NordCap®
PROFESSIONELL KÜHLEN

Bedienungsanweisung

Gewerbetiefkühlschrank MF 185

Table of Contents

1. Safety precautions and warnings

1. Deep freezer is set for 220-240 V 50 Hz network power. Use of incompatible voltage may cause deep freezer to become inoperable or fire.
2. Do not place the deep freezer under direct sunlight or within influence area of a stove, radiator, furnace, oven, heater or infrared. Otherwise, the deep freezer may perform poorly, get damaged or become inoperable.
3. Choose a place without moisture but with air circulation allowed.
4. For your safety, in order to eliminate the risk of electric shock and fire there must certainly be a breaker system with a residual current device in your electrical wiring.
5. After putting the deep freezer into place, allow at least 2 hours without moving it before starting to use.
6. Installation, placement, maintenance and cleaning of your deep freeze shall be performed as prescribed in the manual.
7. Avoid any sharp and pointed object or overheated material from contacting with glass surface of glass-cover products as this may cause the glass to crack or break. (The option of glass cover may vary as per model.)
8. In order to avoid your appliance from sliding or overturning, place the appliance on a non-tilted flat surface.
9. Never use extension cord or multi-plug with your deep freeze.
10. Do not clean your device with pressurized water. Pressurized water might damage inner surface, outer surface and electrical equipment of your device.
11. Black wired condenser on the back of the device must absolutely be cleaned and purged against dust once a year. Cleaning might be performed with a vacuum cleaner.
12. Do not allow children to get into the product or play around it.
13. If your deep freeze is equipped with a cover lock, keep your deep freeze locked and keep the key in a safety place beyond reach of the children. By the product's end-of-life, the lid lock of your deep freezer should be rendered ineffective before disposing. Do remember not to leave children in the deep freezer. Staying in the deep freezer may create a life threatening condition.
14. For your safety, in order to eliminate the risk of electric shock and fire there must certainly be a breaker system with a residual current device in your electrical wiring. Our firm is not responsible for failures and losses which might occur as a result of using the product in an ungrounded network.
15. Do not use any object except ice scraping apparatus provided with your product to scrape ice off. Otherwise, use of sharp, pointed and metallic objects may damage the inner surface of your deep freezer This kind of improper use may also cause gas leakage.
16. Avoid any sharp and pointed object or overheated material from contacting with glass surface of glass-cover products as this may cause the glass to crack or break. (The option of glass cover may vary as per model.)
17. In case of any failure within your product, taking measures for food preserved within the deep freeze is fully under responsibility of the user. Our company is not responsible for spoilt food due to any technical failure or misuse.
18. The appliance should not be used by physically, visually, audibly or mentally handicapped ones, children, non-experienced or non-informed ones without surveillance of a person responsible for the safety of such people.
19. Open the freezer cover only when necessary. Please make sure that the cover is sealed properly when it is not necessary.

20. In the event of a sudden power outage unplug your product. Plug back in 20 minutes after you make sure that the mains become normal.
21. Do not put domestic and wild animals inside your product and do not allow them to enter into your product. These kind of living creatures might damage the electrical system and cause fire.
22. Loading food in pieces, making additions as food starts to freeze instead of filling your freezer to its full capacity is an healthier freezing method. Since sufficient air flow can not be provided in loadings to the full capacity in one time, cooling process of your freezer might not be sufficient.
23. Do not allow food newly put into your freezer to make contact with frozen food.
24. Frozen inner surface of your device or frozen products should not be touched with wet hands. If touched, bonding might occur and might cause injuries.
25. Do not place explosive or flammable material in your deep freeze.
26. The device is not to be used with purposes other than it is intended (food storage) for commercial purposes, for example; cooling water, cooling fizzy or fizzless beverages in a bakery oven.
27. Your device is manufactured for home use and it's not appropriate to use it in commercial areas with a commercial purpose. Failures which might occur as a result of this type of usage is not covered in the warranty disclaimer.

Attention!

• This appliance includes inflammable and explosive gas R6ooa.

The ventilation holes on the casing and the body of the appliance should not be blocked.

• Do not use mechanical tools or other assemblies except the models recommended by the manufacturer to make defrosting quicker.

• The cooling circuit should not be damaged.

• Except materials recommended by the manufacturer, no electric appliances should be used within food preserving partition of the appliance.

• In order to decrease the risk of ignition, this appliance shall only be installed and maintained by services.

2. Technical Specifications

2.1 General product appearance and specifications

2.2 Electrical Cooling parts and specifications

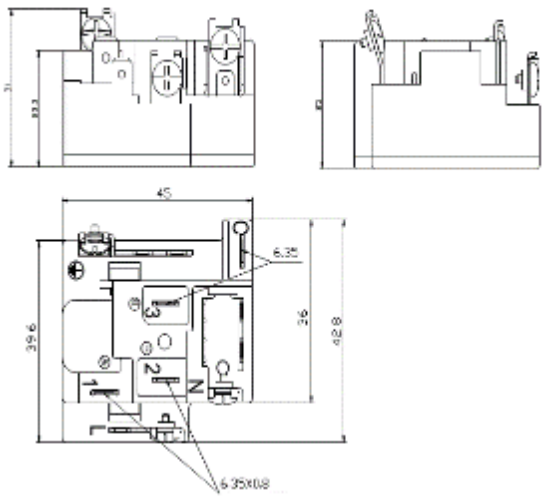
A+		SPECIFICATIONS	
MODEL NAME		FS6210A+ / FS5210A+	FS7300A+
TYPE		VERTICAL DEEP FREEZE	
VOLTAGE		220-240 / 50 Hz	
GROSS VOLUME		210	288
OUTSIDE DIMENSIONS (mm)	WIDTH	540	595
	DEPTH	600	600
	HEIGHT	1470	1765
WEIGHT (kg)		55	65.3
COOLANT and QUANTITY		R-600a / 77gr	R-600a / 90gr
TEMPERATURE CONTROL		ROTATING MECHANICAL THERMOSTAT	
DEFROST		MANUAL	
ISOLATION	CAB	Cyclo pentane	
	DOOR	Cyclo pentane	
ACCESSORIES AND PARTS			
	DRAWER	5 - 6	7
	GLASS RACK	4 - 5	6
EVAPORATOR		Winding 7x0.7mm Aluminium pipe	
CONDENSER		4mm painted steel wire condenser	
DRIER		Molecular XH-9	
CAPILLARY TUBE		Φ1.9*0.66*2140mm	Φ1.9*0.66*2140mm

