reference:	**PQS Independent type-testing protocol** Product verification protocol:
E003/109	VLS 204A AC	E003/RF03.4	E003/RF03-VP.3
E003/110	VLS 304A AC	E003/RF03.4	E003/RF03-VP.3
E003/111	VLS 354A AC	E003/RF03.4	E003/RF03-VP.3
E003/112	VLS 404A AC	E003/RF03.4	E003/RF03-VP.3
E003/113	VLS 504A AC	E003/RF03.4	E003/RF03-VP.3

Periodic preventive maintenance checks

Daily Check:
Monitor Temperature.
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.

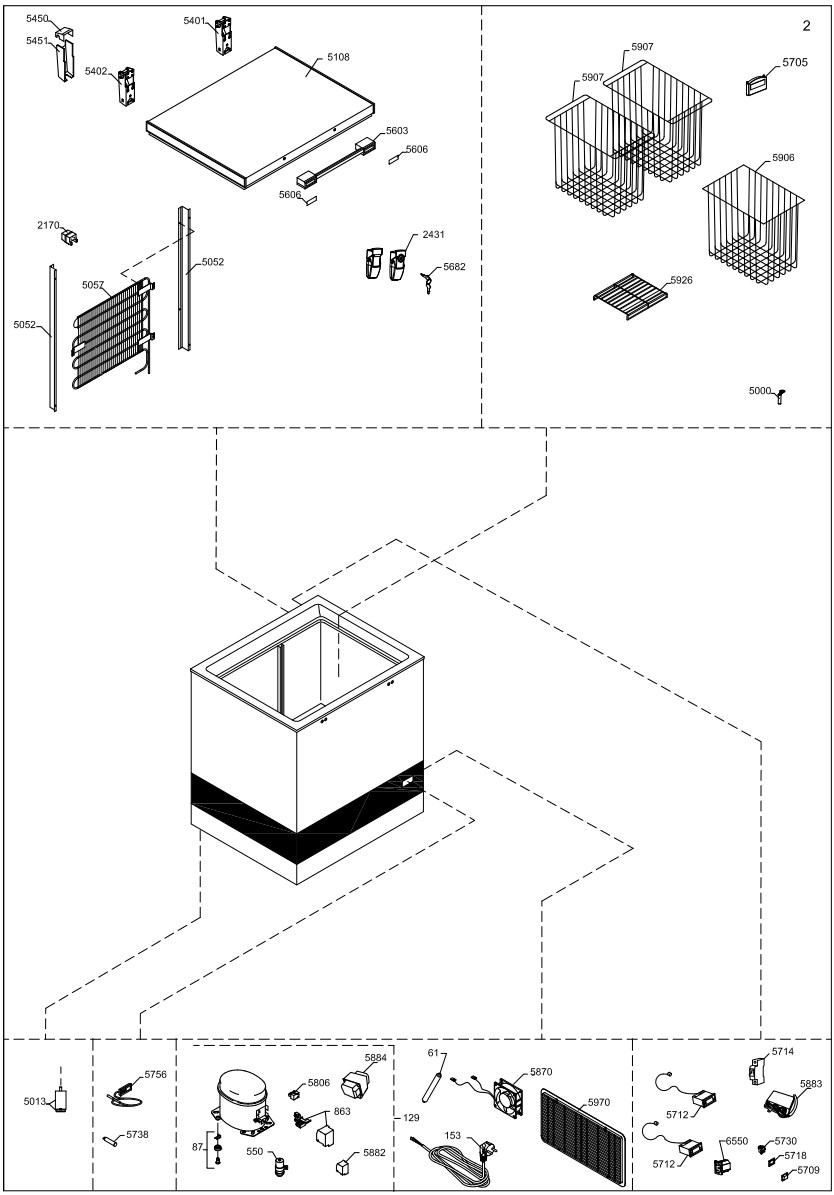
Yearly maintenance:

Check electrical connections and components.

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Complete spare part list VLS204A AC

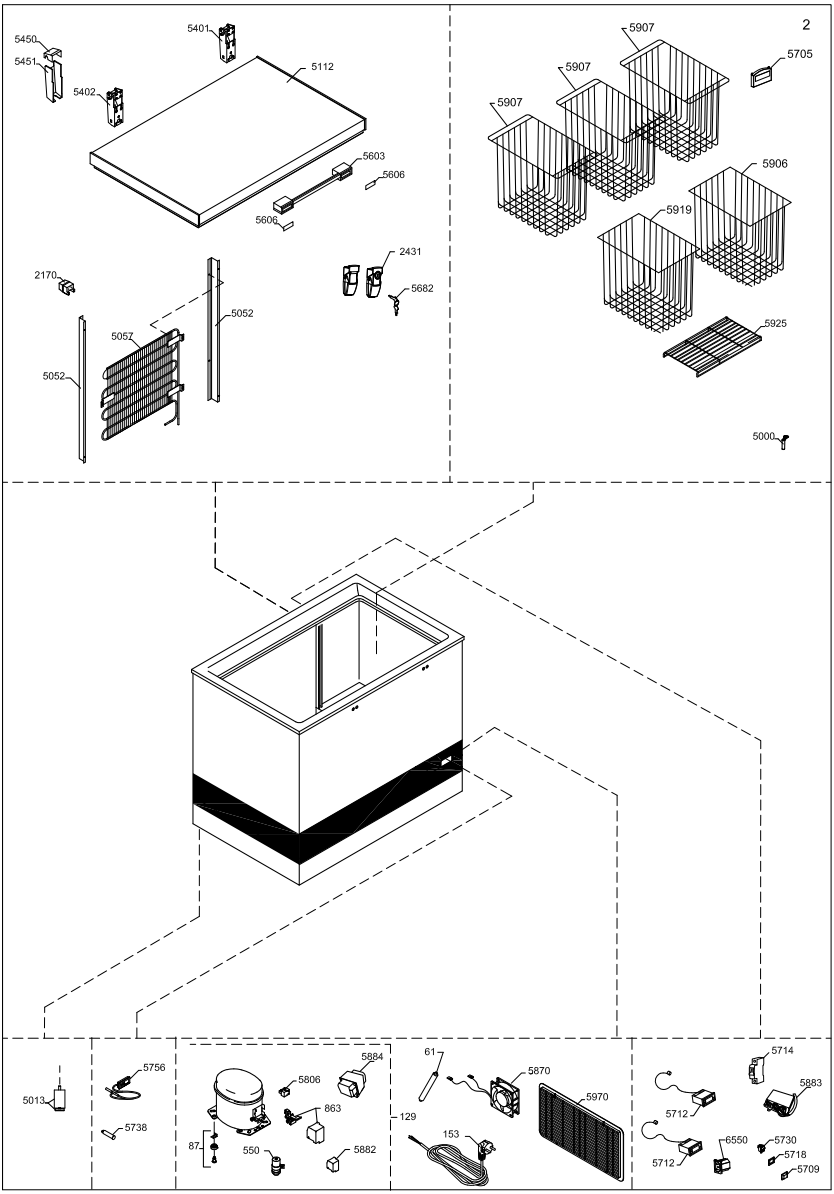
Position	Item number	Item name
0061	0-6538001	Filter drier,
0087	0-6038175	Base plate fittings, complete
0129	8-036510307	Compressor - Embraco EMX3109Y
0153	7535400	Mains lead
0550	6520504	Run cap. 8uF for EMX3109Y
0863	0-A921014	Cover + wiring clamp
2170	0-A9301260103	Distance piece
2431	A915010	Lock complete snap locks
5000	3010049	Drain plug
5013	3040400	Adjustable foot
5052	2041300	Fittings for condenser
5057	6010479	WOT condenser
5108	5000901674113	Lid foamed without handle/hinges
5401	1510133	Hinge
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	702090057	Refrigerator,Thermostat XR30CH incl. sensor
5712	702090058	Safety, Thermostat XR01CH incl. sensor
5714	7060279	Overcurrent circuit breaker
5718	7060105	Rocker Switch Cover
5730	7020245	"on-off" switch
5738	7010138	Pilot lamp, green
5756	7021093-03	Thermometer, solar
5806	6520502	Starting device
5870	7090509	Fan
5882	6520393	Cover
5883	7020503	Voltage stabiliser controller thyratron MFS-2LWE 115V 60Hz
5884	7020504	Voltage stabilizer transformer thyratron MFS-100L 115V 60Hz
5906	3510016	Basket 275 mm
5907	3510015	Basket 236 mm
5926	3510032	Bottom grating
5970	3010308-01	Motor screen
6550	7080143	Connector


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Complete spare part list VLS304A AC

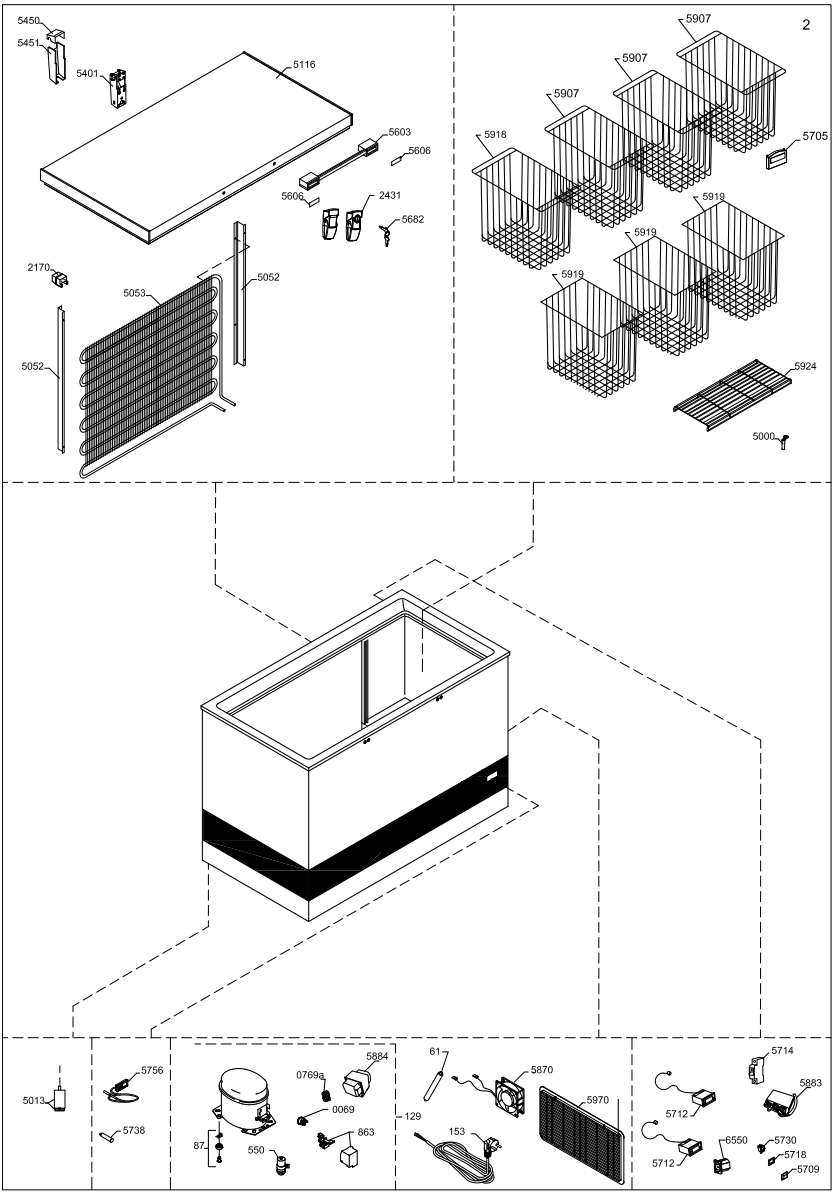
Position	Item number	Item name
0061	0-6538001	Filter drier,
0087	0-6038175	Base plate fittings, complete
0129	8-036510307	Compressor - Embraco EMX3109Y
0153	7535400	Mains lead
0550	6520504	Run cap. 8uF for EMX3109Y
0863	0-A921014	Cover + wiring clamp
2170	0-A9301260103	Distance piece
2430	A915010	Lock complete snap locks
5000	3010049	Drain plug
5013	3040400	Adjustable foot
5052	2041300	Fittings for condenser
5057	6010479	WOT condenser
5112	5000901674163	Lid foamed without handle/hinges
5401	1510133	Hinge
5402	1510137	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	702090057	Refrigerator,Thermostat XR30CH incl. sensor
5712	702090058	Safety, Thermostat XR01CH incl. sensor
5714	7060279	Overcurrent circuit breaker
5718	7060105	Rocker Switch Cover
5730	7020245	"on-off" switch
5738	7010138	Pilot lamp, green
5756	7021093-03	Thermometer, solar
5806	6520502	Starting device
5870	7090509	Fan
5882	6520393	Cover
5883	7020503	Voltage stabiliser controller thyratron MFS-2LWE 115V 60Hz
5884	7020504	Voltage stabilizer transformer thyratron MFS-100L 115V 60Hz
5906	3510016	Basket 275 mm
5907	3510015	Basket 236 mm
5919	3520056	Basket 225 mm
5925	3510031	Bottom grating
5970	3010308-01	Motor screen
6550	7080143	Connector


