

# OPERATION MANUAL

## REFRIGERATOR 160 LITER REF : DIANA



**Thank you for choosing and purchasing our product. Please carefully read the operation instructions before use for a correct application and satisfactory effect. This appliance compliance with the requirement of directive 2006/42/EC.**

English – Original



## Index

<b>Safety instructions</b>	<b>3</b>
<b>General</b>	<b>4</b>
<b>Structure and Parts</b>	<b>4</b>
<b>Handle and Erection</b>	<b>5</b>
<b>Preparation and Power Supply</b>	<b>6</b>
<b>Use and Caution</b>	<b>7</b>
<b>Maintenance</b>	<b>8</b>
<b>Trouble Shooting</b>	<b>9</b>
<b>Principle of Refrigeration System and Electric Circuit Diagram</b>	<b>10</b>
<b>Major Parameters</b>	<b>11</b>
<b>Spare parts list</b>	<b>11</b>
<b>Exploded View</b>	<b>13</b>
<b>Machine and packaging Disposal</b>	<b>14</b>
<b>Standards and Directives</b>	<b>14</b>



## **1. SAFETY INSTRUCTIONS**

- For your safety, do not store or use gasoline or other flammable vapors or liquids in the vicinity of this equipment. Keep the area free and clear of combustible.
- Improper installation, adjustment, alteration, service or maintenance can cause property damage, injury, or death. Read the installation operating and maintenance instructions thoroughly before installing, or servicing this equipment.
- Instructions must be posted in a prominent location. All safety precautions must be taken in the event the user smells gas.
- These models are designed, built, and sold for commercial use only. If these models are positioned so the general public can use the equipment, make sure that cautions, warnings, and operating instructions are clearly posted near each unit so that anyone using the equipment will use it correctly and not injure themselves or harm the equipment.
- **WARNING:** It is hazardous for anyone other than a trained person to carry out any service or repair operation.
- Before doing any maintenance or repair, contact your authorized service representative.
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children unless they are aged from 8 years and above and supervised.
- This product is intended for commercial use only.

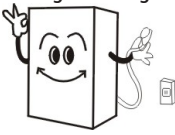

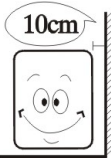
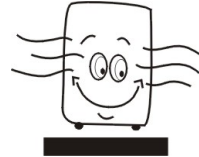
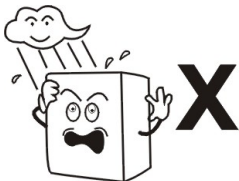

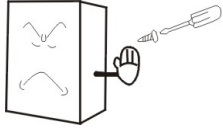
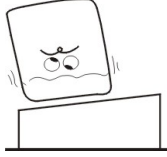
## 2. GENERAL

1. Top brand fully enclosed compressor is used on the desk-top refrigerator. The refrigerant R134a or R600a is of an environmentally friendly agent. It features a rational configuration of refrigeration system with blower forced air cooling. The temperature is quite even inside the refrigerator.
2. Double hollow transparent glasses are used on door and body. It features an artistic and elegant appearance, perfect perspective and easy access.
3. It has a wide application in department store and house as well as the meeting room and sitting room

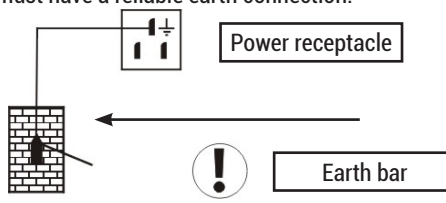
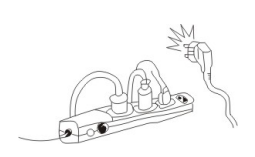
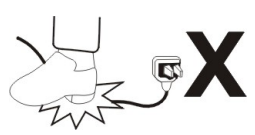

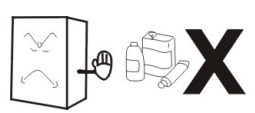
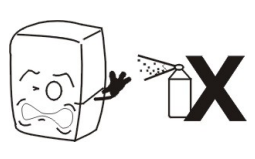
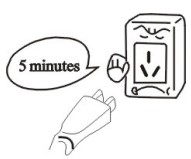