		SPECIFICATIONS	
COMPRESSOR	MODEL	JIAXIPERA TB1114Y	GMCC PZ90H1Y
	STARTING TYPE	RSCR	RSCR
	OIL TYPE	Mineral, 200ml	Alkylbenzene, 140±10
Compressor winding	Main winding	21.5 Ω	23.1±7%Ω
	Auxiliary winding	22.6 Ω	30.2±7%Ω
STARTING RELAY	MODEL	TY -QZ-108-02	QPE2-C15MD3
OVERLOAD	MODEL	B50-120	DRB17T61A1
	CLOSING TEMPERATURE	61±9℃	61±9℃
PROTECTOR	OPENING TEMPERATURE	120±5℃	140±5℃
CAPACITOR	CONSTANT CIRCUIT	4 μF/450VAC	3 μF/450VAC
		SPECIFICATIONS	
COMPRESSOR	MODEL	DONPER LR82CY1	GMCC PZ80E1Z
	STARTING TYPE	RSCR	RSCR
	OIL TYPE	Mineral, 200ml	Alkylbenzene, 130±10
Compressor winding	Main winding	21.5 Ω	26.32±7%Ω
	Auxiliary winding	22.6 Ω	24.47±7%Ω
STARTING RELAY	MODEL	TY -QZ-108-02	QPE2-C15MD3
OVERLOAD	MODEL	B50-120	DRB17S61A1
	CLOSING TEMPERATURE	61±9℃	61±9℃

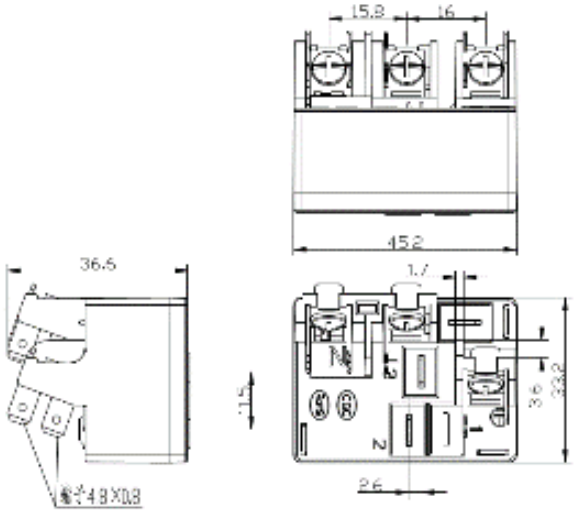
PROTECTOR	OPENING TEMPERATURE	120±5℃	135±5℃
CAPACITOR	CONSTANT CIRCUIT	4 μF/450VAC	3 μF/450VAC