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Complete spare part list VLS354A AC

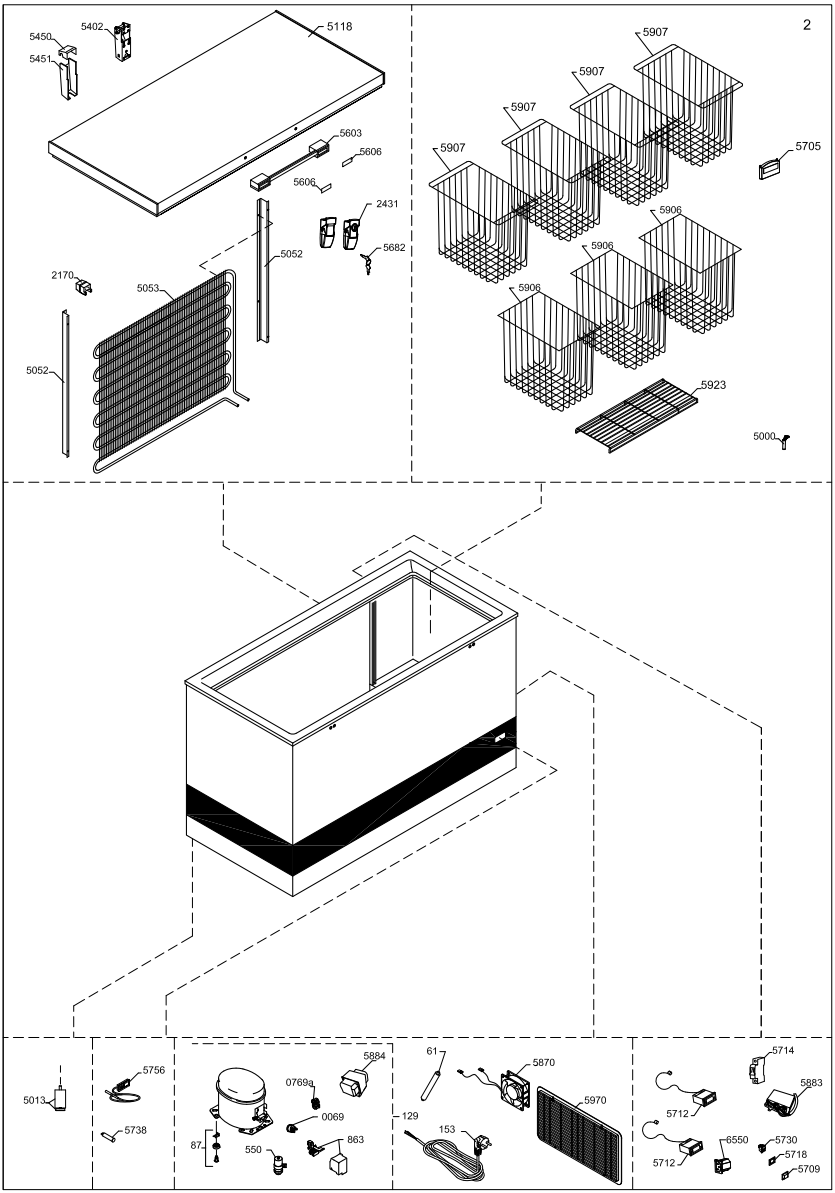
Position	Item number	Item name
0061	0-6538001	Filter drier,
0069	6520506	Overload Protector
0087	0-6038175	Base plate fittings, complete
0129	8-036510341	Compressor
0153	7535400	Mains lead
0550	6520507	Run capacitor
0769a	6520505	PTC group V115 for EMX3113Y/3118Y-115V
0863	0-A921014	Cover + wiring clamp
2170	0-A9301260103	Distance piece
2431	A915010	Lock complete snap locks
5000	3010049	Drain plug
5013	3040400	Adjustable foot
5052	2040504	Fittings for condenser
5053	6010068	WOT condenser
5116	5000901674213	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	702090057	Refrigerator,Thermostat XR30CH incl. sensor
5712	702090058	Safety, Thermostat XR01CH incl. sensor
5714	7060279	Overcurrent circuit breaker
5718	7060105	Rocker Switch Cover
5730	7020245	"on-off" switch
5738	7010138	Pilot lamp, green
5756	7021093-03	Thermometer, solar
5870	7090508	Fan
5883	7020503	Voltage stabiliser controller thyratron MFS-2LWE 115V 60Hz
5884	7020504	Voltage stabilizer transformer thyratron MFS-100L 115V 60Hz
5907	3510015	Basket 236 mm
5918	3520055	Basket, 190 mm
5919	3520056	Basket 225 mm
5924	3510030	Bottom grating
5970	3010308-01	Motor screen
6550	7080143	Connector
XXXX	1006710	Wire diagram


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Complete spare part list VLS404A AC

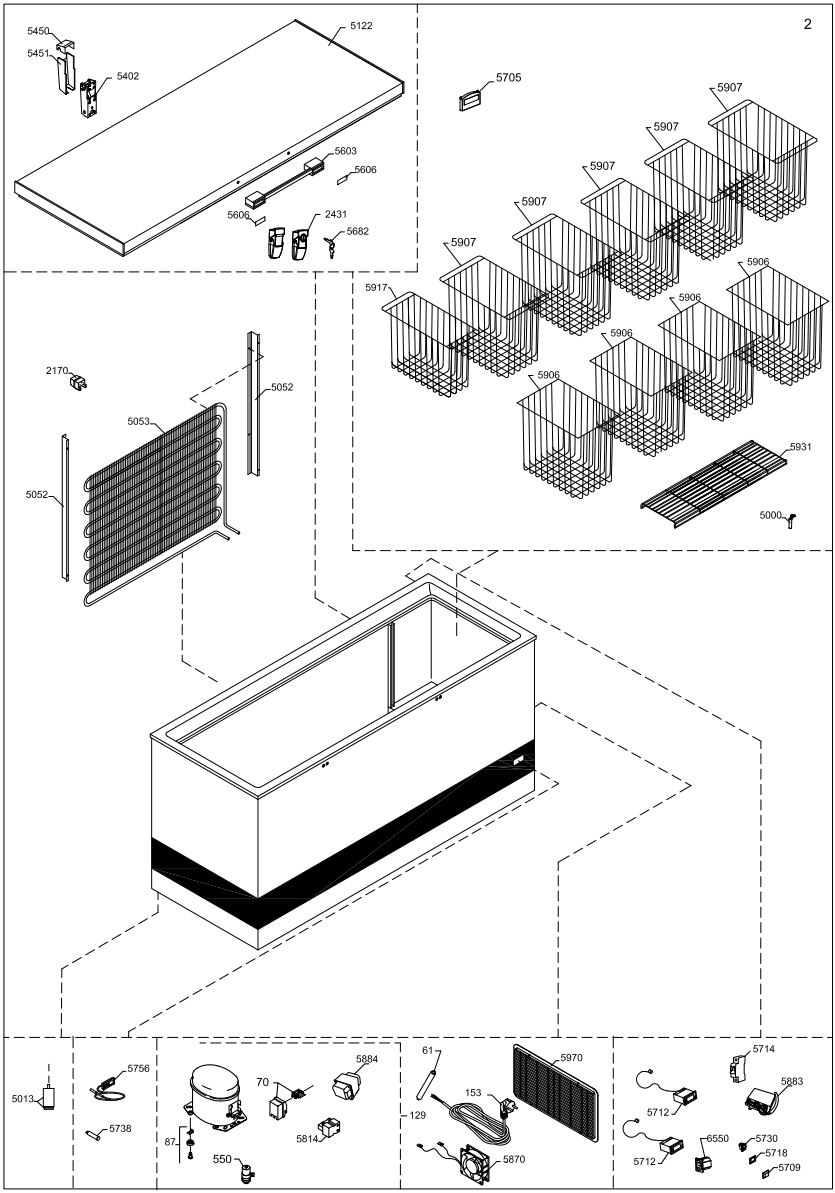
Position	Item number	Item name
0061	0-6538001	Filter drier,
0087	0-6038175	Base plate fittings, complete
0129	8-036510341	Compressor
0153	7535400	Mains lead
0550	6520507	Run capacitor
0769a	6520505	PTC group V115 for EMX3113Y/3118Y-115V
0863	0-A921014	Cover + wiring clamp
2170	0-A9301260103	Distance piece
2431	A915010	Lock complete snap locks
5000	3010049	Drain plug
5013	3040400	Adjustable foot
5052	2040504	Fittings for condenser
5053	6010068	WOT condenser
5118	5000901674243	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	702090057	Refrigerator,Thermostat XR30CH incl. sensor
5712	702090058	Safety, Thermostat XR01CH incl. sensor
5714	7060279	Overcurrent circuit breaker
5718	7060105	Rocker Switch Cover
5730	7020245	"on-off" switch
5738	7010138	Pilot lamp, green
5756	7021093-03	Thermometer, solar
5870	7090508	Fan
5883	7020503	Voltage stabiliser controller thyratron MFS-2LWE 115V 60Hz
5884	7020504	Voltage stabilizer transformer thyratron MFS-100L 115V 60Hz
5906	3510016	Basket 275 mm
5907	3510015	Basket 236 mm
5923	3510028	Bottom grating
5970	3010308-01	Motor screen
6550	7080143	Connector


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Complete spare part list VLS504A AC

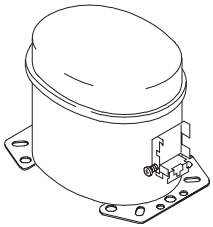
Position	Item number	Item name
0061	0-6538001	Filter drier,
0070	A921001	Cover + wirring clamp
0087	0-6038175	Base plate fittings, complete
0129	8-036510306	Compressor - Complete NLE13KTK 115-127V R600a
0153	7535400	Mains lead
0550	6520526	Run cap. 15uF for NLE13KTK
2170	0-A9301260103	Distance piece
2431	A915010	Lock complete snap locks
5000	3010049	Drain plug
5013	3040400	Adjustable foot
5052	2040504	Fittings for condenser
5053	6010068	WOT condenser
5122	5000901674293	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	702090057	Refrigerator,Thermostat XR30CH incl. sensor
5712	702090058	Safety, Thermostat XR01CH incl. sensor
5714	7060279	Overcurrent circuit breaker
5718	7060105	Rocker Switch Cover
5730	7020245	"on-off" switch
5738	7010138	Pilot lamp, green
5756	7021093-03	Thermometer, solar
5814	6520331	Starting device
5870	7090508	Fan
5883	7020503	Voltage stabiliser controller thyratron MFS-2LWE 115V 60Hz
5884	7020504	Voltage stabilizer transformer thyratron MFS-100L 115V 60Hz
5906	3510016	Basket 275 mm
5907	3510015	Basket 236 mm
5917	3510537	Basket 117 mm
5931	3510523	Bottom grating
5970	3010308-01	Motor screen
6550	7080143	Connector


