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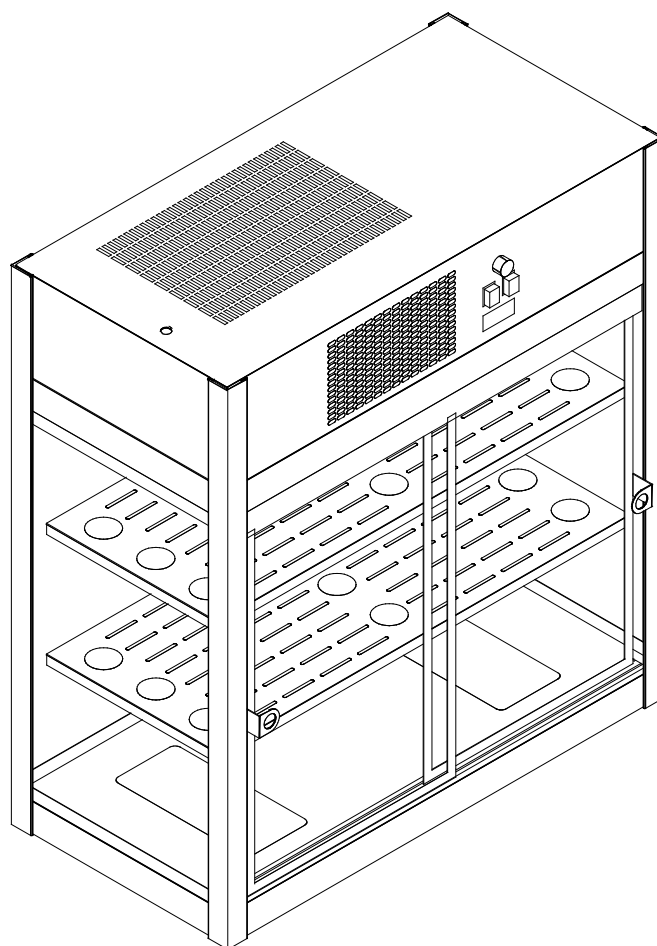
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Diamond
catering equipment

INSTALLATION, OPERATION AND SERVICE MANUAL

**STAINLESS STEEL OR WOODEN
REFRIGERATED FOOD DISPLAY CASE
mod. F100/F120/F200**



CE



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CHAP 1 - CHARACTERISTICS OF THE INSTALLATION ENVIRONMENT

1.1 Preliminary directions

Installation must be carried out by following the instructions contained in this handbook and only by specialized technical personnel. The manufacturer cannot be held liable for any damage caused by a faulty installation.

Before starting the operations it is necessary to make sure the supply circuit is sized so as to ensure correct operation in accordance with the power installed, **and that an automatic differential switch has been installed in proportion to the power drawn by the entire system.**

The position where the display cabinet has to be installed must have the following characteristics:

- * The distance from the socket to be used must be such that, once connected, the power cable is not stretched too much nor is an obstacle to free passage.
- * The appliance is to be sufficiently aerated, far from heat sources, and not easily reachable by water.
- * The air inlet slits for the compressor must not be obstructed.

CHAP 2 - FITTING

2.1 Handling and Unpacking

After unpacking check the integrity of the various elements before going ahead with installation, in the event of damage or defective components address to professionally qualified personnel.

2.2 Connection to the electric network

Before carrying out the electrical connection make sure that the specifications of the rating plate correspond to the values of the electric power supply mains. The rating plate is located on the top of the display cabinet.

To ensure electrical safety it is necessary to make sure that the display cabinet is correctly connected to an effective earthing system. For this purpose use the screw marked with the \perp symbol. In case of doubt ask for the assistance of qualified personnel.

If the socket to be used doesn't fit with the appliance's plug, have the socket replaced with a suitable one by a specialized technician. If you need to use adapters, multiple sockets, and/or extensions, you have to use only components in conformity with the current safety standards (EN 60204) according to the electrical characteristics of the display cabinet.