Starting Relay

QPE2-C15MD3

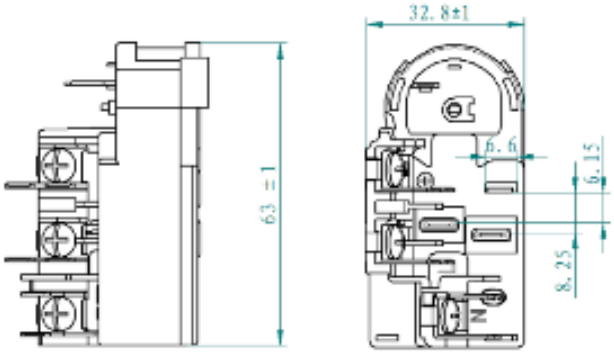


TY-QZ-107



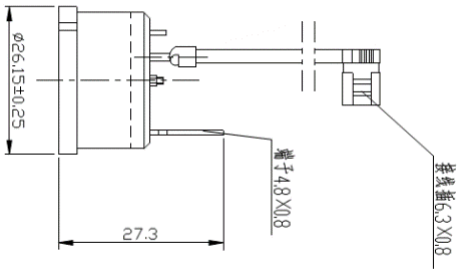
TY -QZ-108-02

B50-120

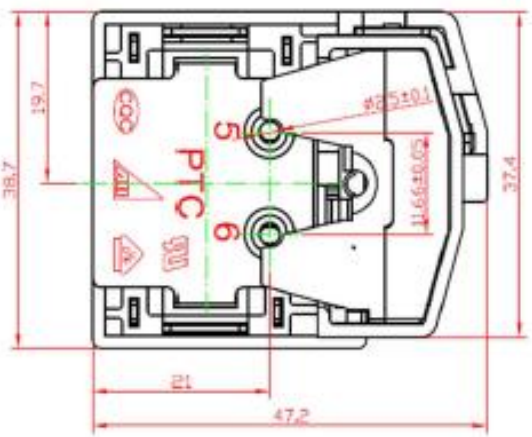


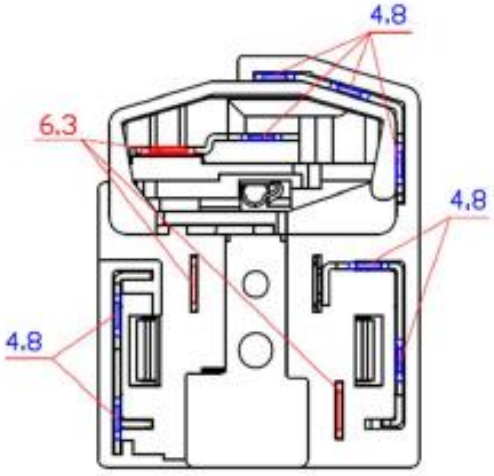
Current Protection Thermic

B54-105



QPE2-C15MD3 +DRB17T61A1





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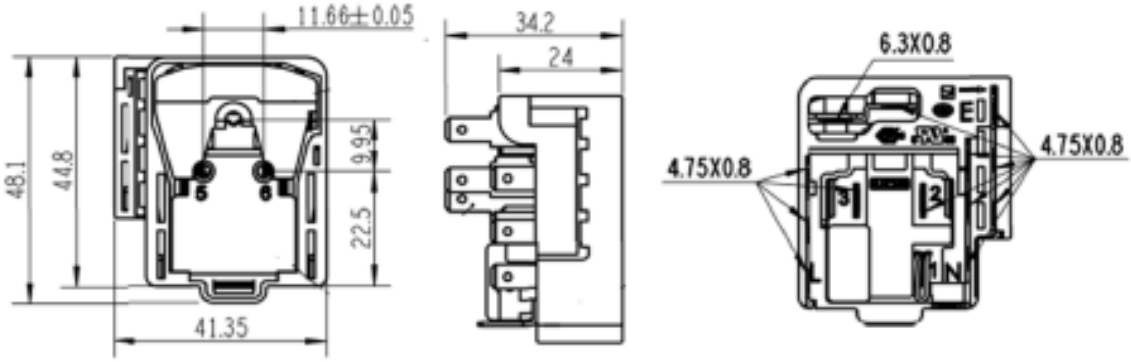

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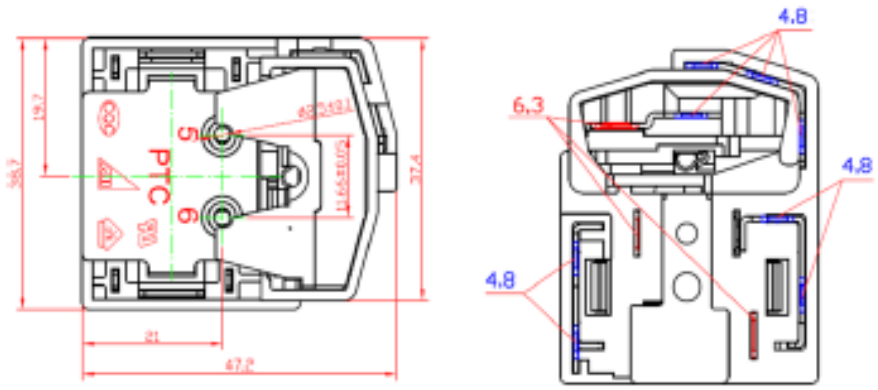
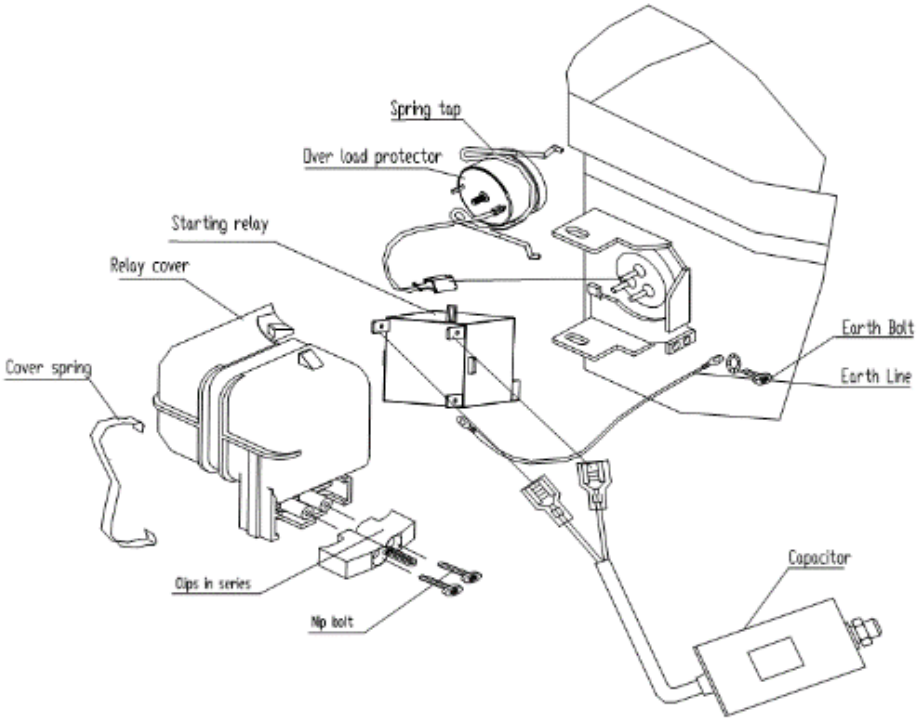
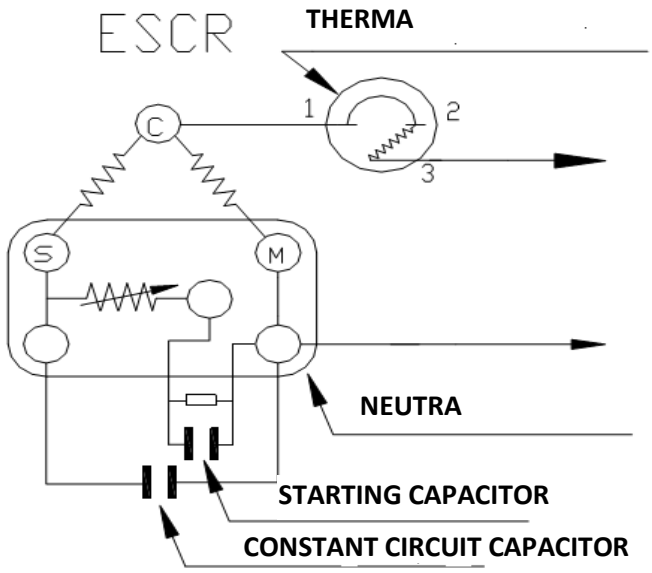


