

Use and maintenance

REFRIGERATORS / FREEZERS



Fiocchetti
THE COLD MANUFACTURER

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1.1 CERTIFICATION

All the refrigerated cabinets are manufactured in conformity to the EC directives applicable at the moment of the emission of the product on the market.

All the refrigerated cabinets are certified according to the CEE directives no 2006/42/CE 2006/95/C, 2004/108/CE and further amendments; they manufactured according to the security standards for the electrical appliances for laboratory application (CEI EN 61010-1) or to 93/42/CEE applicable to Medical Devices if destined to the storage of blood or blood components.

1.2 TESTING AND GUARANTEE

The appliance is tested in our premise in compliance with established regulations and then shipped ready for use.

The guarantee is valid for a full 12 months from the date of delivery of the appliance and covers the repair or replacement of defective parts, with the exception of electrical, electronic components.

Manifest defects or difference with respect to the client's order must be communicated to the manufacturer within five days from the receipt of the goods or they will not be covered by the guarantee terms.

Any hidden or other defects must be communicated to the manufacturer within five days from the time that they are discovered and, in any event, within the maximum guarantee term of six months. The purchaser shall be entitled only to request repair or replacement of the goods. The purchaser is not entitled to claim compensation for direct or indirect damages of any whatsoever nature. In any event, the entitlement to repair or replacement of the materials must be exercised within the maximum term of the guarantee, which is contractually stipulated to cover a shorter period than the maximum term established by law.

Repairs or replacement of defective materials will be carried out at the manufacturer's premise; material returned to the manufacturer must be shipped on carriage paid basis and will be returned to the purchaser at his expenses.

1.3 SCOPE, CONTENT AND ADDRESSEES OF THE MANUAL

This manual has been prepared with the scope of supplying all the instructions required for the correct use of the appliance and to maintain it in optimal working conditions. It also contains important safety information for the user. The following professional roles are explained in order to define the responsibilities of each person involved:

Installer: qualified technician who positions the appliance and places it in service in accordance with the instructions contained in this manual.

User: the person who, after having read this manual carefully, operates the appliance in accordance with the intended use specified in this manual. The user is obliged to read the manual attentively and refer constantly to the information in it contained.

Routine maintenance technician: qualified technician able to perform routine maintenance of the appliance by following the instructions in this manual.

Special maintenance technician: qualified technician, authorized by the manufacturer to perform extraordinary maintenance of the appliance.

The manufacturer declines any whatsoever responsibility in the case of improper use of the appliance deviating from the reasonably construed intended use, and for all operations carried out that are not in compliance with the instructions laid down in the manual.

This manual must be conserved in a place that is accessible and known to all the operators (installer, user, routine maintenance technician, special maintenance technician).

This manual must not reproduced or divulged, in whole or in part, using any whatsoever mean or in any whatsoever form.

1.4 CLIENT'S RESPONSIBILITIES

The customer is required to:

- effect the electrical connection of the appliance
- prepare the place of installation
- provide consumable materials for cleaning
- perform routine maintenance

In the case of power failure or malfunctions do not open the door in order to maintain uniform temperature inside the unit. If the problem persists for more than a few hours, move the material contents to a more suitable place.

1.5 INSTRUCTIONS FOR SERVICE REQUEST

For all technical problems and any requests for technical service, refer exclusively to your local dealer (See space in the last page) or directly to the manufacturer, specifying model and serial number of the equipment.

2

PRODUCT DESCRIPTION

2.1 TECHNICAL DESCRIPTION

The object of the appliances in this manual is to produce cold through the vaporization at a low pressure in a thermal exchanger (evaporator) of a refrigerant liquid, type HCFC or HFC; the vapour therefore obtained is brought to the original liquid state through a mechanical compression at higher pressure (compressor), followed from a cooling stage in another thermal exchanger (condenser).

The correct and uniform distribution of the cold air into the chamber is granted through one or more electro-mechanical fans (depending from the model).

The appliance consists in a modular single structure with various materials and insulation in expanded polyurethane foam, density 43 Kg/m³.

The appliance instruments are located on the front panel that in some models closes the front of the motor until, inside which the condenser unit and electrical wiring can also be housed.