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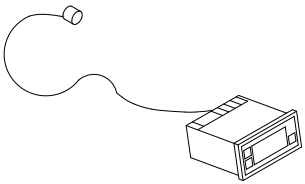
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Vital components

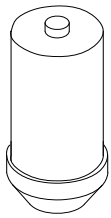
Position	Item no	Description
VLS204 - 304A AC		
0129	8-036510307	Compressor
VLS354 - 404A AC		
0129	8-036510341	Compressor
VLS504A AC		
0129	8-036510306	Compressor



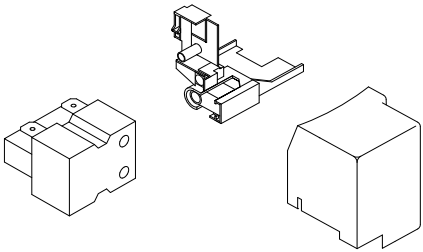
5712	702090057	Refrigerator,Thermostat XR30CH incl. sensor
5712	702090058	Safety,Thermostat XR01CH incl. sensor



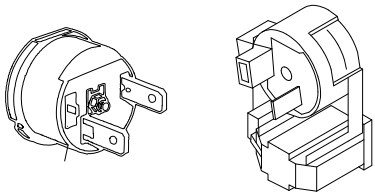
VLS204-304A AC		
0550	6520504	Run capacitor
VLS354-404A AC		
0550	6520507	Run capacitor
VLS504A AC		
0550	6520526	Run capacitor



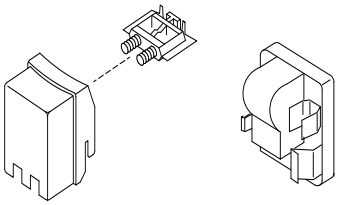
VLS204-304A AC		
5806	6520502	Starting device
0863	0-A921014	Cover+ wiring clamp



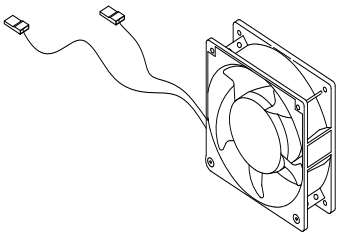
VLS354-404A AC		
0069	6520506	Overload Protector
0769a	6520505	Cover



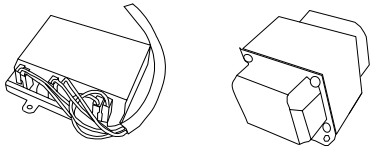
Position	Item no	Description
VLS504A AC		
0070	A921001	Cover &wiring clamp
5814	6520331	Starting device



5870	7090508	Fan



5883	7020503	Controller Thyratron
5884	7020504	Transformer Thyratron



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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



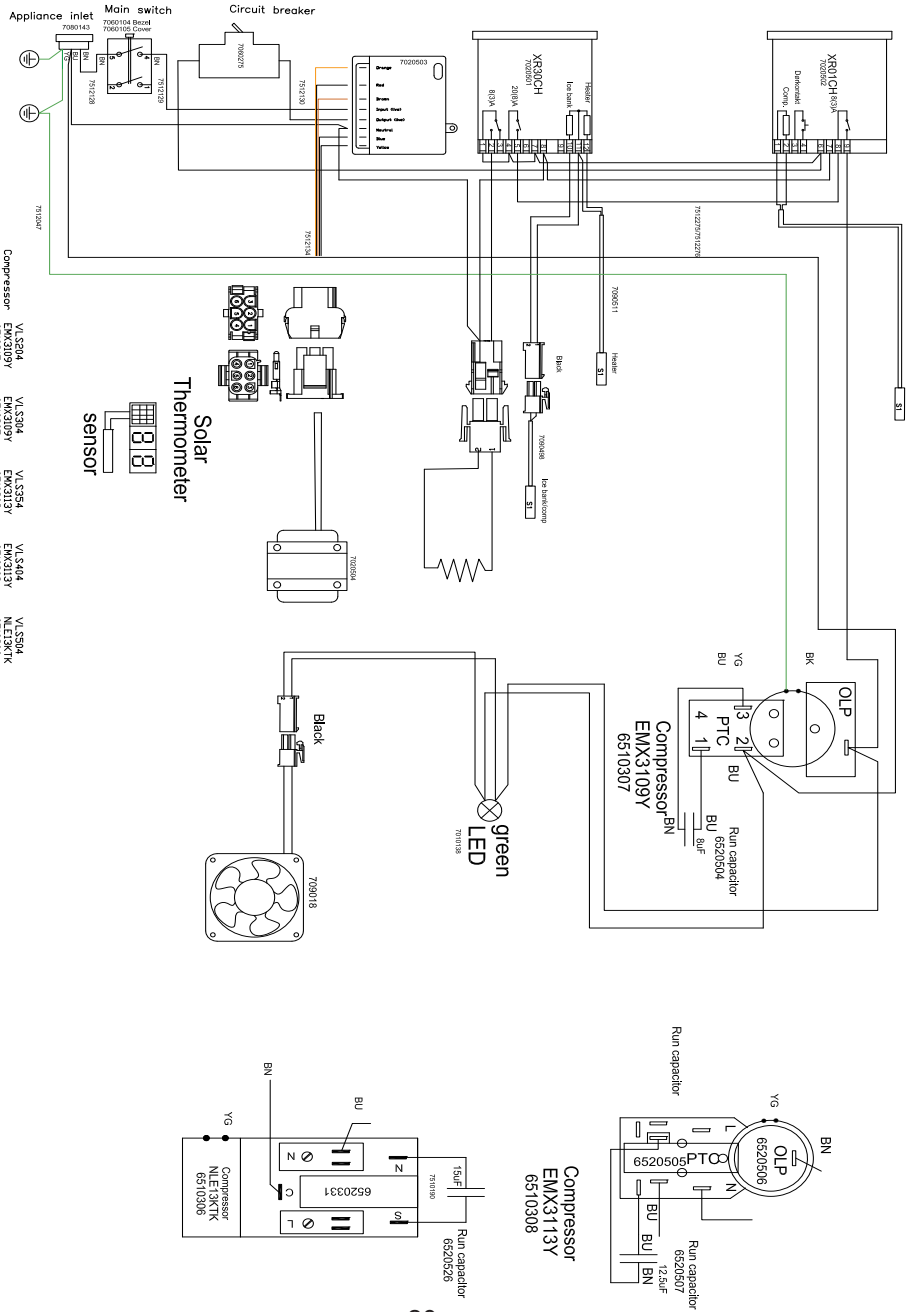
7.Multimeter



Proposed additional service kit/items
Sealing kit
Tar tape
Extra self-tapping screws

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Wire diagram



Voltage stabilizers

Getting to know your appliance

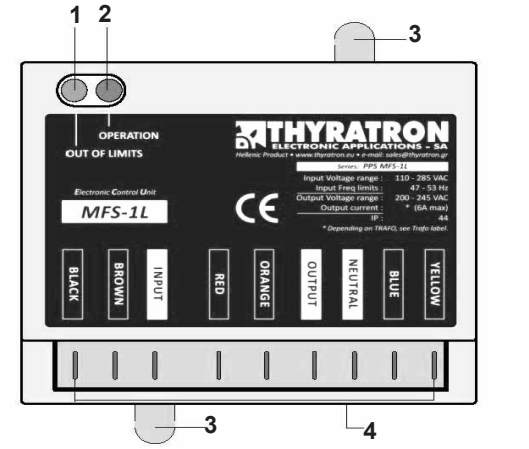


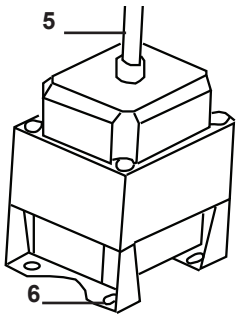
Product features:

- Voltage stabilizer
- Voltage, Frequency and current supervisor
- Intelligent ambient temperature protection
- Intelligent Time delay 3’30”+0”to30’’ random
- Surge protection
- Reconnecting Voltage Hysteresis
- Zero Crossing
- Soft Start
- Zero current change over

Electronic Control Unit - ECU & Trafo

(1): "OUT OF LIMITS" led (Red) (3), (6): Mounting points (2): "OPERATION" led (Green)
(4): Fast on terminals (5):Connection cables - Fast On female terminal





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LED - Indication

Event	Red LED	Green LED
Normal operation	Off	On
4 minutes delay	Blink slow	Off
Frequency out of limits	Blink fast	Off
Temperature out of limits	Blink slow	Blink slow
PPS MFS Failure or No Power	Off	Off

Voltage stabilizasion

Output Voltage Limits	
PPS MFS-L performs voltage correction and stabilization using Autotransformer, Relays and Triacs. PPS MFS-L makes switching in order to keep the output voltage within limits.	200 - 245 VAC ±2%

Voltage & frequency monitoring

Input Voltage limits	
PPS MFS-L monitors voltage and frequency of main power and cuts off the output when the values of main power (voltage or frequency) come out of limits.	60 - 415 VAC

Input frequency limits		
Stage \ Hz	**50 Hz**	**60 Hz**
Stage_1: Continuously Operation	47 - 53	57 - 63
Stage_2: 60mins Delay to Cut-Off	46 - 47 & 53 - 54	56 - 57 & 63 - 64
Stage_3: 10mins Delay to Cut-Off	45 - 46 & 54 - 55	55 - 56 & 64 - 65
Stage_4: Instant Cut-Of	< 45 & > 55	< 55 & > 65

PPS MFS-Lw Series :				PPS MFS-1Lw					PPS MFS-2Lw	
PPS MFS-xxxLw *Series* *(xxx: 070, 085, 100, 150, 200)*				**040**	**060**	**070**	**085**	**100**	**150**	**220**
Power Supply	Nominal Voltage			220 - 240 VAC						
	Operation Voltage Bandwidth (@ 25^0C)			60 - 415 VAC						
	Ambient Temperature	Humidity		-5 to +45 °C				5 - 95 %RH, non-condensin		
Input	Voltage	Low	High	110 VAC ± 3% with hysteresis				285 VAC ±2% with hysteresis		
	Frequency Lower / Upper	50Hz	60Hz	45 / 55 Hz ±0.2Hz				55 / 65 Hz ±0.2Hz		
Output	Voltage range			200 - 245 VAC ±2%						
	Max. Current (A)							4.3		
	Continuous Operation *(45^0C)* Current (A) @ Low Voltage							3.2		
Start Up Time, Time Delay				- 4 minutes (3'30'' + 0" to 30'' random) - Zero on Production Line for first 30 minutes continuous operation of life cycle						
Thermal protection				- Temperature limits +80 °C - Temperature rise 15°C / 15 minutes						
Plastic Housing				UL94 V-0 Flame Retardant						
IP Class				IP44						
Lifetime				Relay lifetime cycles 350,000						
Connections				6.3mm x 0.8mm flat, terminal						
Cable Harness - Lengths				250mm / 550mm / 1000mm versions						
Insulation Class, Transformer Windings				H (180°C)						
Dimension (mm)	ECU			114 x 98 x 31						
	Trafo	*Standard installation* *Vertical installation*						130x95x110 108x140x90		
Total weight (Kg)								4.3		

GB

Safety instructions - Installation

What this chapter contains

This chapter contains the safety instructions which you must follow when installing, operating and servicing the **Power Protector Stabilizer MFS**. If ignored, physical injury or death may follow and/or damage may occur to the **PPS MFS**. Read the safety instructions before you work on the unit. These warnings are intended for all who work on the PPSMFS, or cable.