Compressor connection

Donper LR82CY1





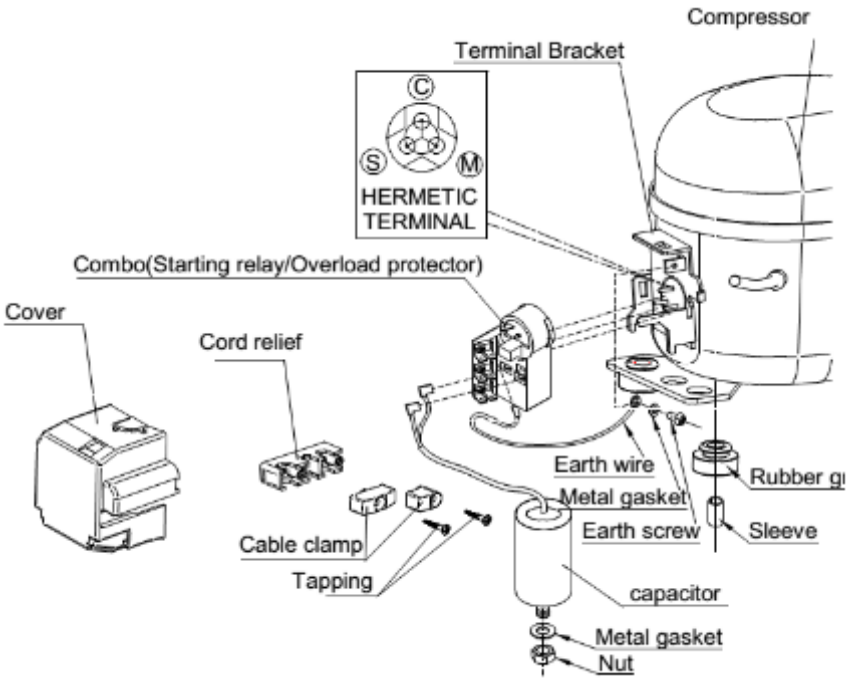
C-S : **AUXILIARY WINDING**
C-M : **MAIN WINDING**
S-M : **COMMON**

Permissible compressor pressure values

Coolant	R600a
Maximum condenser pressure	8.7 bar
Peak pressure	9.8 bar

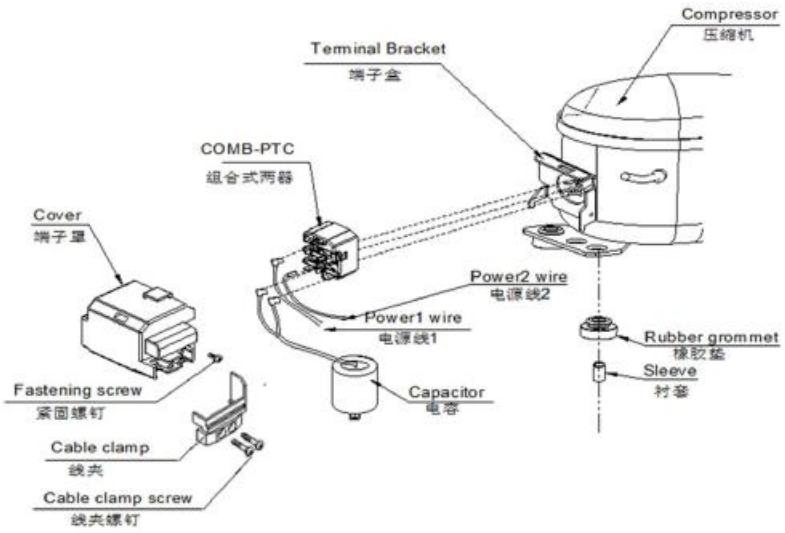
Compressor connection

Jiaxipera TB1114Y

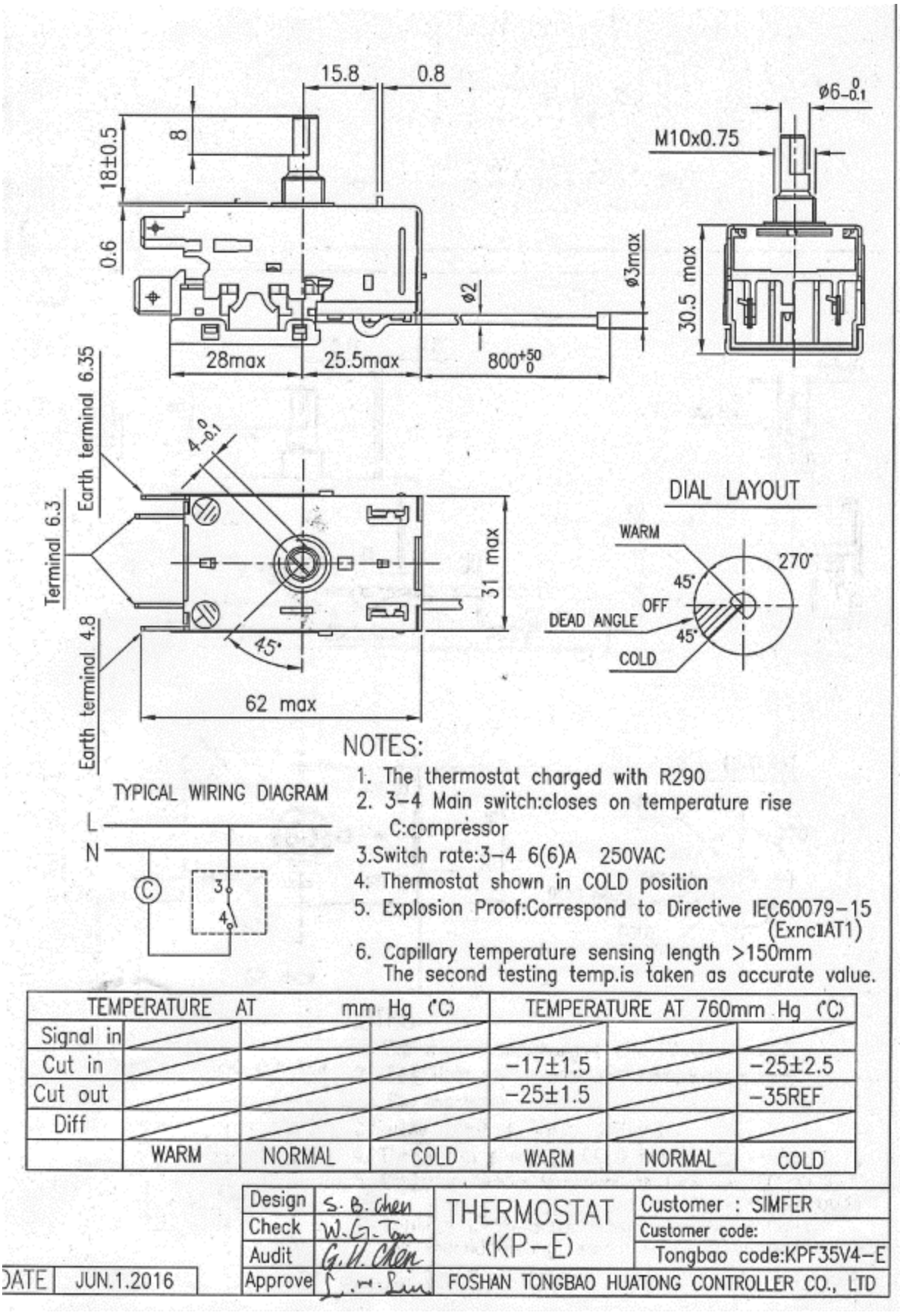


Compressor connection

GMCC PZ90E1Z VE PZ90H1Y


Compressor
压缩机
Terminal Bracket
端子盒
COMB-PTC
组合式两器
Cover
端子罩
Power2 wire
电源线2
Power1 wire
电源线1
Rubber grommet
橡胶垫
Sleeve
衬套
Capacitor
电容
Fastening screw
紧固螺钉
Cable clamp
线夹
Cable clamp screw
线夹螺钉

Thermostat



TEMPERATURE AT mm Hg (°C)				TEMPERATURE AT 760mm Hg (°C)		
Signal in						
Cut in				-17±1.5		-25±2.5
Cut out				-25±1.5		-35REF
Diff						
	WARM	NORMAL	COLD	WARM	NORMAL	COLD