The appliance interior is fitted with suitable supports for wire shelves (grids) or extractible drawers. The doors are fitted with an automatic device and magnetic seal elements easily replaceable. During the design and construction stages, all the measure have been adopted to implement total safety including radiused interior corners, funnel-shaped base panel to convey condensate to exterior, no rough surface, fixed guards protecting moving or potentially dangerous parts. The maximum grids or drawers load for all Fiocchetti's models is 30 kg, and the weight should be uniformly distributed. **IMPORTANT:** if the light bulb or neon providing internal illumination is broken or faulty, a model with similar features should be used for replacement. Our equipment has been developed for indoor use, and is not meant to be used outdoors.

3.1 GENERAL SAFETY REGULATIONS

Read this manual carefully and follow the prescriptions contained herein.

The user assumes full responsibility in the case of operations carried out without observing the instructions in the manual. Primary general safety regulations:

- do not touch the equipment with wet hand and/or feet
- do not insert screwdrivers or other pointed objects among guards or moving parts of the appliance
- do not pull the power cord to disconnect the appliance from the electrical mains
- make sure that the appliance is not used by non-qualified personnel
- before performing any clearing or maintenance on the appliance disconnect it from the electrical mains by switching it off and extracting the plug
- In the case if faults or malfunctions, switch off the appliance and do not attempt to repair it yourself. All the service and repair operations must be performed exclusively by conveniently qualified authorized technicians.

3.2 APPLICATIONS AND INTENDED USE

This appliance has been conceived to be used in hospitals, laboratories, pharmacies, etc. on professional premises. The appliance has been designed for the storage of products at a controlled temperature, within the following temperature ranges, according to appliance series:

MEDIKA / MEDIKA 2T	+2°C +15°C
LABOR	0°C +15°C
LABOR 2T/PLASMA LABOR 2T	C+ : +0°C +15°C /+0°C +15°; C- +0°C +15°C/-10°C -24°C
EMOTECA	+4°C
EMOTECA TWIN	+4°C
VISION/PLASMA VISION	-15°C -20°C
VISION 2T/ PLASMA VISION 2T	+2°C +15°C / -15°C -20°C
FREEZER/PLASMA FREEZER	-10°C -25°C
ARTIC/PLASMA ARTIC	-25°C -30°C
SUPER- ARTIC/PLASMA SUPERARTIC	-30°C - 40°C
SUPER- ARTIC 2T/PLASMA SUPERARTIC	+2°C +10°C / -20°C -35°C
TER	+2°C +30°C
SPARK PROOF	+2°C +15°C

All the above listed series of appliance are suitable for products storage; for this reason we suggest to store only products that are already cooled, or frozen, depending from the type equipment. On request, models working at temperature ranges different from the standards specified here above or with improved performances may be supplied, like for instance equipment fitted with tropicalized cooling unit. All uses except authorized uses of the appliance shall be considered as "improper use" for which the manufacturer declines all responsibility.

IMPORTANT: to assure a correct functioning of the appliance, the set point temperature must always be lower than the ambient temperature, exception made for TER series.

3.3 USE CONTRAINDICATION

The appliance must not be used:

- Exposing it to outdoors conditions
- With reductions or multi-way adapters
- In places subject to explosive atmosphere or with risk of fire
- Near to heat sources
- In case the equipment was to be embedded in any type of furniture, a correct air flow of the condensing unit (compressor and fan motors) must be ensured. On the contrary, the warranty will immediately expire.

3.4 SAFETY AND ACCIDENT PREVENTION

The appliance embodies various features designed to assure safety and to protect the health of the user. The following list describes the protections adopted against mechanical risks:

- **Stability:** the appliance is designed and built so that even in case shelves/drawers were fully extracted in the intended conditions of operation, it will remain stable so that it can be used with no risk of tipping, falling or sudden movement.
- **Surfaces, edges, corners:** accessible parts of the appliance have no sharp corners, sharp edges or rough surfaces that could cause injury.
- **Moving parts:** moving parts of the unit are designed, built and configured to avoid risk. Moving parts are protected by fixed guards to prevent accidental contact that could result in injuries

LIST OF MEASURES ADOPTED FOR THE PROTECTION AGAINST ADDITIONAL RISKS:

- o **Electrical power:** the appliance has been designed, built and fitted with the aim of preventing the risk of electric shock in compliance with established safety regulations
- o **Noise:** the appliance has been designed and built to reduce risk related to the emission of airborne noise to a minimum (lower than 70 db).