WARNING! The work described in this chapter may only be carried out by a qualified electrician.Ignoring the safety instructions can cause physical injury, death or/and damage to the equipment. Make sure that the device is disconnected from the mains (input power) during installation.

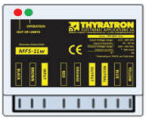


Beware of hot surfaces. Some parts, such as transformer, may remain hot for a while after disconnection of the electrical supply.

- Only qualified personnel are allowed to install and maintain the PPS MFS.
- PPS MFS is intended to be built into commercial refrigeration appliances or other enclosures that provide protection against certain external influences and, in any direction, protection against direct contact and electric shock.
- It shall be installed in an area where it is inaccessible without disassembly of the enclosing area.
- Never work on the PPS MFS or cable when main power is applied. Always ensure by measuring with a multimeter (impedance at least 1 Mohm) that voltage between device input phases INPUT and NEUTRAL is close to 0V. Externally supplied control circuits may cause dangerous voltages inside the device even when the main power on the drive is switched off.
- Do not make any insulation or voltage withstand tests on the device.
- When reconnecting the wiring, always check that the Phase - Neutral order is correct.
- Do not change the electrical installations of the PPS MFS. Changes may affect the safety performance or operation of the device unexpectedly. All customer-made changes are on the customer's responsibility.
- Make sure that dust from borings and grindings does not enter the drive when installing. Electrically conductive dust inside the unit may cause damage or malfunctioning.
- Do not fasten the device by welding. **Note:** The fast-on terminals on the device are at a dangerously high voltage when the input power is on.

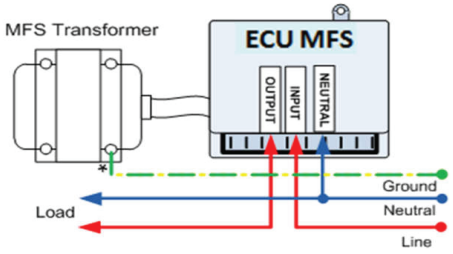
Installation and maintenance work

- The PPS MFS consist of two parts, the Electronic Control Unit (ECU) and the Autotransformer (Trafo). The ECU and the Trafo of the device is delivered in separates cardboard box. The type, size and material of the package depend on the frame size of the Autotransformer.
- The parts of the PPS MFS must be connected by using fast-on terminals taking in care the coloring code of the cables and ECU.
- PPS MFS is intended to be used with the protection of a fuse gG, type B, IEC60269-3-1.
- Confirm compatibility with connection terminals as well as insulation. The connectors are Fast On terminals 6.3x0.8mm
- The device must be installed in an upright position (beside figure) with allowance for adequate cooling.
  IP rating is met only when the ECU is installed in a vertical position with the connection tabs at the bottom. This is also important as the ECU also detects ambient temperature as one of its features.



- An earth ground connection must be take place on to the Trafo. Detail of grounding Transformer Enclosure during implementation in the appliance. (IEC 60417-5019)





Before powering the device:

- Confirm color coding between ECU and Autotransformer
- Confirm the correct fitting of the terminals to ensure IP rating of the connections.

GB

Fuse trouble shooting

How to determine why the thermal magnetic breaker nuisance trips?

The thermal magnetic breaker is installed to protect the build-in voltage stabilizer.

Cause: Circuit breakers trip.

Resolution:

1. First, determine if the breaker trips on startup or if it trips after running for a while.

2. If it trips at start-up but doesn't do it repeatable, it is caused by inrush current to either the voltage stabilizer or the compressor. Resetting the breaker will have no harm on the appliance

3. If it trips at start-up and does it multiple times, there is a short circuit within the appliance and a service technician should be contacted.

4. If it breaks after some time, the appliance is overloaded. Ensure that the condenser and engine room are clean and give the unit some minutes to cool down before resetting the fuse. The start electronic on the compressor can also be faulty causing the compressor to run on the start condenser constantly.

Maintenance, diagnostic and repair procedures

The PPS MFS maintenance-free and is made up of non-repairable / refurbishable parts. In the event of a failure of the PPS MFS, both ECU and Trafo have to be replaced with new unused units. Part replacement is not advisable.

Storage

Should not be stored or and transport in high temperature or high humidity condition. Usage, beyond the specified shelf life could compromise product long term reliability. The suitable condition is +5 to +35°C and less than 95% RH in Relative Humidity indoor.

Applicable Ambient temperature and humidity range during transport and storage: -30 to +70°C, 5 to 95% RH.

End of life resource recovery and recycling procedures.

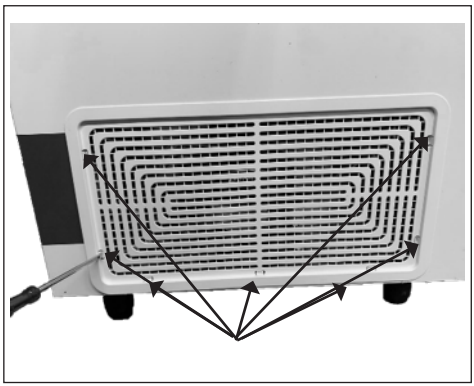
Disposal of Old Electrical & Electronic Equipment (Applicable in the European Union and other European countries with separate collection systems).

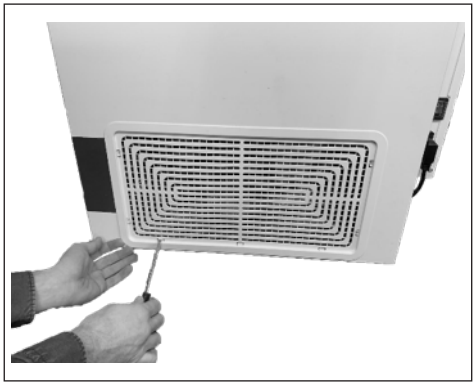


This symbol on the product or on its packaging indicates that this product shall not be treated as household waste. Instead it shall be handed over to the applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences for the environment and human health, which could otherwise be caused by inappropriate waste handling of this product.

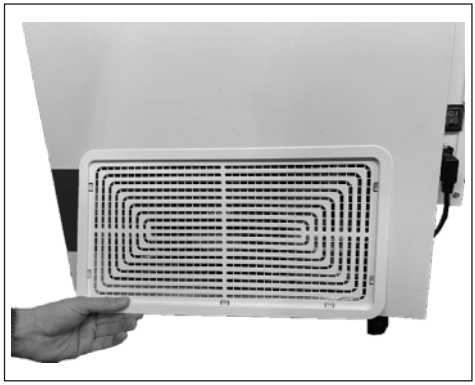
Motor compartment

How to get access to the motor compartment.

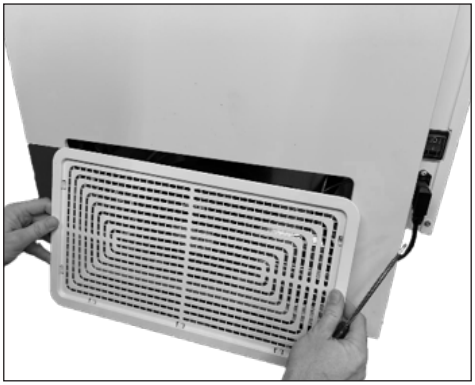




1. Use a screwdriver to unlock all 7 clamps.



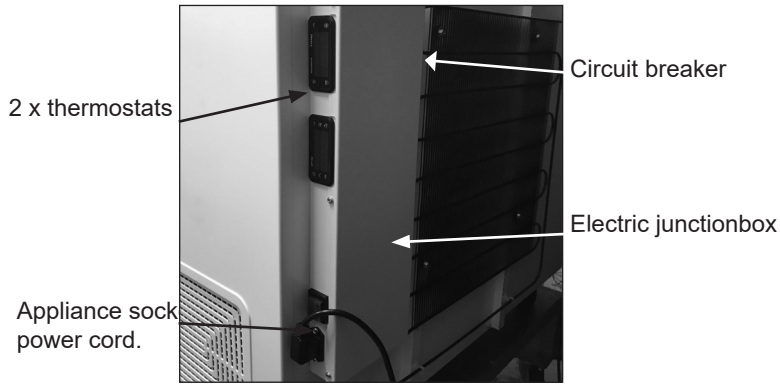
2. Unlock all 7 clamps



3.Gently pull the compressor grille.

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Thermostat replacement

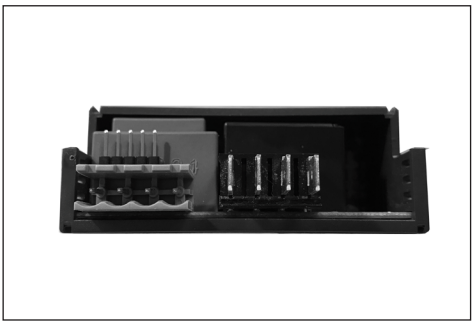




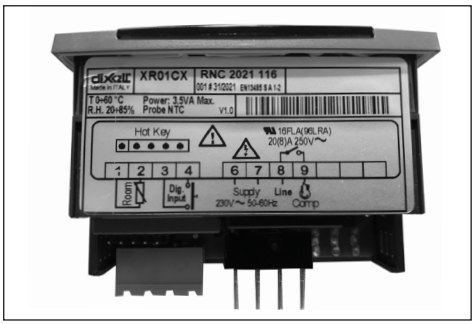
Front with display and adjustments buttons for safety and freezer



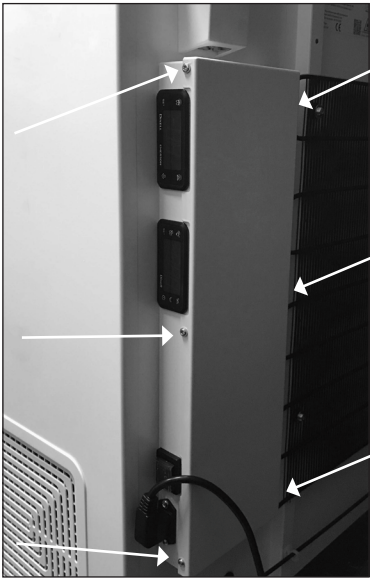
Front with display and adjustments buttons for cooler



Back with electrical sockets

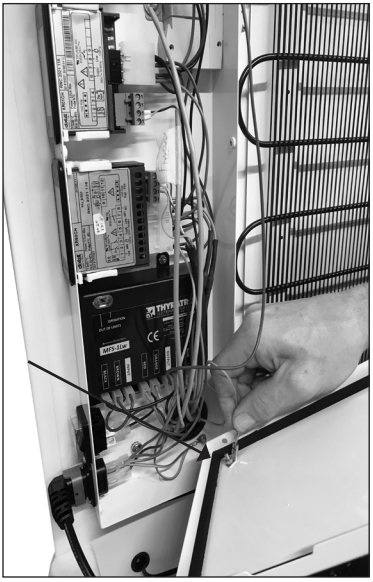


Top view

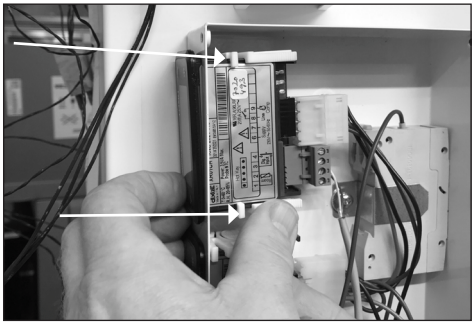




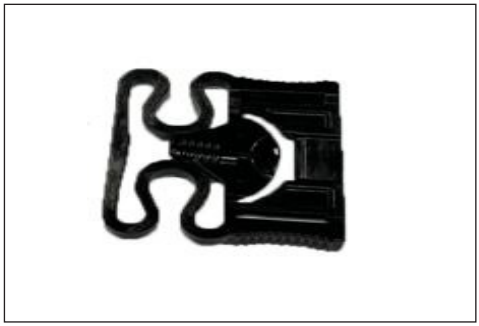
1. Access electrical componentsDismount 6 x Torx 20 screws and unmount the junction box lid



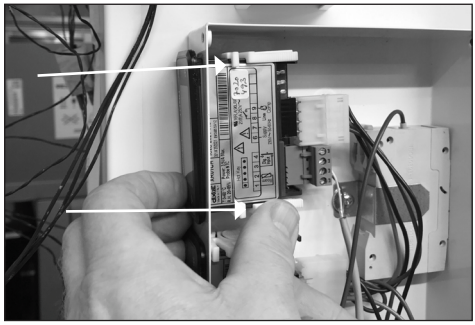
2. Remove grounding cable from junction box by unscrewing bolt with a wrench 6mm.