Design	S. B. Chen	THERMOSTAT (KP-E)	Customer : SIMFER
Check	W. G. Tan		Customer code:
Audit	G. H. Chen		Tongbao code:KPF35V4-E
Approve	L. M. Lin	FOSHAN TONGBAO HUATONG CONTROLLER CO., LTD	
DATE	JUN.1.2016		

2.3 Product Outer Dimensions:

Model	W (mm)	D (mm)	H (mm)
FS7300A+	595	600	1765
FS6210A+ / FS5210A+	540	600	1470

2.4 Temperature control and adjusting

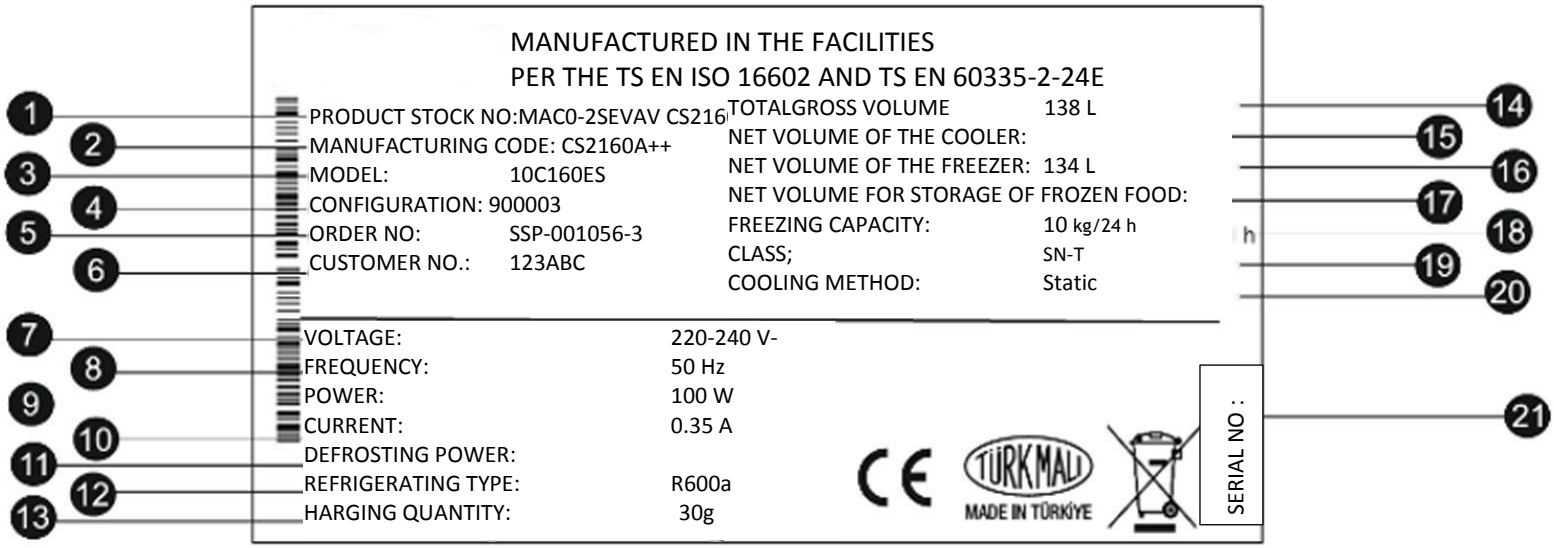
Mechanical thermostat model:

MODES

a) **Min. position**: keeps the freezer at the hottest value. The temperature inside the freezer is about -17/18 degrees C at this position.
b) **Off Mode**: When the potentiometer is switched to Off by rotating it counter clockwise, cooling system turns off.
c) **Max Mode** : When the freezer is switched to this position, it operates as the quick freezing function by operating continuously.