3.5 SAFETY PROTECTIONS ADOPTED

It is strictly forbidden:

- to tamper with or remove the evaporator cover that protects the user from the risk of cutting on the heat exchanger fins
- to remove the data plate fixed to the inside edge of the motor housing showing technical specifications and earth connection warning
- to remove the data plates on the evaporator unit cover near the electrical wiring inside the motor housing which warn the user to disconnect electrical power before working on appliance

The manufacturer declines all responsibility for safety of the appliance if the above recommendations are not observed.

4

TRANSPORT AND HANDLING

4.1 TRANSPORT AND HANDLING

The appliance must be transported and handled exclusively in a vertical position, in observance of the instructions printed on the packing.

This precaution is necessary to avoid contamination of the refrigerant circuit with compressor lube oil resulting in valve and heat exchanger coil failure and start problems of the electric motor. The manufacturer assumes no liability for problems due to transport effected in conditions others than those specified above.

The internal equipment (shelf clips/slides, supports, wire shelves, drawers) are shipped inside the unit. The appliance is secured to a wooden base by means of screws and wrapped in polyethylene or packed in a carton, case or crate.

The appliance must be handled using a fork lift truck with suitable forks (forks length at least equal to 2/3 length of unit).

In case the appliance should be laid down flat in order to bring it into the installation place, it is advisable to wait at least 6 hours before switching it on.

4.2 POSITIONING

Incorrect positioning can cause damage to the appliance and generate hazardous conditions for users. The installer must therefore observe the following general regulations:

- make sure to maintain a minimum of 3 cm distance from the walls
- the room must be well ventilated
- keep from heat sources
- avoid direct sunlight
- remove packing material
- remove accessories from the inside of the unit
- remove the wooden base
- Position the appliance with the help of a spirit level. Adjust the levelling feet on the metal base of the unit if necessary (in the models fitted with adjustable feet) (Fig.1)
- remove the protective PVC film from the external surfaces of the unit

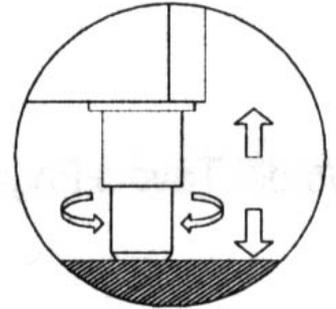


Fig.1

- Clean the interior with a soft damp cloth and alcohol in order to eliminate the protective oils.

4.3 WIRING AND ELECTRICAL HOOK-UP

The electrical plant and electrical hook-up operations must be performed by a qualified electrician. For safety reasons follow the following indications:

- check that the electrical plant is suitably sized for the absorbed power of the unit
- If the electrical socket and the plug on the appliance power cord are incompatible, change the plug with a suitable component, ensuring that the replacement part is approved, according to the laws in force.
- do not use reductions or multi-way adapters

It is important to connect the appliance correctly to an efficient earth system, in compliance with the relevant legislation.

If the power cord is damaged, it must be replaced from the manufacturer, from an authorized after sale service, or from a trained technician with similar competence, in order to avoid any possible risk.

4.4 SET-UP OPERATIONS

To prevent errors and accidents, a series of checks for possible damage sustained during transport, installation and hook-up operations must be performed before starting up the unit.

4.4.1 Preliminary checks:

- check the condition of the power cord (no cuts or chaffing)
- check that the feet, door hinges and shelf supports are stable
- check the condition of internal and external components (pipelines, heat exchanger elements, fans, electrical components, etc.); check also that all parts are firmly fixed into position
- Check that the door seals are not damaged (broken or scratched) and that the doors close and seal properly.

The user must also observe the following instructions to obtain the best operation from the appliance.

4.4.2 Indication for optimal duty:

- do not block the motor compartment air vents
- Arrange the material on suitable shelves or drawers. Do not place the products to refrigerate directly on the base or against the walls, doors or fixed guards of the unit
- make sure door is kept closed

- keep the defrost water drain outlet clear
- limit the frequency and duration of opening; each time the door is opened the internal temperature will alter and with the possibility of ice formations on the evaporator
- perform routine maintenance regularly (**see condenser cleaning Par. 6.3**)
- load the material at ambient temperature gradually to allow correct refrigeration
- The power supply must be as indicated in the technical data plate (+/- 10%)
- The appliance is designed and built to work in ambient temperatures between +15°C e +25°C and relative humidity of 60%. In ambient working operations different respect the specified, will not be possible to achieve the performances declared from the manufacturer.