## 3. STRUCTURE AND PARTS



**4. HANDLE AND ERECTION**

<p><b>Handle with care</b> Unplug the wall socket first. Never tilt it over 45 degree during handling.</p> 	<p><b>Dry place</b> Always locate the refrigerator at a dry place.</p> 
<p><b>Sufficient space</b> The distance from both sides and back of refrigerator to wall or other substance must not less than 10cm. The refrigeration capability might be decreased if its surround space is too small to circulate air.</p> 	<p><b>Well ventilation</b> Always locate the refrigerator at a place with fine ventilation. For the first time use, wait for 2 hours after handling and then plug the wall socket and start it.</p> 
<p><b>Far from heat source</b> Never place the refrigerator directly under the sunshine. Never locate it nearby any heat source or heater to prevent it from reducing refrigeration capability.</p> 	<p><b>No heavy load</b> Never put any heavy load on the top of the refrigerator.</p> 
<p><b>No hole making</b> Never make hole on the refrigerator. Never install other matter on the refrigerator.</p> 	<p><b>Stable location</b> To avoid the unexpected noise and vibration, unpacking and locate the refrigerator on a flat and solid place.</p> 

**5. PREPARATION AND POWER SUPPLY**

<p><b>Exclusive power socket</b> Normally, the power supply should be 220-240V, single phase AC with exclusive single phase three pin receptacle (250V 10A) and fuse (6A). The power receptacle must have a reliable earth connection.</p> 	<p><b>No share on socket</b> Never let the refrigerator share the common socket with other appliance, otherwise the cable becomes hot and fire might be resulted.</p> 
<p><b>Protect cables</b> Never break or damage the cables otherwise current leakage and fire might be resulted.</p> 	<p><b>No water flushing</b> Never give the refrigerator surface a flush otherwise current leakage might be resulted.</p> 
<p><b>Prevent from flammables and explosive</b> Never put any flammable or explosive inside the refrigerator such as ether, gasoline, alcohol, adhesive and explosive. Never put dangerous product nearby the refrigerator.</p> 	<p><b>No spray</b> To spray the flammables such as paint or coating nearby the refrigerator is not allowed, otherwise fire might be resulted.</p> 
<p><b>After power break</b> After power break or unplugging the refrigerator, always wait at least 5 minutes and then you may plug the refrigerator and start it again.</p> 	<p><b>No medicine</b> No medicine is allowed to keep inside the refrigerator.</p> 

## 6. USE AND CAUTION

### 6.1. BEFORE USE:

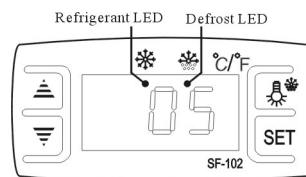
Plug the refrigerator on 220-240V~ exclusive socket.

After the refrigerator running, put hand on the air suction to confirm it is sufficient cold. Then you may put food inside the cold box.

### 6.2. DIGITAL TEMPERATURE CONTROLLER

It is a mini-sized and integrated intelligent controller and applicable to the compressor of one Hp.

The main functions are: Temperature Display/Temperature Control/Manual, automatic defrost by burning off/Illumination Control/Value Storing/self-Testing/Parameter Locking.



#### Front Panel Operation

##### 1 - Set temperature

Press „set“ button, the set temperature is displayed.

Press  $\triangle$  or  $\nabla$  button to modify and store the displayed value.

Press „set“ button to exit the adjustment and display the cold-room temperature.

##### 2 - If no more button is pressed within 10 seconds, the cold-room temperature will be displayed.

##### 3 - Illumination: Press $\square$ button, it lights; Press again, it stops.

Manual start/stop defrost: Press  $\square$  button and hold for 6 seconds to defrost or stop defrost.

##### 4 - Refrigerant LED: During refrigeration, the LED is on; When the cold room temp. is constant, the LED is off; During the delay start, the LED flashes.