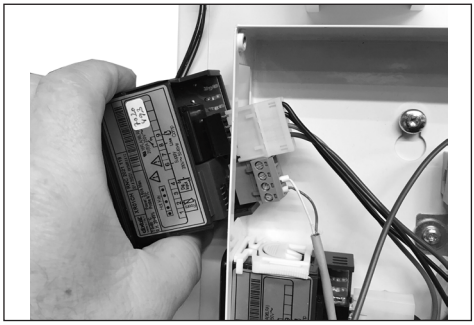
3. Remove 2 fixing clamps from thermostat. Slide the fixing clamps backwards



Fixing clamp



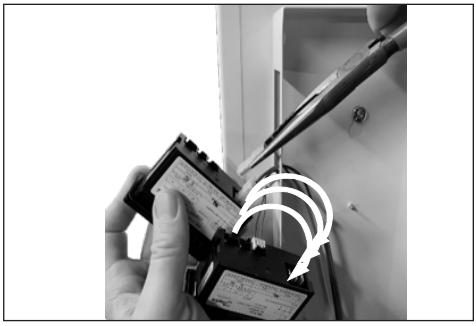
4. Use your finger to press and slide the lower clamp backward to remove form the thermosatat body



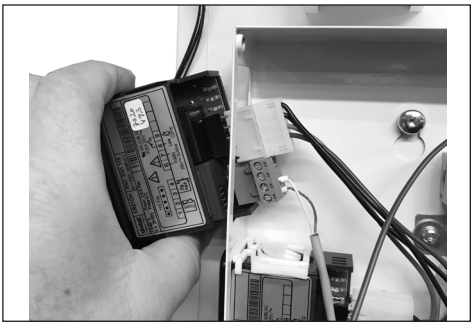
5. Push the thermostat out



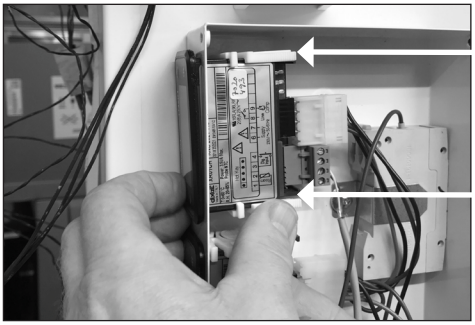
6. Switch the sensor wire plug from old socket to the new thermostat socket.



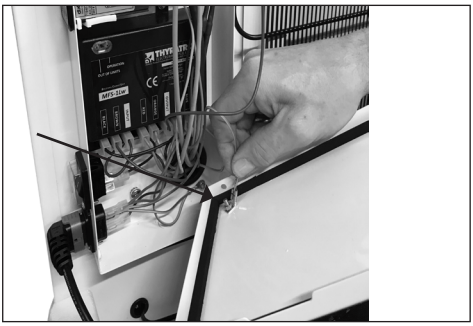
7. Switch the power wire plug from the oldto the new thermostat wire socket.



8. Bring the thermostat back in place.



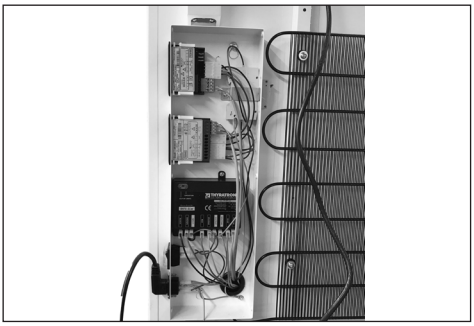
9. Use your finger to press and slide the upper clamp back in place to secure fixture of the thermostat.



10. Remount grounding wire.



11. Remount junction box cover.



It’s the same procedure that needs to be done for both of the thermostats

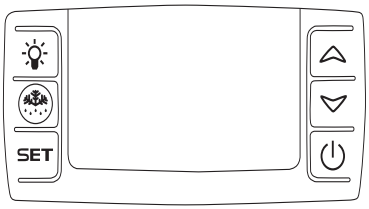
GB

Thermostat adjustment



Safety thermostat

Cooler thermostat



SET To display target set point in programming mode it selects a parmeter 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 swich 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.

Deafault Set Points

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

IMPORTENT:
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. 1ºC 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 vill show tbe Set point value.
2. Push and immediately release the SET key or wait for 5 seconds to display the probe value again.

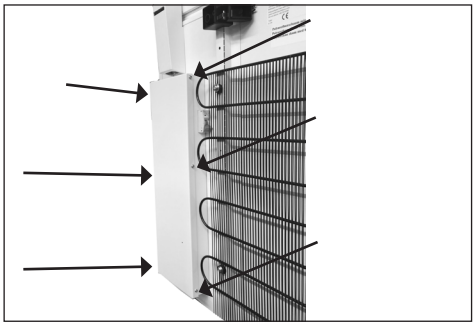
How to changes the setpoint

1. Push the SET key for more than 2 seconds to changes the Set point value
2. The value of the set point will be displayed and the ºC or ºF LED starts blinking
3. To change the Set value push the o or n arrows within 10s
4. To memorise the new set point value push the SET key again or wait 10s.

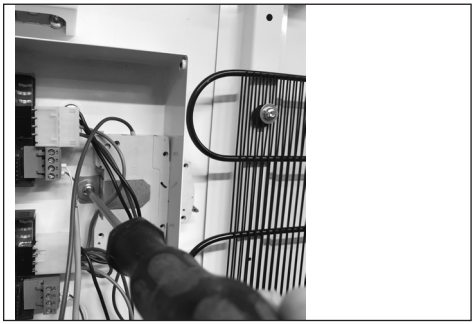
Circuit breaker replacement



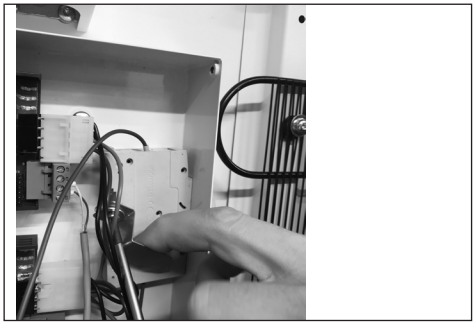
Circuit breaker is placed on the other side of the dixell



1. Dismount 6 x Torx 20 screws and unmount the junction box lid



2. Used Torx 20 to loosen the screw



3. Remove the fitting



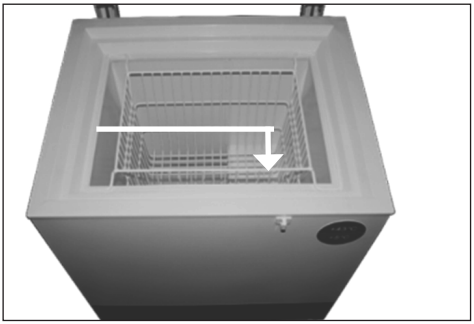
4. Remove the wires



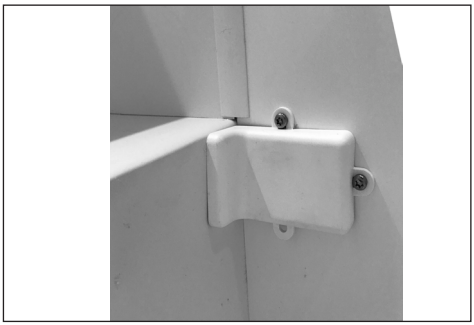
3. Pull the circuit breaker out and replace it.

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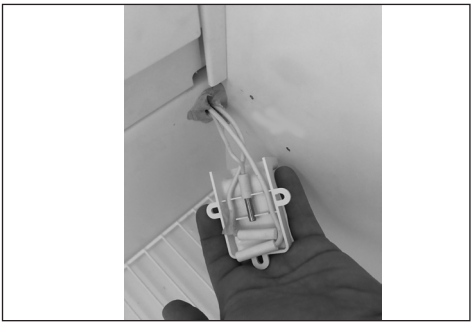
Thermostat sensor replacement



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



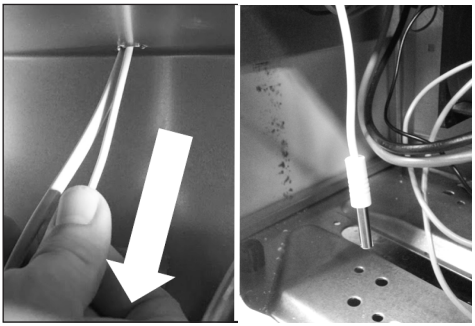
1. Dismount the sensor cover by loosen the 2 x torx screws – size 10.



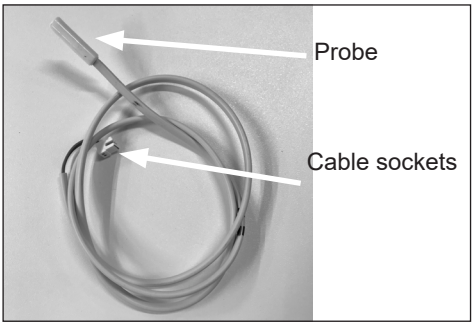
2. Take it out gently, remove the wire and the sensor from the cover.



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



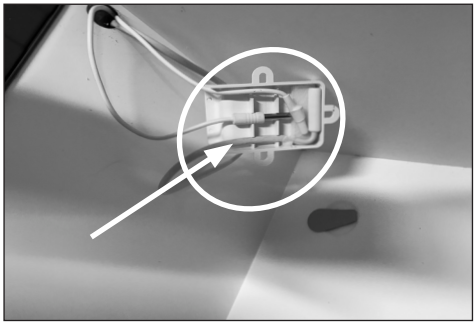
4. Gently pull the white wire until the probe is visible.