3. Product labelling and descriptions

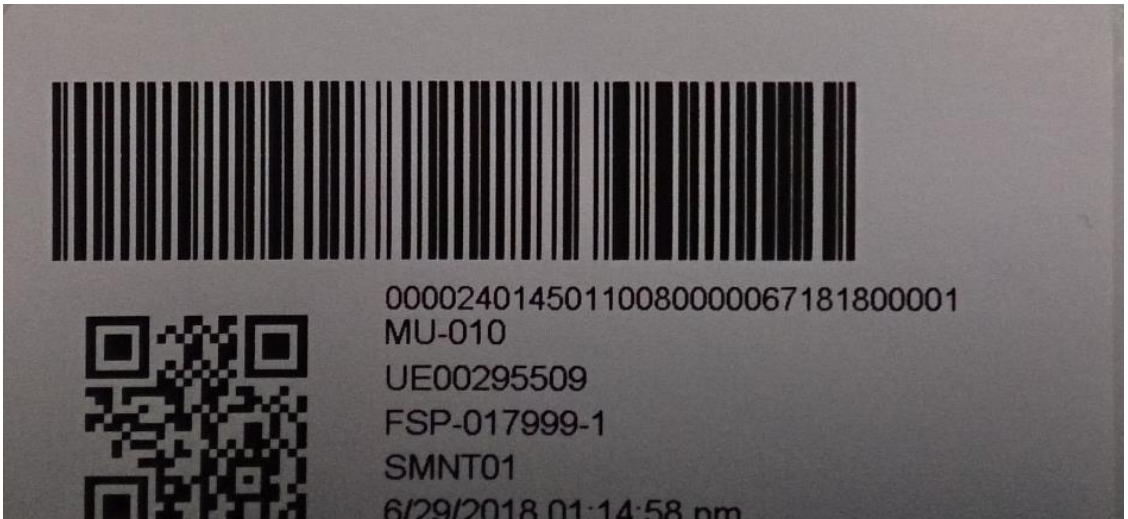
3.1 Type label and descriptions



1. Product description code used in factory.
2. The code by which we distinguish volume and energy class of home products and export products within Simfer and is also given in the technical table in user manuals. Customer based variation is applicable.
3. Product main model code.
4. Short code generated in consequence of selection of options.
5. Order number and line number belonging to the order.
6. Market code belonging to the customer as per customer demand.
7. Permissible operating voltage of the device.
8. Permissible operating frequency of the device.
9. Value of maximum power used by the device.
10. Value of maximum current used by the device.
11. Out of use.
12. Type of coolant in device
13. Quantity of coolant in device
14. Total gross internal volume of the device.
15. Out of use.
16. Usable net volume of the device.
17. Out of use.
18. Maximum product quantity the device can freeze at a time within 24 hours.
19. Climatic class of the device. (SN-T : the device can operate between 10°C and 43°C)
20. The device has a static cooling system. No fan support is provided.
21. Serial number

TOTALGROSS VOLUME 138 L
NET VOLUME OF THE COOLER:
NET VOLUME OF THE FREEZER: 134 L
NET VOLUME FOR STORAGE OF FROZEN FOOD:
FREEZING CAPACITY: 10 kg/24 h
CLASS; SN-T

3.2 Serial number expansion



Material Configuration Code:										PU Code			MSK Code			GPU Code			PU Amount				Last Two Digits of the Year		Days of the Year Out of 365			Number Series			
0	0	0	0	2	4	0	1	4	5	0	1	1	0	0	8	0	0	0	0	0	6	7	1	8	1	8	0	0	0	0	1

3.3 Product model name expansion

VERTICAL DEEP FREEZE								
SIMFER	F	S	1 7	3	0	0	A+	S
BRAND	PRODUCT TYPE		DRAWER	CABINET TYPE	MODEL CHANGE SEQUENCE NO		ENERGY	CABINET COLOUR
Simfer	C: Horizontal (Chest)	S: Simfer	5: 5 Drawers	2: 145 cm	00		B: B Energy Class	Empty: White
Oscar	F: Vertical (Free Standing)		6: 6 Drawers	3:175 cm	01		A+: A+ Enegy Class	S: Silver
	0: Oscar		7: 7 Drawers	4:185 cm	02		A++: A+ +-Energy Class	INX: Inox
			8: 8 Drawers		03 r			

4. Product Installation and Removal

4.1 Door Removal

Part Name	How to	Descriptive images
Top cover	1. Upper plastic cover protecting the upper hinge is removed by means of a flat tip screwdriver	
	2. Upper metal hinge is removed by means of a Philips screwdriver. Remove the door.	

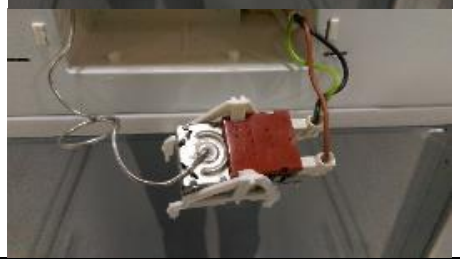
4.2 Door handle and lock housing removal

Part Name	How to	Descriptive images
Cover Handle	MODEL 1 Remove two plastic plugs on the door handle and remove the phillips head screws to remove the door handle.	
	MODEL 2	
	Remove the plastic side covers by pushing them forward.	
	Phillips head screw under the door is removed.	

4.3 Thermostat removal

Mechanical Thermostat

CAUTION: Always remove the plug of refrigerator before replacement. Make sure that refrigerator is deenergized.

Part Name	How to	Descriptive Images
Mechanical Thermostat	Pull the thermostat button on the front panel out. Then, remove the nut under it.	
	Insert a part of detail under the control panel with a diameter of 3-4 mm about 30mm and stretch the tab to the center of the refrigerator when you consider that the part contacts the tab. On the other hand, pull the control panel slightly forward.	
	Slide the upper door to the left and take it out. Remove the plastic body holding the thermostat by pressing two tabs each on the bottom and top inwards.	
	Take thermostat that is detached from the body out by releasing the rear plastic from the tab. Remove the electrical connectors, and then remove the thermostat by pulling its capillary out carefully.	 

4.4 Capacitor removal*

*On particular models

CAUTION: Always remove the plug of refrigerator before replacement. Make sure that refrigerator is deenergized.

Part Name	How to	Descriptive Images
Capacitor	Constant circuit capacitor is located on left rear corner of the compressor part.	
	Lightly move the capacitor to the right and left by holding its body and lift it up.	

4.6 Compressor removal

CAUTION: Always remove the plug of refrigerator before replacement. Make sure that refrigerator is deenergized.