##### 5 - Defrost LED: during defrosting, the LED is on; When is stops defrosting, the LED is off, During the delay display of defrost, the LED flashes..

##### 6 - Digital controller reset

When display shows «Disorder», press  $\nabla$  button for 2s until buzzer rings, quickly press  $\nabla$  button for 6s until buzzer rings again, the display will flash for 3s and it restores factory setting.

### 6.3. CAUTIONS

Shorten the door open time and reduce open frequency is good to keep a cold temperature inside the refrigerator.

Never block the air suction and outlet. Keep air circulation and refrigeration capability.

Do not make food congested as it will influence the cooling effect. Adjust the rack height for proper food storage.

Cool the hot food down to room temperature before you put it into the refrigerator.

Try to reduce the open times and keep refrigerator inside cold in case the power is cut off.

Only skilled service man is allowed to repair the damaged power cable with special tools.

Never touch compressor to avoid from scald.

If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction 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.

The operation manual are not suitable for the persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.

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

During normal operation, the emission noise level does not exceed 70dB(A)

The maximum loading of the Shelf does not exceed 18kg.



The climatic class of the appliance is 4, the Units are suggested to be used at 16-32 ambient temperature.

To avoid damages or other problems, this product can not be put or stored with any corrosive food.

**WARNING:** Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.

**WARNING:** Do not use mechanical devices of other means to accelerate the defrosting process, other than those recommended by the manufacturer.

**WARNING:** Do not damage the refrigeration circuit.

**WARNING:** Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of the type recommended by the manufacturer.

**ADDITIONAL WARNING:**

Caution: risk of fire. The height of the triangle in the symbol shall be at least 15mm.



**7. MAINTENANCE**

**7.1. NOTICE**

Often keep the refrigerator clean and periodical maintenance is necessary.

Always unplug the socket before maintenance

Never use damaged plug or loose socket to prevent from electric shock or short circuit.

Never flush the refrigerator. Never use alkali detergent, soap, gasoline, acetone or brush.

**7.2. CLEAN OUTSIDE**

Dip soft cloth in neutral detergent (tableware detergent) to clean the outside of the refrigerator and then wipe it with dry soft cloth.

**7.3. CLEAN INSIDE**

Take rack out for cleaning with water.

**7.4. SHUT DOWN REFRIGERATOR FOR A LONG TIME**

Take all food out and unplug the wall socket.

Clean both inside and outside of the refrigerator thoroughly and open the door for sufficient dry.

The glass breaks easily. Keep the glass far from children.

**7.5. REPLACEMENT OF LAMP IN THE LIGHT BOX**

If the LED is damaged, it must be replaced by the manufacturer, its service agent.





**8. TROUBLE SHOOTING**

Trouble	Cause and Remedy
No refrigeration	Is the plug in socket well? Is the fuse broken? Is there no power?
Unsatisfactory refrigeration	Is it under the sunshine? Is there any heat source nearby? Is the surrounding ventilation bad? Does the door close well? Does door open for a long time? Is the door seal strip deformed or damaged? Is food congested or too much? Does food block the air suction or outlet? Regulate the temperature controller.
Much noise	The refrigerator does not level. The refrigerator contacts wall or other matter. There is loose part in refrigerator.
Contact local service agent for help if simple trouble shooting does not solve the problems.	