2.3 Packing-list

DESCRIPTION	F100			F120			F200		
	Code No.	piece	DIMENS. (mm)	Code No.	piece	DIMENS. (mm)	Code No.	piece	DIMENS. (mm)
Display cabinet structure	630002	1	805 x 410 x 650	640002	1	805 x 410 x 900	650002	1	1005 x 410 x 900
Inside shelf	630031	1	764 x 315 x 15	630031	2	764 x 315 x 15	650031	2	962 x 315 x 15
Rear window	VE0151	1	758 x 396	VE0154	1	758 x 616		1	958 x 616
Side window	VE0152	2	361 x 369	VE0155	2	361 x 616		2	361 x 616
Right-hand sliding door	630091	1	380 x 350	640061	1	380 x 570	650061	1	480 x 570
Left-hand sliding door	630101	1	380 x 350	640071	1	380 x 570	650071	1	480 x 570
Right-hand front shelf supp.	630141	1	422 x 60	640141	1	622 x 60	640141	1	622 x 60
Left-hand front shelf support	630151	1	422 x 60	640151	1	622 x 60	640151	1	622 x 60
Rubber foot	MC061	4	30 x 10	MC061	4	30 x 10	MC061	4	30 x 10
Light 13 W 12 V	EL0051	1		EL0051	1		EL0051	1	
Green switch	EL0006	1	35 x 30 x 40	EL0006	1	35 x 30 x 40	EL0006	1	35 x 30 x 40
Orange switch	EL0008	1	35 x 30 x 40	EL0008	1	35 x 30 x 40	EL0008	1	35 x 30 x 40
Thermometer ROF 88	630193	1		630193	1		630193	1	
Timer	630196	1		630196	1		630196	1	
Box with evaporator	630191	1	450 x 400 x 210	630191	1	450 x 400 x 210	630191	1	450 x 400 x 210
Compressor	630192	1		630192	1		630192	1	
Fan	630194	1		630194	1		630194	1	

CHAP 3 - USER INSTRUCTIONS

3.1 Directions

This manual is an integral part of the product.

It is recommended to read all the information and instructions contained in this manual carefully before starting to use the display cabinet since it contains essential information about the safe use and service of the machine.

Keep this manual carefully in order to be able to refer to it whenever you need it.

All the personnel assigned to using this machine must be trained to use it.

3.2 Allowed uses

THE REFRIGERATED DISPLAY CABINET HAS BEEN DESIGNED AND MANUFACTURED TO BE USED TO CONSERVE FOODSTUFFS, CONFECTIONERY OR BEVERAGES AT A TEMPERATURE OF A FEW DEGREES ABOVE ZERO ° C

THE REFRIGERATED DISPLAY CABINET MUST OPERATE WITHIN THE LIMITS DESCRIBED IN THIS MANUAL AND ACCORDING TO THE INSTRUCTIONS SPECIFIED IN IT

The machine should be destined only for the use it has been designed for, every other use is to be considered improper and therefore unreasonable. The manufacturer is not liable for any damage to persons or things caused by improper, erroneous, or unreasonable use.

Any tampering or modification to the appliance that has not previously been authorized by the manufacturer frees the manufacturer from damage deriving from or referable to the above mentioned acts.

CHAP 4 - DESCRIPTION OF THE MACHINE

4.1 Technical features

TECHNICAL DATA	U.M.	F100 T	F100 T/L	F120 T	F120 T/L	F200 T	F200 T/L
Width	mm	806	818	806	818	1006	1018
Length	mm	410	460	410	460	410	460
Height	mm	695	695	945	945	945	945
Internal width	mm	770		770		970	
Internal length	mm	340		340		340	
Internal height	mm	370		620		620	
Total capacity	m ³	0.1		0.16		0.20	
Weight	Kg	70		85		95	
Maximum power draw	W	282					
Power supply voltage	V	230 single-phase					
Maximum current draw	A	1.5					
Frequency	Hz	50					
Power cable cross-section	mm ²	1.5					
Refrigerating fluid		R134 a					
Refrigerating mass	Kg	0.200					

Tab. 4.1 Main technical particulars of the refrigerated display cabinet

4.2 Description of the main elements

The refrigerated display cabinet is used to conserve foodstuffs and beverages at a sufficiently low temperature. All the components of the display cabinet are shown in Fig. 2. It is formed by a stainless steel framework the windows and the refrigerator unit are fixed in.