Part Name	How to	Descriptive Images
Never use welding etc. material during removal of the compressor		
	Body ground connection and compressor body ground connection are removed.	 
	Terminal assembly electric terminal connection is removed. Then cover retaining metal clip is stretched and removed with a flat screwdriver.	 
	Cover is removed by pulling it manually outwards. Relay is removed with a flat screwdriver and thermic terminals in rear side are removed manually.	 
	Relay and Thermic are separated by removing connections on relay and thermic.	

	Condenser connecting pipe is cut at a point close to drier with a pipe cutter. Then compressor outlet pipe is cut at a point 2-3 cm away from the welding point.	 
	Lastly, compressor return pipe is cut at a point 2-3 cm away from the welding point. Then compressor leg connection plate trivet is straightened with long needle nose pliers and compressor is removed.	 

CAUTION : Never interfere with a device filled with R600a gas with weld. If you are not able to cut the drier inlet pipe, ensure that the gas is discharged by gashing the drier body with side cutting pliers. Then cut the pipes

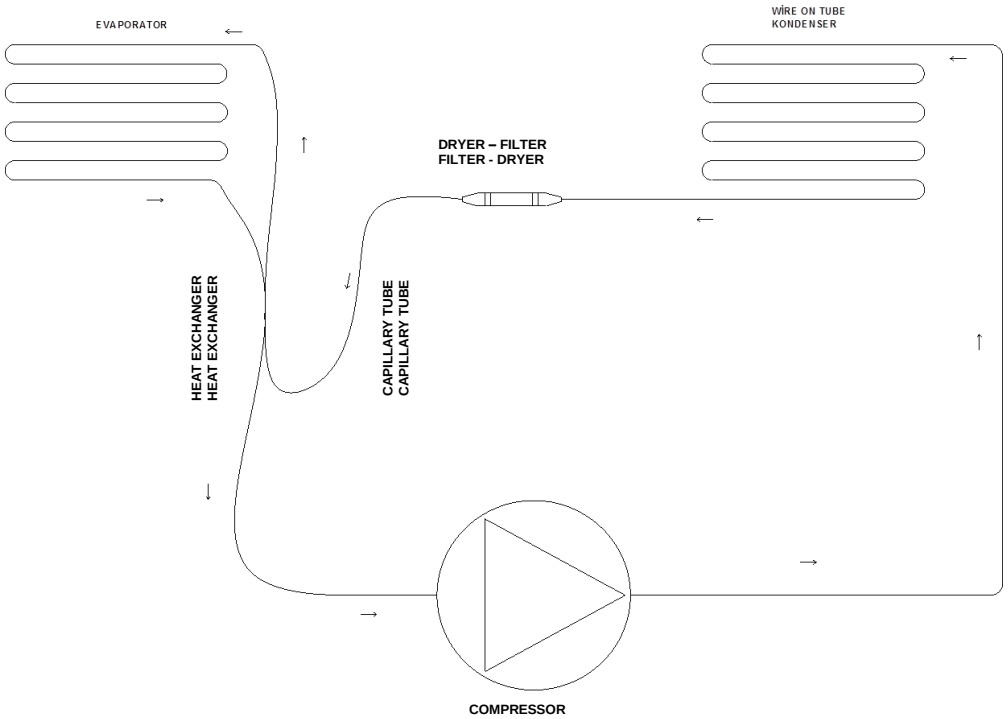
4.7 Condenser removal

Part Name	How to	Descriptive Images

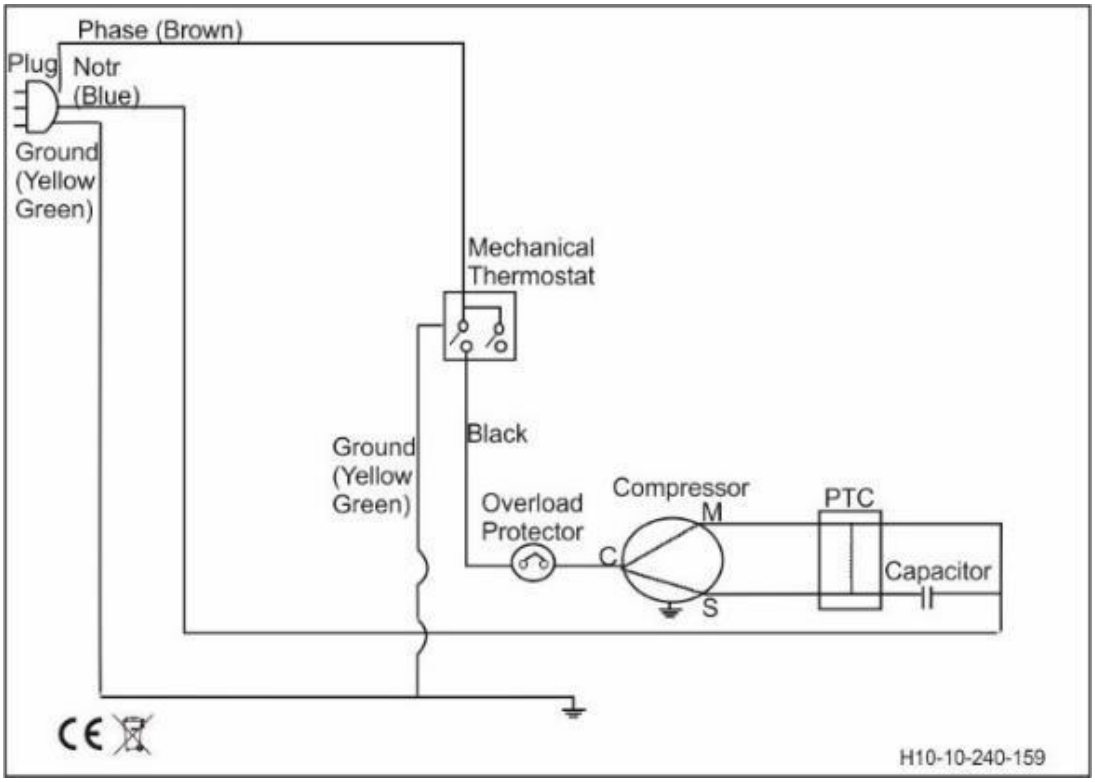
Rear Wire condenser	Inlet and outlet parts of condenser is separated from compressor in gas free fridge.	 
	Remove rear wire condenser from the holders with a phillips screwdriver.	