**NOTE**

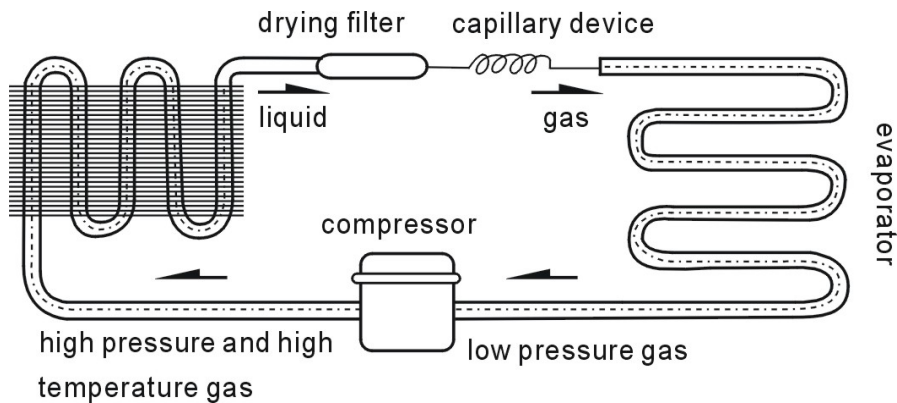
**FOLLOWING PHENOMENA ARE NOT TROUBLES**

The murmur of water is heard when the refrigerator is working. It is a normal phenomenon as the coolant is circulating in the system.

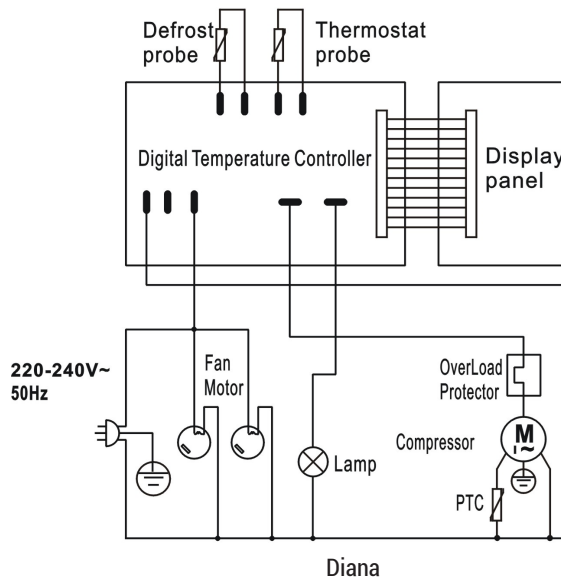
In wet season, condensation might be found on the outside of the refrigerator. It is not a trouble, which is caused by high humidity. Simply use cloth to wipe it.

**9. PRINCIPLE OF REFRIGERATION SYSTEM AND ELECTRIC CIRCUIT DIAGRAM**

The principle of compression refrigeration consists of "compression", "condensation", "throttling" and "vaporization". The compression is undertaken by compressor, the condensation is completed by condenser, the throttling valve is executed by capillary and the vaporization is implemented by evaporator. When the coolant is circulating in the closed refrigeration system, the compressor sucks coolant, which has absorbed heat in evaporator, the coolant becomes a high pressure and high temperature gas. In condenser, it dissipates heat in air, while the coolant is re-liquefied and throttled in capillary and then enters into evaporator with low pressure. The liquefied coolant quickly boils and vaporizes into gas when the pressure suddenly drops. Meanwhile, it absorbs heat inside the refrigerator. And the compressor sucks the low pressure and low temperature gaseous coolant. It is circulating in this way up to realization of intended refrigeration.



**CIRCUIT DIAGRAM**



## 10. MAJOR PARAMETERS

Model	DIANA
Coolant and injection quantity	R600a(65)
General Rated Input Power (W)	160
Kind of weather	4
Refrigeration temperature(°C)	0-12
Electric shock protection class	I
Rated Voltage(V)	220-240~
Rated Frequency(Hz)	50
Rated Current (A)	1.4
Lamp Power (W)	2.5 (LED)
Total effective volume(L)	160
Net weight (kg)	66
Overall dimension(mm)	880x568x686