Steel framework

This is the frame of the display cabinet and is formed by:

Bottom shelf, used as base and shelf

Top, used as base for the motor unit, supported by four **Columns**

Sliding doors.

Track.

Refrigerator unit

It has a steel or a wooden **Covering**, where the controls are and it is formed by:

Electric compressor, Condenser, Axial fan, Condensate collection basin

Evaporator and Centrifuge fan, Defrosting timer (Fig. 5), Thermometer, Thermostat and Switch

Wiring diagram (see Fig. 4)

The wiring diagram (Fig. 4) of the various components has been made in accordance with the current regulations in the electrical field.

4.3 Description of accessories and safety devices

The intermediate **shelves** are used as additional surfaces for support.

If you leave accidentally open the doors, the **automatic closing system** with sliding doors prevents the eventual temperature rising inside the cabinet.

4.3.1 Regulating thermostat

The regulator thermostat is a device to control the air temperature in the display cabinet. When the temperature drops under the values set by the user, the thermostat disconnects the power supply. The power supply will come back on automatically by increasing the temperature.

CHAP 5 - PUTTING INTO OPERATION

5.1 Description of operations

1. Set the thermostat placed on the refrigerator unit covering side, onto the temperature wished to be kept inside the display cabinet.
2. Press the switch, next to the thermostat (pos. Fig. 3), putting it into position I. A green light on the switch will turn on to confirm switch-on.
3. Put the food to be conserved into the display cabinet, putting it straight onto the shelves or on trays suitable for contact with foodstuffs.
4. Check that the sliding doors of the display cabinet close.

To switch off the appliance it is necessary to press the green switch, putting it into position O, thereby turning off the green light on the switch.

CAUTION: For an optimum use of the display cabinet we recommend not to put too hot food into the display cabinet and not to hinder door closure.

5.2 Periodical defrosting

The display cabinet is equipped with a timer (see fig.5) for periodical defrosting of the evaporator, which is set so as to disconnect the power supply for twelve minutes, four times a day, thereby defrosting approximately every six hours of operation.

This setting can be modified by qualified and authorized personnel, possibly by means of the technical service:

1. Make sure you have disconnected the electrical power supply.
2. Remove the upper cover by unscrewing the two fixing screws.
3. Set the defrosting time by moving the indicator A on the wished value of the scale B.
4. Set the defrosting frequency by moving the inserts E of the F dial.
5. Close the refrigerating unit with its covering.

The defrosting water is collected in an internal basin and let to evaporate.

5.3 Directions to prevent accidents

The personnel assigned to using the display cabinet must follow the instructions specified in this manual. If the operator has not been sufficiently well trained, operation will not be optimum and the risks concerning safety will increase.



it is compulsory to:

- * Keep clean the surfaces that could come into contact with foodstuffs.
- * Make sure that the power supply cable is intact and properly connected to the electric network.
- * The area where the appliance is installed must be ventilated.



it is forbidden to:

- * Obstruct the slits allowing air to pass through, both the ones inside the display cabinet and the ones on the refrigerator unit covering.
- * Clean the machine using direct water jets or high-pressure equipment.
- * Hinder sliding door closure.
- * We recommend not to expose the display cabinet to sunlight.

- * Use objects that are not suitable for contact with foodstuffs to contain the food to be conserved.