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

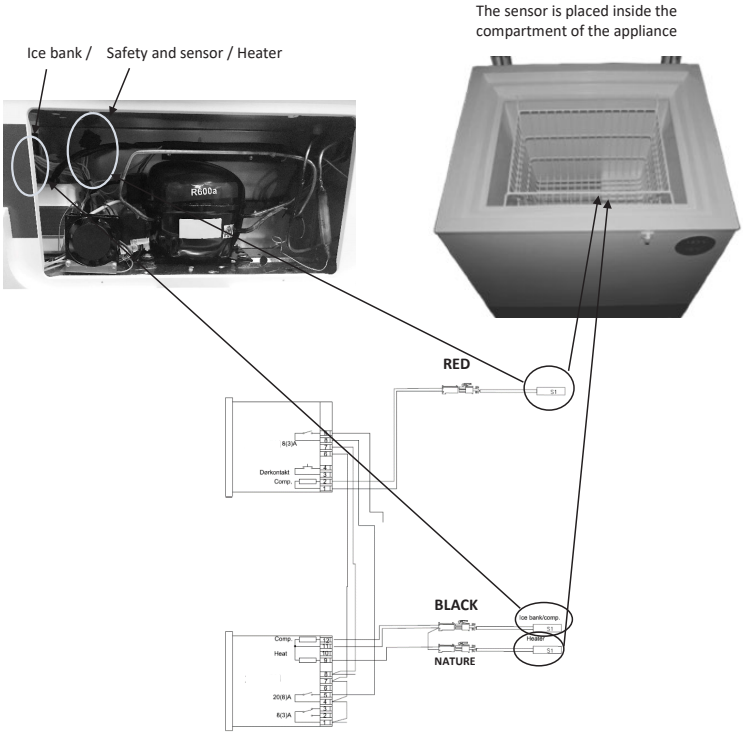


6. **IMPORTANT!** When re-mounting the new thermostat sensor remember to properly seal the wire feed through.



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

Sensor explanation

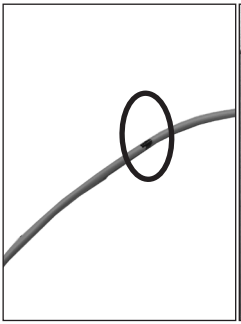


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Sensor replacement for Icebank



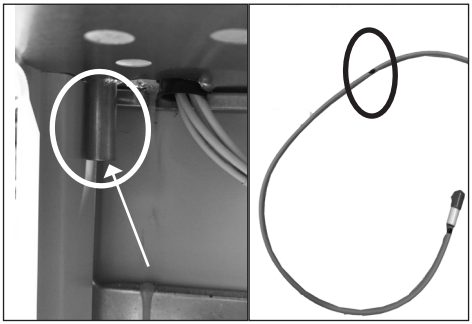
The icebank sensor is placed in the corner



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

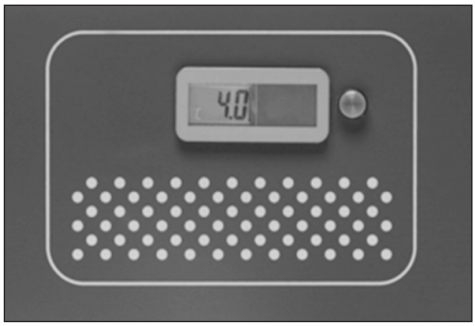


2. Tie it up with strips and cover with tar kit

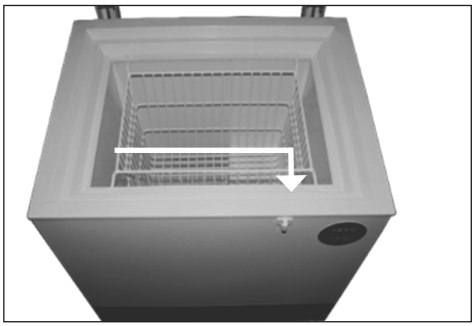
Thermometer replacement



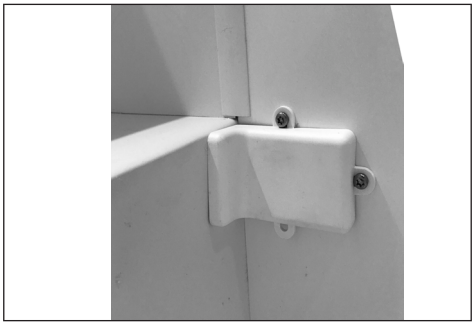
The thermometer is placed in at the front of the appliance.



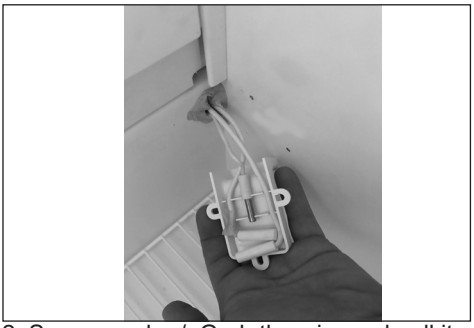
Thermometer display.



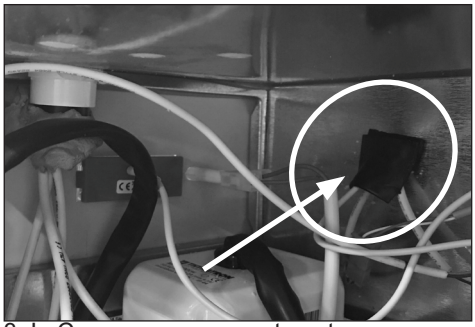
The thermometer sensor is placed inside the compartment of the appliance.



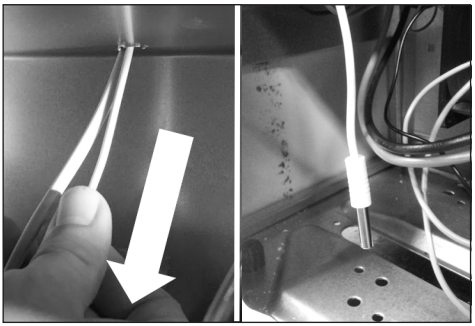
1.Dismount the temperature sensor cover by loosen the 2xtorx screws – size 10



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



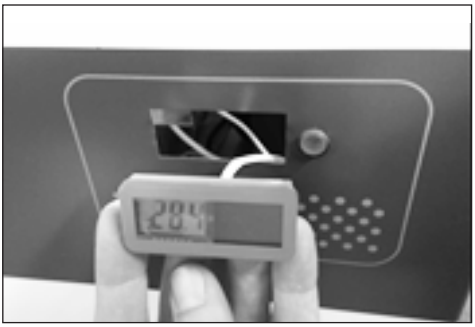
3. In Compressor compartment, remove black sealing, and gently pull the white wire until the probe is visible.



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



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



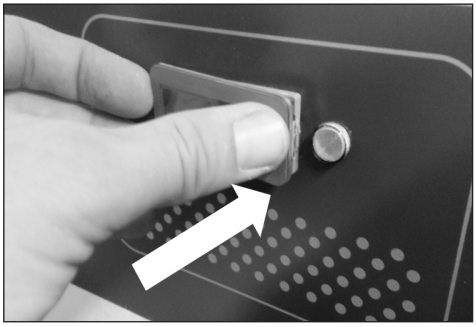
6. Temperature monitor is loose from cabinet.



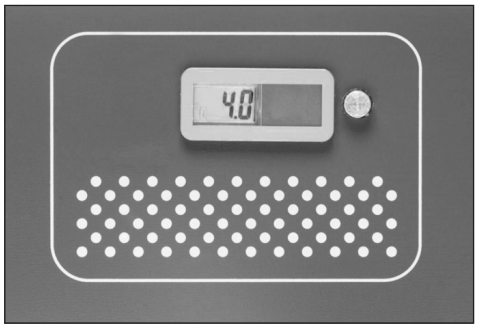
7. Thermometer comes with wire and sensor.



8. Installation of thermometer display.



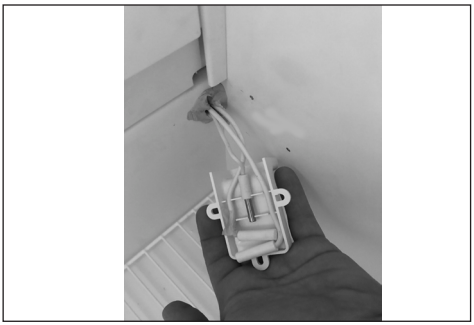
9. Push untill display is fixed to cabinet.



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.

GB

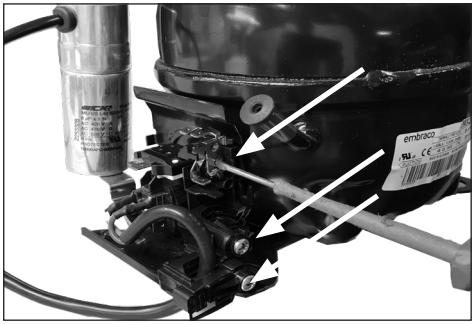
Starting device replacement VLS204-304



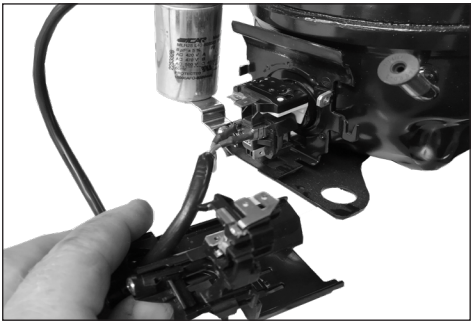
The starting device is mounted on the left side of the compressor.

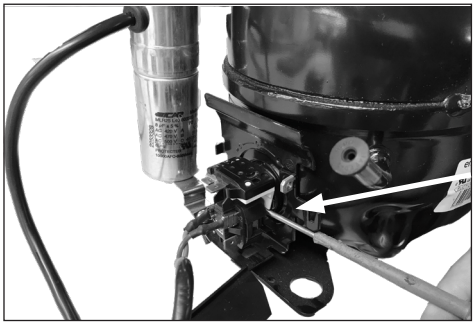


1. Dismount the cover by pushing the cover lock from right to the left with a flat screw driver.

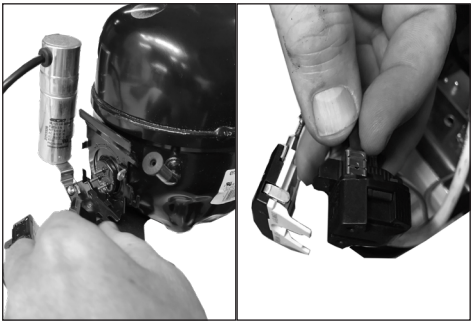


2. Use a screwdriver to loosen the parts where the starting device is. Use a screwdriver to loosen the 3 x screws.





4. Use a flat screwdriver to tilt it out.



5. The PTC has two pieces.

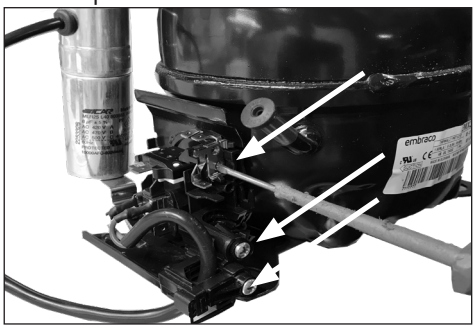
Run capacitor replacement VLS204-304



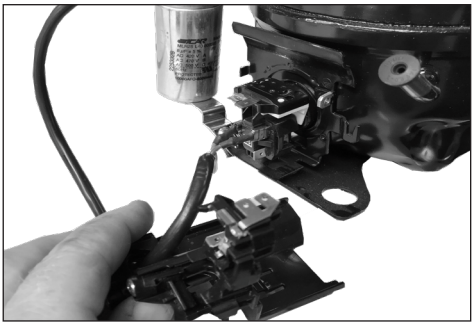
The run capasitor is placed in the left side of the compressor compartment, fixed to the compressor bracket.