### Note

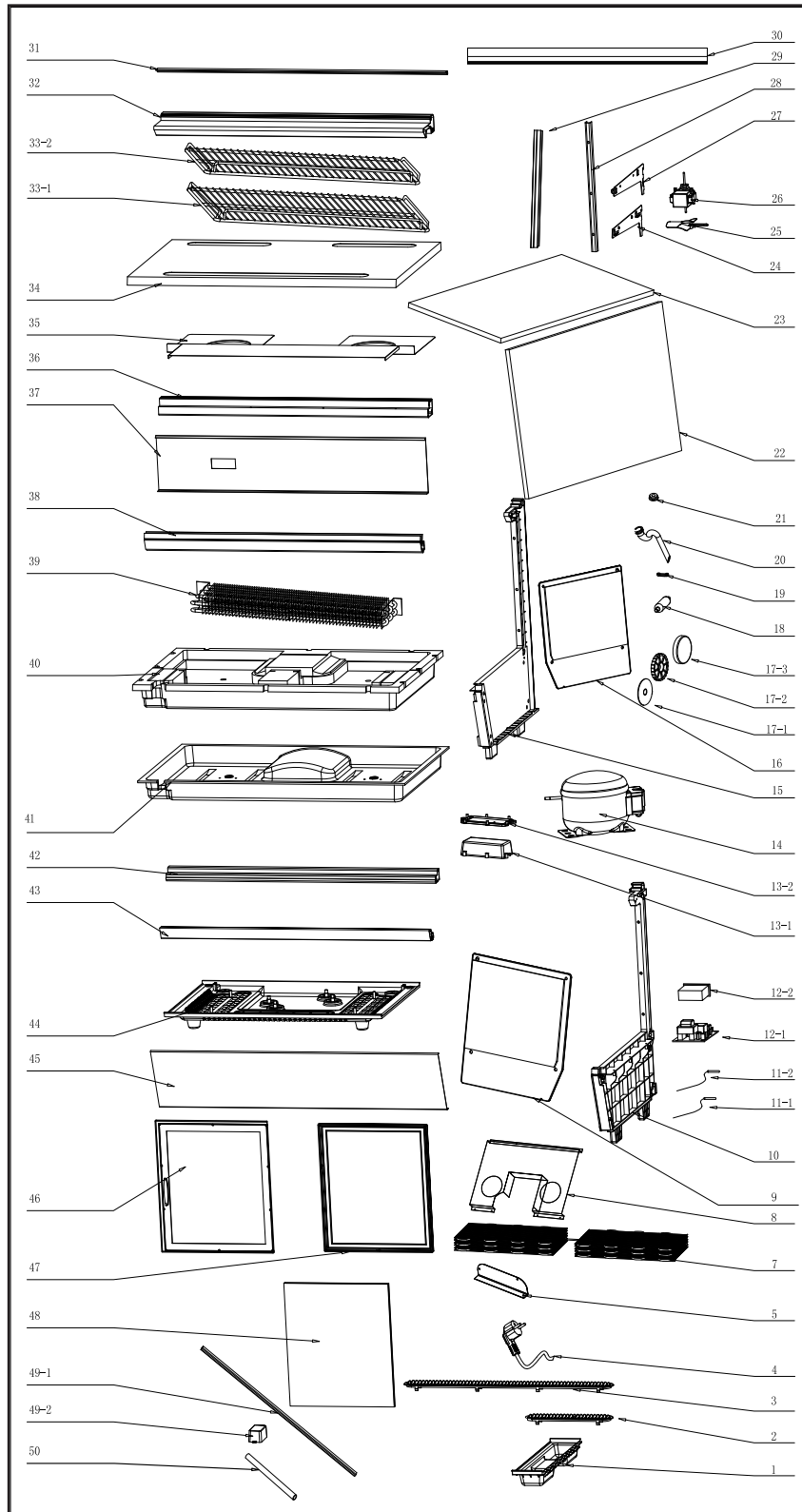
1. The electric circuit diagram and parameters on the product name plate are final ones if they have been changed.
2. The design might be improved without notice.