CHAP 6 - MALFUNCTIONING

6.1 Troubles during operation



CAUTION: For all the operations described below, disconnect the display cabinet from the mains and address to specialized personnel who have a sufficient knowledge of the functions of the different parts and of the precautions to be taken.

Below are listed some possible malfunctioning and the likely cause and remedy. If you cannot solve the problem or if it is not provided in the following table, call our customer technical service:

MALFUNCTIONING	LIKELY CAUSE	REMEDY
The pilot light is off and the display cabinet is not refrigerated	<ul style="list-style-type: none"> * Power is not reaching the power supply circuit * Faulty switch, thermostat, or compressor 	<ul style="list-style-type: none"> * Make sure there is power in the electric network * Check the correct connection of the power supply cable (§ 7.2.6) * Check the different connections and various electrical components and replace them if necessary (§ 7.2.1 and § 7.2.3)
The green pilot light is on and the display cabinet is not refrigerated	<ul style="list-style-type: none"> * Power is not reaching the refrigerating unit * Faulty switch, thermostat, or compressor * Refrigerating fluid leakage * Too high dissipation 	<ul style="list-style-type: none"> * Make sure there is power in the electric network * Check the correct connection of the power supply cable (§ 7.2.6) * Check the different connections and various electrical components and replace them if necessary (§ 7.2.1 and § 7.2.3) * Check the refrigerating gas circuit * The display cabinet is positioned in a too hot place * The automatic closing system is not operating correctly, take care over the closure of the sliding doors.
The orange pilot light is on and the display cabinet is not illuminated	<ul style="list-style-type: none"> * Power is not reaching the neon light * Faulty switch or neon 	<ul style="list-style-type: none"> * Make sure there is power in the electric network * Check the correct connection of the power supply cable (§ 7.2.6) * Check that the switch on the neon is on. * Check the different connections and various electrical components and replace them if necessary.

CHAP 7 - CLEANING AND MAINTENANCE

7.1 Instructions for cleaning

Routine maintenance essentially consists of daily cleaning all the parts that can come into contact with the foodstuffs. The cleaning instructions to be followed are listed below:

- * Make sure the electrical power supply has been disconnected by unplugging it from the socket.
- * Remove all the containers that may be in the display cabinet.
- * Use a soft damp cloth and then dry.
- * To clean the stainless steel do not use iron wool, iron brushes or scrapers since they can deposit ferrous particles that by oxidizing lead to rust. To remove hardened residues, use wooden or plastic spatulas, or stainless steel wool.
- * If you use alkaline detergents, thoroughly rinse after washing.
- * Do not spray with direct jets of water or with high-pressure equipment since any water getting into the outer casing can jeopardize the safety of the machine.
- * Clean the condenser (see § 7.2.1) at least every six months with a soft brush or with a vacuum cleaner.

When the appliance has not to be used for long periods, disconnect the electrical power supply, spread a protective film all over the stainless steel surfaces by passing over them a cloth soaked in Vaseline oil, and air the rooms periodically.

7.2 Special maintenance

The special maintenance procedures should be carried out by qualified and authorized personnel, possibly by means of the technical service of the manufacturer of the component requiring servicing.

CAUTION: it is recommended to use only genuine spare parts, in compliance with the same technical specifications as the ones replaced.



CAUTION: in any case, before starting, the electrical power supply must be disconnected by deactivating the automatic switch located up-line from the appliance.

7.2.1 Replacing the refrigerating unit

To access the refrigerating unit it is necessary to carry out the following operations:

1. Make sure you have disconnected the electrical power supply.
2. Remove the top covering by extracting it upwards and taking care over the electrical cables.
3. Remove the insulating cover by unscrewing the four screws.
4. Replace the damaged part of the unit and close it all back up.

7.2.2 Replacing the switch

To replace the switch it is necessary to carry out the following operations:

1. Make sure you have disconnected the electrical power supply.
2. Remove the upper cover by unscrewing the two fixing screws.
3. Replace the switch and close it all back up.