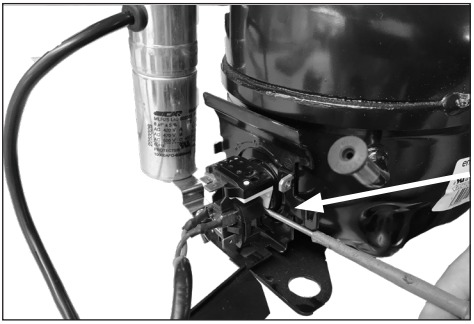


1. Dismount the cover by pushing the cover lock from right to the left with a flat screw driver.



2. Use a screwdriver to loosen the parts where the starting device is. Use a screwdriver to loosen the 3 x screws.





3. Use a flat screwdriver to tilt it out.



4. Use a screwdriver to loosen it and remove it.

GB

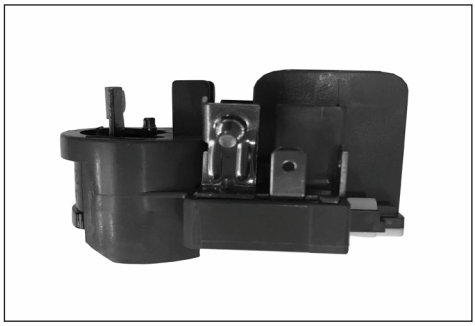
Starting device replacement VLS354-404



Front with terminals.



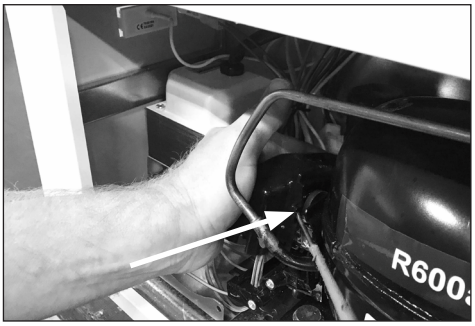
Back with connection plug.



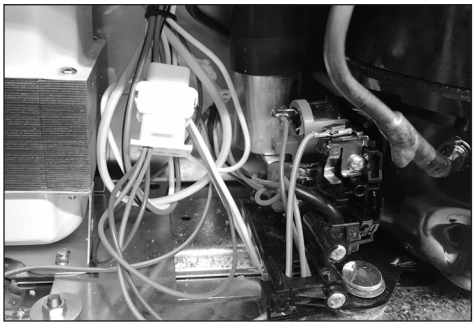
Side view.

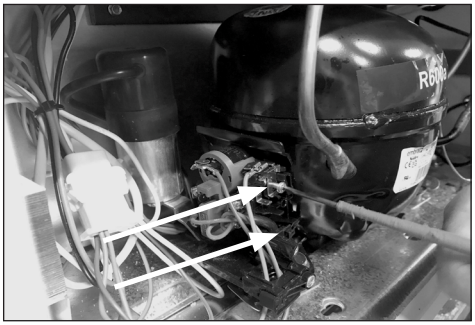


The starting device is mounted on the left side of the compressor.

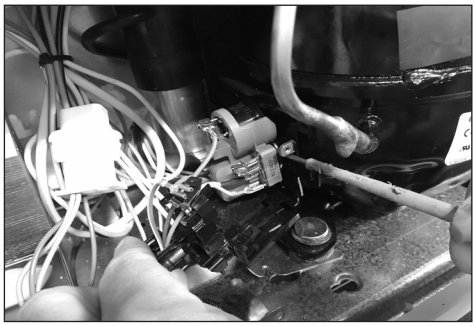


1. Dismount the cover for starting device by use a screw driver to click it loos. Push the plastic cover up.

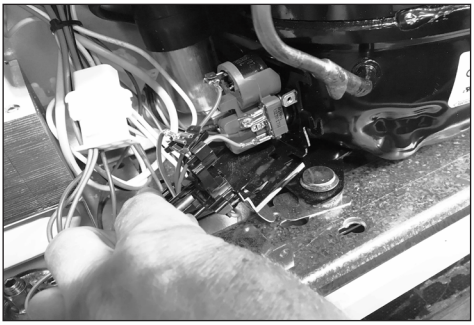




2. Use a screw driver. Loosen the screws.



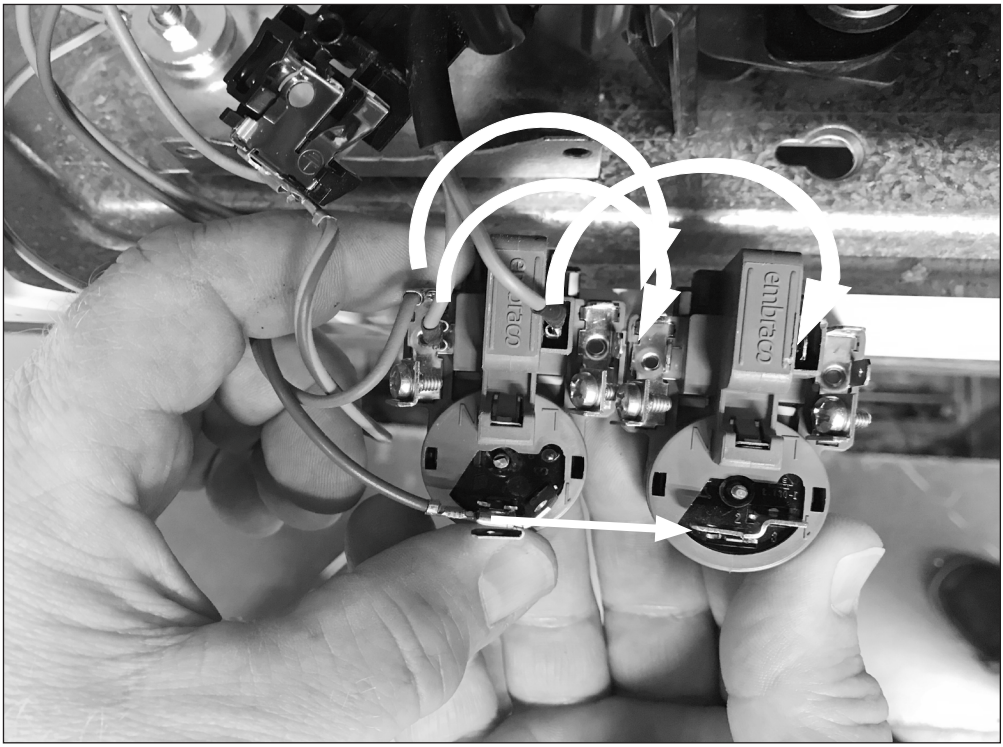
3. Use a screw driver and gently remowe the starter from the socket of compressor.



4. Starting device loose from socket



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

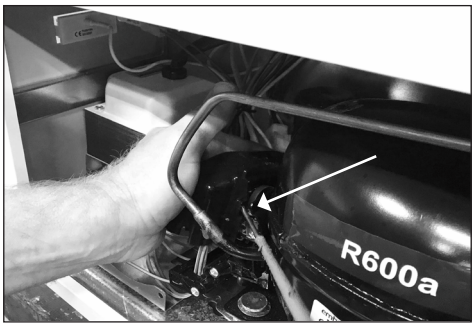


6. Use a nose plier to unmount the wire sockets from starting device.
   Exchange the wires 1/1 from the old starting device to the new one.

Run capacitor replacement VLS354-404



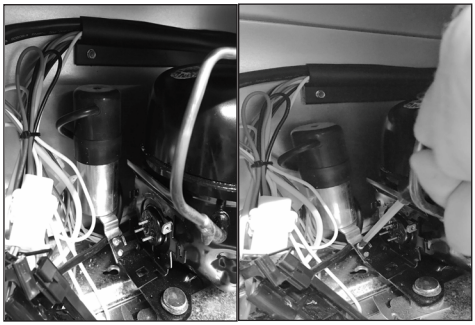
The run capasitor is placed in the left side of the compressor compartment, fixed to the compressor bracket.



1. Dismount the cover by pushing the cover lock from right to the left with a flat screw driver.



2. Pull out the cover, and remove the starting device as the description describes.

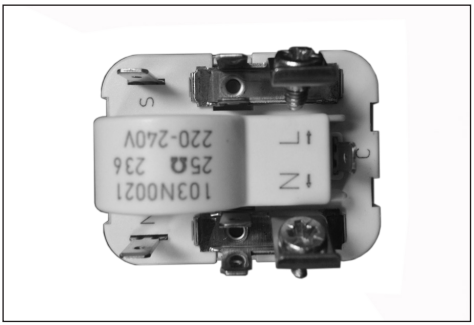


3. Use a screwdriver to loosen the run capasitor



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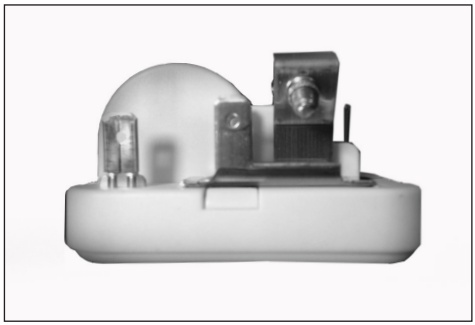
Starting device replacement VLS504



Front with terminals.



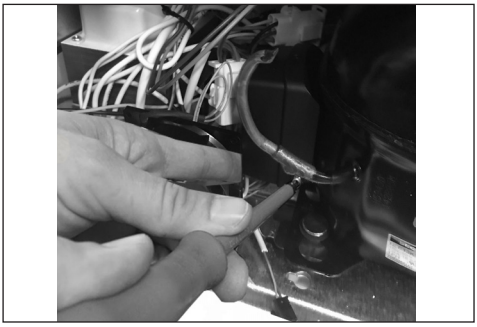
Back with connection plug.



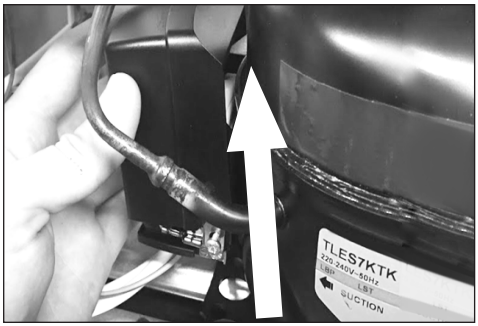
Side view.



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



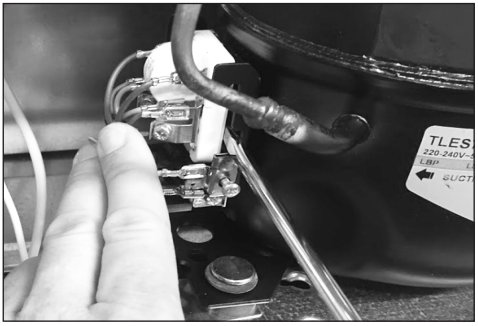
1. Dismount the cover for starting device by loosen the phillips screw.



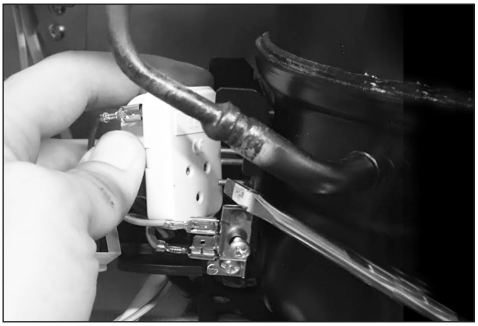
2. Push the plastic cover up.