## 11. LISTE DES PIÈCES DÉTACHÉES

RTW-160L-5 R600a Spare Parts List		
Number	material code	Parts Name
50	1.1.B.B06.26	Accumulator
49-2	1.1.A.A01.10.30	LED Power driver
49-1	1.1.A.A01.14.12	LED light
48	1.1.E.E2.01.55	Door Glass
47	1.1.C.C49.25	Outer door frame
46	1.1.C.C49.24	Inner door frame
45	1.1.B.B16.01	Font frame
44	1.1.C.C49.42	Bottom base of compressor
43	1.1.C.C49.12	Front bottom pillar
42	1.1.C.C49.13	Rear bottom pillar
41	1.1.C.C49.04	Plastic base for pillar
40	1.1.D.D08.02.06	Foam base of evaporator
39	1.1.A.A10.17	Evaporator
38	1.1.C.C49.64	Front middle pillar
37	1.1.B.B16.02	Rear base panel
36	1.1.C.C49.15	Rear middle pillar
35	1.1.C.C49.45	Evaporator protect board
34	1.1.B.B16.07	Vent tray
33-2	1.1.B.B02.06.13	Shelf 2

33-1	1.1.B.B02.06.14	Shelf 1
32	1.1.C.C49.16	Top Panel
31	1.1. C.C49.17	Decorative board
30	1.1. C.C49.60	Front top pillar
29	1.1. C.C49.62	Side seal
28	1.1. B.B02.06.19	Pillar for bracket
27	1.1. B.B25.27	Right shelf bracket
26	1.1. A.A03.01.14	Motor Fan
25	1.1. C.C17.03	Fan blade
24	1.1. B.B25.26	Left shelf bracket
23	1.1. E.E2.12.111	Top glass
22	1.1. E.E2.12.112	Front glass
21	1.1. C.C41.01	Motor fixer ring
20	1.1. C.C41.13	Water pipe
19	1.1. C.C24.03	Wire clip
18	1.1. A.A04.01	Dry filter
17-3	1.1. B.B14.19	Nut decoration
17-2	1.1. C.C49.32	Nut gasket
17-1	1.1. C.C49.29	Decoration nut gasket
16	1.1. E.E2.12.114	Right glass
15	1.1. C.C49.48	Right Panel
14	1.1. A.A02.01	Compressor
13-2	1.1. C.C22.07.A1	Control box cover
13-1	1.1. C.C21.03.A1	Control box
12/2	1.1. A.A17.06.01	Digital controller
12/1	1.1. A.A17.01.01	Main circuit Broad
11/2	1.1. L.L24.04.13	Defrost Probe
11/1	1.1. L.L24.04.06	Temperature Probe
10	1.1. C.C49.47	Left panel
9	1.1. E.E2.12.113	Left glass
8	1.1.B.B16.03	Condensator cushion
7	1.1.A.A09.58	Condensator
6	x	x
5	1.1.B.B16.06	Fixed board of pcb box
4	1.1.A.A08.02.78	Power cord
3	1.1.C.C49.09	Cover for air suction
2	1.1.C.C49.10	Cover for air outlet
1	1.1.C.C49.11	Water tray

12. EXPLODED VIEW



### 13. STANDARDS AND DIRECTIVES

#### Meaning of crossed out wheeled dustbin:

Do not dispose of electrical appliances as unsorted municipal waste, use separate collection facilities.

Contact your local government for information regarding the collection systems available.

If electrical appliances are disposed of in landfills or dumps, hazardous substances can leak into the groundwater and get into the food chain, damaging your health and well-being.

When replacing old appliances with new ones, the retailer is legally obligated to take back your old appliance for disposals at least free of charge.

The device complies with current EU standards and directives. If necessary, we will send you the corresponding declaration of conformity.

#### Packaging disposal

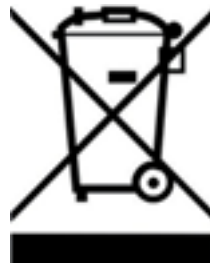
Please separate the packaging materials accordingly and return them to the responsible collection points for recycling and environmental housing.



#### Device disposal

once the appliance has been used up, dispose of it properly at a collection point for electrical appliances. Electrical appliances do not belong in household waste.

Your responsible administration will inform you about the addresses and opening hours of collection points. This is the only way to ensure that old appliances are properly disposed of and recycled. Thank you very much!





CE