7.2.3 Replacing the thermostat

To replace the thermostat it is necessary to carry out the following operations:

1. Make sure you have disconnected the electrical power supply.
2. Remove the upper cover by unscrewing the two fixing screws.
3. Remove the insulating cover by unscrewing the four screws.
4. Replace the thermostat positioning the sensor in the same position and close it all back up.

7.2.4 Replacing the thermometer

To replace the thermometer it is necessary to carry out the following operations:

1. Make sure you have disconnected the electrical power supply.
2. Remove the upper cover by unscrewing the two fixing screws.
3. Remove the insulating cover by unscrewing the four screws.
4. Replace the thermometer positioning the sensor in the same position and close it all back up.

7.2.5 Replacing the neon

To replace the neon inside the cabinet it is necessary to carry out the following operations:

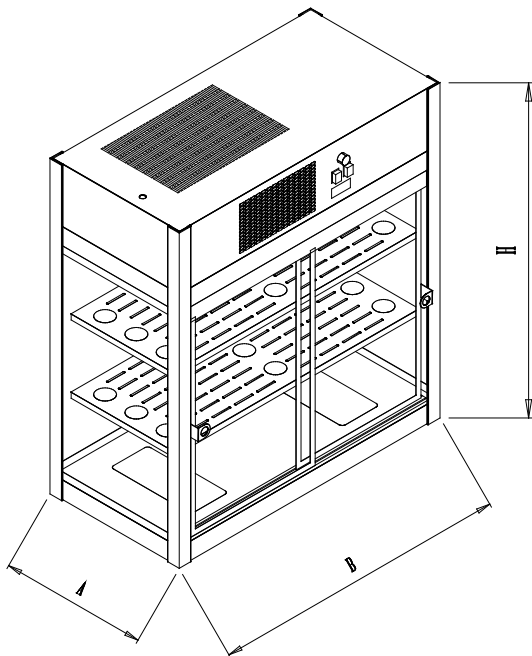
1. After making sure you have disconnected the electrical power supply, empty the display cabinet, removing any trays and shelves as well.
2. Remove the upper cover by unscrewing the two fixing screws.
3. Replace the neon by unscrewing it from the bottom and reconnecting the cables in the same way.
4. Reposition the covering.

7.2.6 Replacing the power supply cable

To replace the power supply cable it is necessary to carry out the following operations:

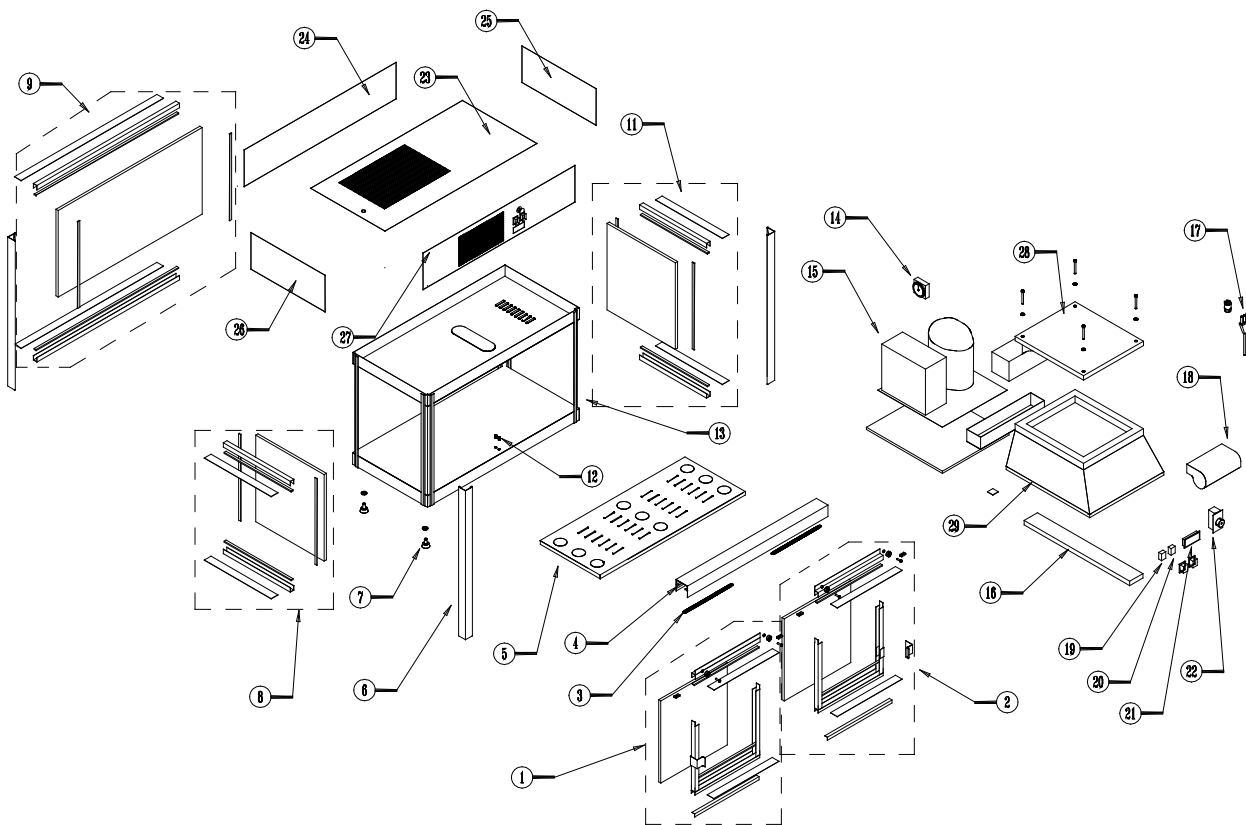
1. Make sure you have disconnected the electrical power supply.
2. Remove the upper cover by drawing it upwards and paying attention to the electric cables.
3. Disconnect the two power cables from the switch and the earth lead (yellow-green) from the equipotential screw, loosen the external nut and remove the power cable. In its place insert the new one, making it pass through the hole on the instrument panel and connecting it like the one just removed.
4. Put the upper cover back into its original position.

FIGURES



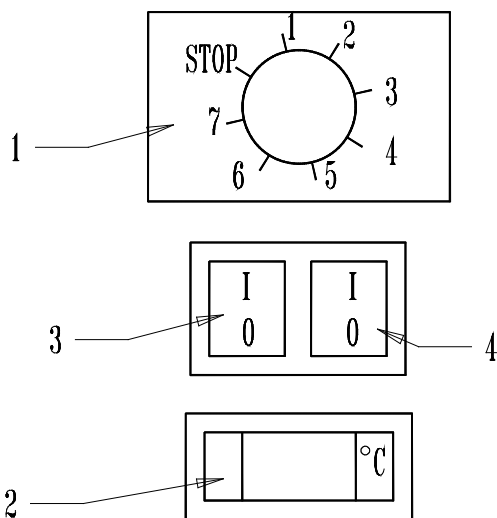
	MATERIAL	H (mm)	A (mm)	B (mm)
F 100 T	Steel	695	410	806
F 120 T	Steel	945	410	806
F 200 T	Steel	945	410	1006
F 100 T/L	Wood	695	460	818
F 120 T/L	Wood	945	460	818
F 200 T/L	Wood	945	460	1018