5. Electrical loop schedule

Mechanical thermostat

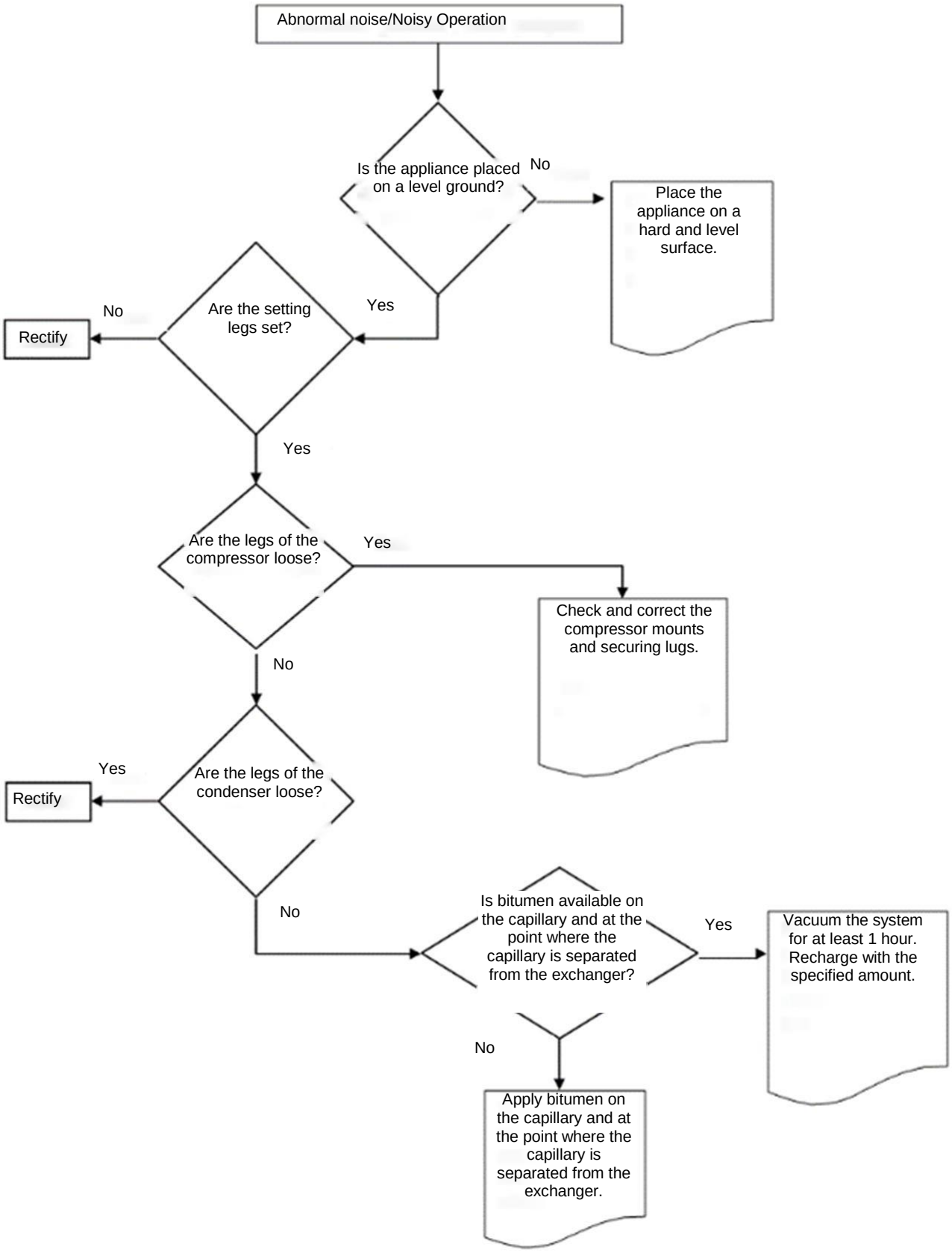


6. Cooling loop schedule



7. Product Failure

7.1 Device is not working or not Cooling


Abnormal noise/Noisy Operation
Is the appliance placed on a level ground?
No
Place the appliance on a hard and level surface.
Yes
Are the setting legs set?
No
Rectify
Yes
Are the legs of the compressor loose?
Yes
Check and correct the compressor mounts and securing lugs.
No
Are the legs of the condenser loose?
Yes
Rectify
No
Is bitumen available on the capillary and at the point where the capillary is separated from the exchanger?
Yes
Vacuum the system for at least 1 hour. Recharge with the specified amount.
No
Apply bitumen on the capillary and at the point where the capillary is separated from the exchanger.

7.3 Cooling system troubleshooting

Symptom	Reason	Remedy
• Evaporator cooling decreases but heats up afterwards • Condenser heat is increasing • Mode of operation never changes	System failed due to presence or formation of humidity.	Take out the coolant from the freezer. Replace the drier, vacuum and return required amount of gas.
• Condenser is cold • Evaporator is cold • Compressor is hot	Foreign substances in the system block the cooling cycle.	Take out the coolant from the freezer. Replace the drier, vacuum and return required amount of gas.
• There is not any temperature difference between return pipe and pressure pipe. • Compressor temperature is at ambient temperature • There is no cooling in evaporator	Compressor failure	Replace compressor.
• Frosting in the return pipe • Condenser is overheated • Evaporator is not working efficient	Too much coolant.	Take out the coolant from the freezer. Replace the drier, vacuum and return required amount of gas.
• Condenser is cold • Compressor surface is too hot • Freezer cooling rate is very slow	Coolant leakage (zonal frosting might be observed on evaporator.) System failed due to presence or formation of humidity.	Take out the coolant from the freezer. Replace the drier, vacuum and return required amount of gas.

7.4 Electrical system troubleshooting

CAUTION: Always remove the plug of refrigerator before interference. Make sure that refrigerator is deenergized.

8. Product Exploded image

8.1 General appearance

	(STATIC VERTICAL DEEP FREEZER)	2018
	-OVERVIEW-	REV-02