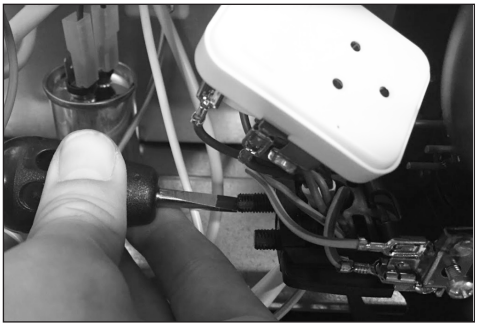
3. Pull the cover back to loosen.



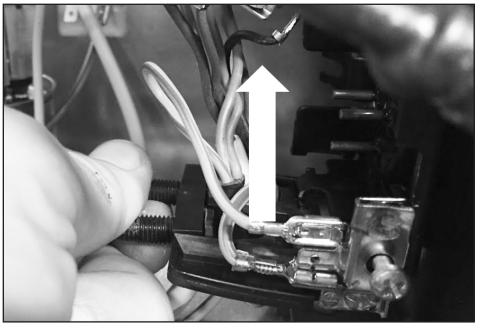
4. Use a screw driver and gently remowe the starter from the socket of compressor.



5. Starting device loose from socket



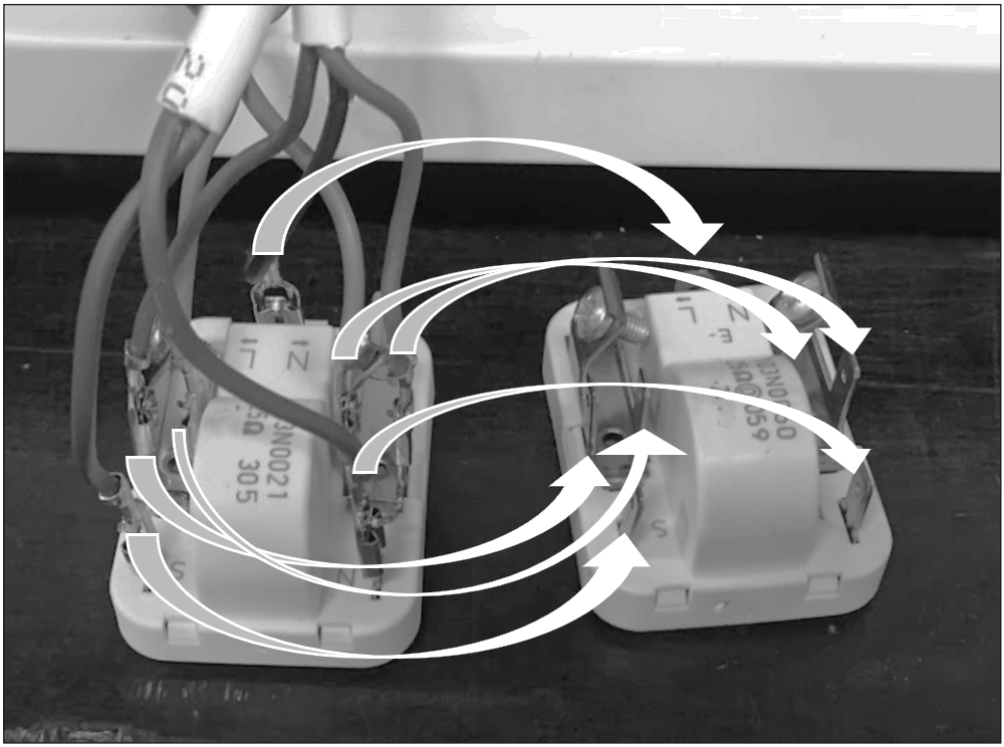
6. Use a small screwdriver or a wrench size 6 – to unmount the wire fastener



7. Push the plastic bracket up.



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

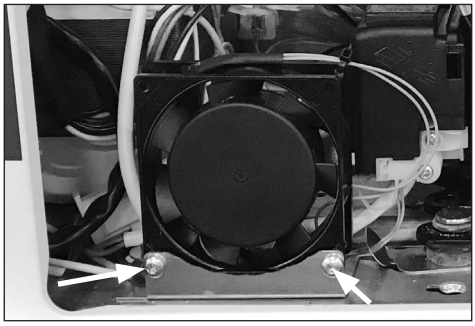


9. Exchange the wires 1/1 from the old starting device to the new one.

Fan replacement



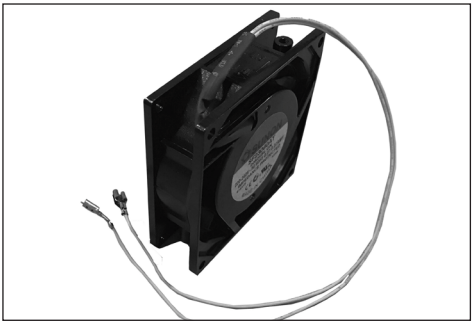
The fan is placed at the left side of the compressor.



1. Dismount the fan from the bracket by losen the 2 hexagon bolts with a Socket wrench.



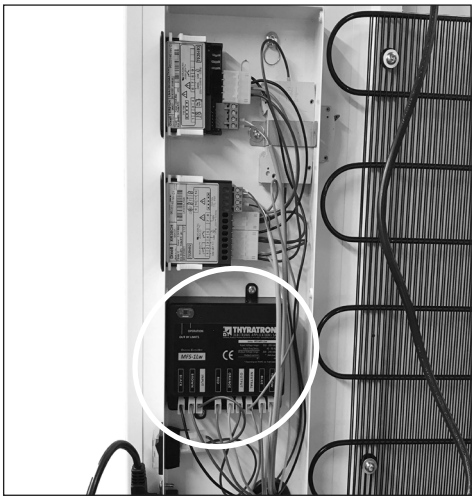
2. Remove strip for free access to the fan. When mounting the fan please remember to secure the wires to the fan again.



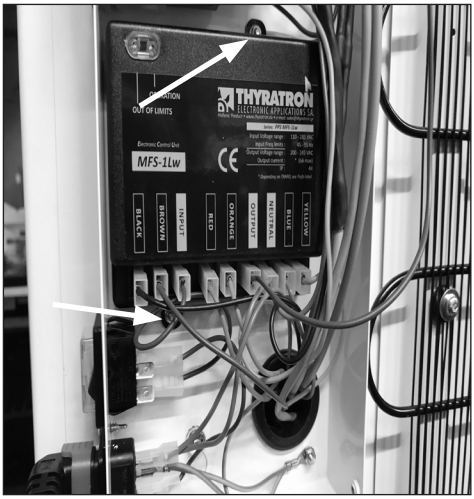
3. Use the nose plier to unmount the 2x cable sockets.

GB

Voltage Stabilizer ECU replacement



1.The controller is placed in the bottom



2.Loosen the 2 screws and remove the wires



3.Used a flexible socket wrench

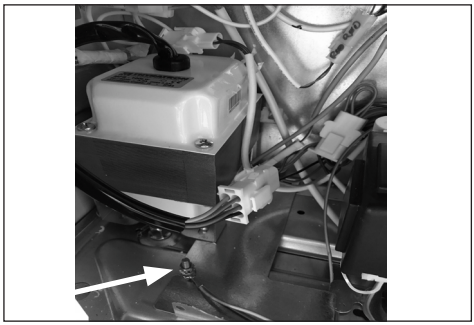


4. Exchange the wires from the old ECU to the new.

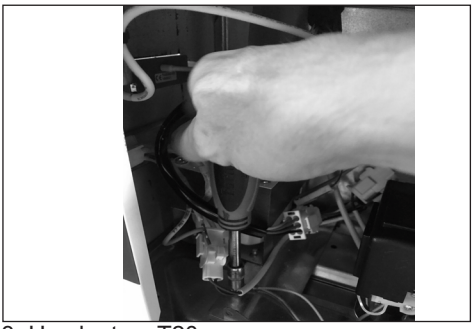
Transformer replacement



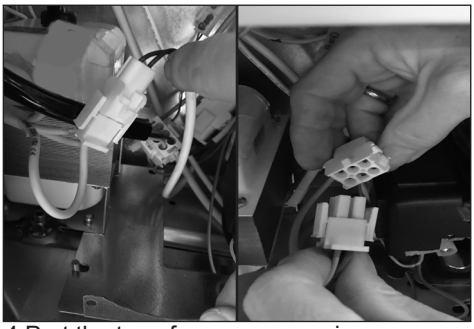
1.The transformer is placed on the left sideof the compressor compartment



2. Loosen the screw



3. Used a torx T20



4.Part the transformer power wires, bysqueezing on the side of the clamps fixingthe wire connection, the pull the plug/socketapartthe



5. Pull out the voltage stabilizer tranformer

GB

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)?
- 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?
- Are baskets used and in place?
- Is the appliance placed according to instructions in the manual?
- Does the lid close tight to the cabinet and is the lid gasket in good condition?
- Is the grille for the compressor compartment clean?
- Are all electrical components working properly?
- Overall condition of the cabinet – internal and external: any corrosion, rusting, cracks?
- Inspection of the refrigeration system (the condenser, evaporator, the whole refrigeration circuit/line)?

Trouble shooting

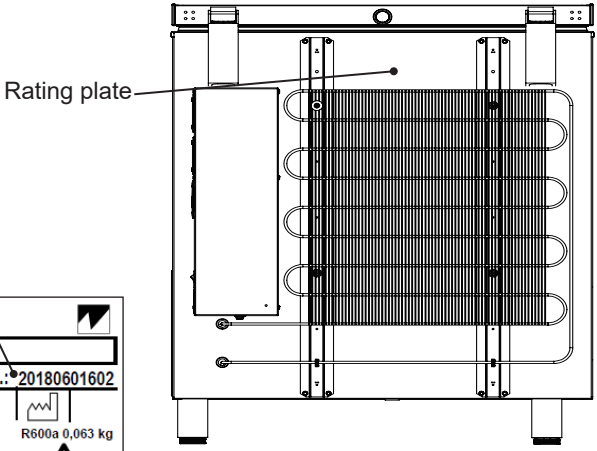
Fault	Possible cause	Remedy
Compressor is not running.	Be patient, it is most likely that the compressor will start within a few minutes.	If this is not the case, check the following:
	Power for appliance is not plugged in	Check that the power for appliance is plugged in
	Power for stabilizer is not plugged in	Check that the power for stabilizer is plugged in
	Power for appliance is not switched on	Check that the power for appliance is switched on
	Power for stabilizer is not switched on	Check that the input voltage is within the input range of stabilizer
	Stabilizer power fuse has blown	Check fuse
	Stabilizer 6 min. time delay is in progress	Wait for the delay to end
		- If the above is OK, call technical supervisor.
Compressor is running, and the temperature is too high.	The ventilation grille is blocked.	Ensure unhindered air circulation.
	The lid is not closed properly.	Ensure that the lid is closed properly.
	The temperature in the room in which the appliance is installed is too high.	Shield the appliance against direct sun light and ensure more ventilation to the room.
No temperature is displayed.	The Thermometer is broken.	Change the thermometer.
	There is not enough light for the solar sensor.	Turn on the light.

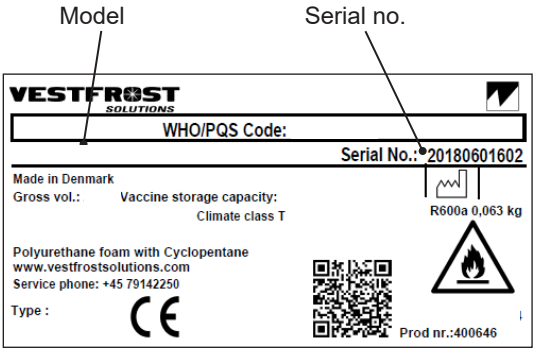
GB

Technical support

When contacting Vestfrost Solutions technical support please supply below information:

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





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.

Drawing no.: 8195139 rev 02
Revision date: 31-07-2023