Figure 1 - Overall dimensions



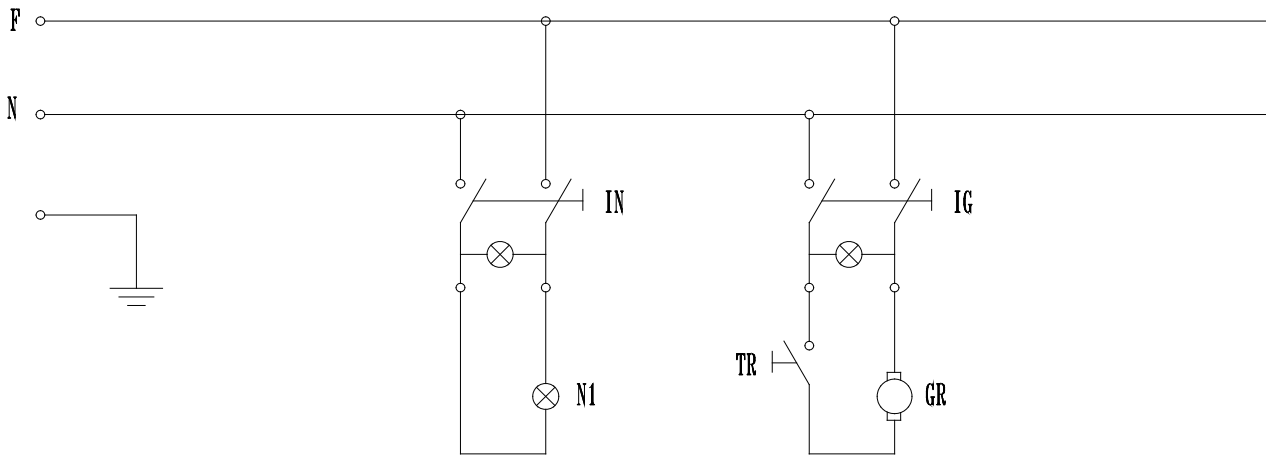
- | | | |
|--------------------------------------|---------------------------------|---------------------------------|
| 1. Left sliding door | 12. Brass pin for sliding doors | 22. Thermostat |
| 2. Right sliding door | 13. Structure | 23. Upper housing |
| 3. Traction spring for sliding doors | 14. Defrosting timer | 24. Rear housing |
| 4. Rail support | 15. Refrigerating unit | 25. Right housing |
| 5. Inside shelf | 16. Neon light | 26. Left housing |
| 6. Outside Upright | 17. Power supply cable | 27. Front housing |
| 7. Foot | 18. Fan | 28. Box cover |
| 8. Left window | 19. Unit switch | 29. Box with fan and compressor |
| 9. Rear window | 20. Neon switch | |
| 11. Right window | 21. Thermometer | |

Figur 2 – Display cabinet components



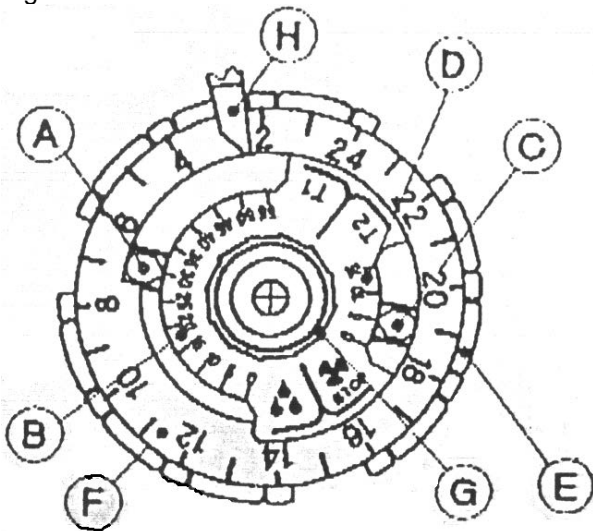
- 1 - regulating thermostat
- 2 - thermometer
- 3 - refrigerator unit switch
- 4 - lighting switch

Figure 3 – Control panel



IN - lighting switch
 IG - refrigerating unit switch
 TR - regulator thermostat
 Figure 4 - Electrical circuit

N1 - internal lighting lamp
 GR - refrigerating unit



- A. Indicator defrosting duration
- B. Defrosting duration
- C. Indicator fan delay time
- D. Fan delay time
- E. Defrosting insert
- F. Dial
- G. Knob
- H. Actuator starting operation