4.4.3 Special warnings for Artic, Super Artic and Plasma series.

These appliances have been designed and built to store and maintain products at a controlled temperature; the products should be stored when already frozen. The lowest working temperature is -40°C for the series SUPERARTIC and -30°C for the series ARTIC and the rotation of the stored products cannot exceed a percentage of 5% daily.

4.4.4 INTERNAL FITTING NEW MODELS:

MEDIKA	140 – 170 – 200 – 250 – 300 – 400 – 500 – 600 – 700/1000/1500
MEDIKA 2T	280 – 400 – 500 – 600 – 800 – 1000 – 1500
LABOR	140 – 170 – 200 – 250 – 300 – 400 – 500 – 600 – 700/1000/1500
LABOR 2T	280 - 400 – 500 - 700
PLASMA LABOR 2T	280 - 400 – 500 - 700
EMOTECA	140 – 170 – 250 – 400 –500-600- 700/1500
EMOTECA TWIN	250 – 700 – 1500
FREEZER	140 - 250 - 400 – 600 – 700 – 1500
PLASMA FREEZER	140 - 250 - 400 – 600 – 700 – 1500
ARTIC	400 – 600 – 700
PLASMA ARTIC	400 – 600 – 700
VISION	400 – 700
PLASMA VISION	400 – 700
VISION 2T	400 – 500 -700
PLASMA VISION 2T	400 – 500 -700
TER	200 – 400 – 700
SPARK PROOF	400 – 700

The innovative system fitted of stainless steel racks (standard fitted) allow the possibility of having an internal fitting mixing shelves and drawers (mounted on telescopic slides) perfectly interchangeable. For eventual orders of additional shelves or drawers, please refer always to the model and serial number, see data plate paragraph 10.1.

Position the shelves support on the rack at the desired position, insert them into the special slot (Fig. 4) and turn them of 90° to block them. Once positioned 4 supports on the same height level, is possible to insert the shelf (Fig.3).

In order to change the position of the drawers, extract the same, and once it is fully extracted, unlock it from the slides through the unlocking devices (plastic lever black colour) positioned on the side. The drawer is unlocked by pushing the right lever up and the left lever down at the same time. After that is possible to remove the telescopic slides by lifting the front part (Fig.2) of the slide up (to extract it from the rack in the front part) and pulling the slide frontward, to extract the rear part. Repeat the same operations, but inverting the sequence to reposition the slides and the drawers.

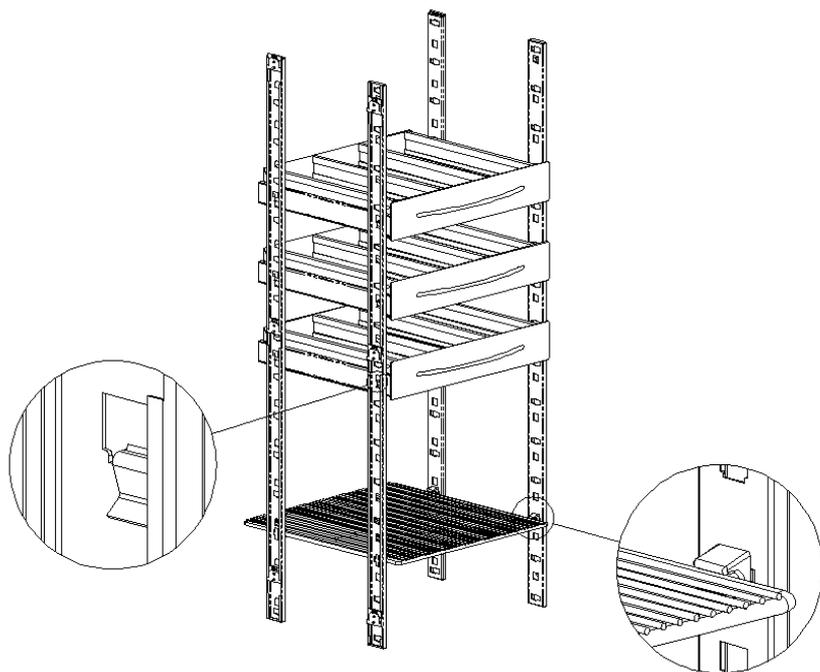


Fig.2

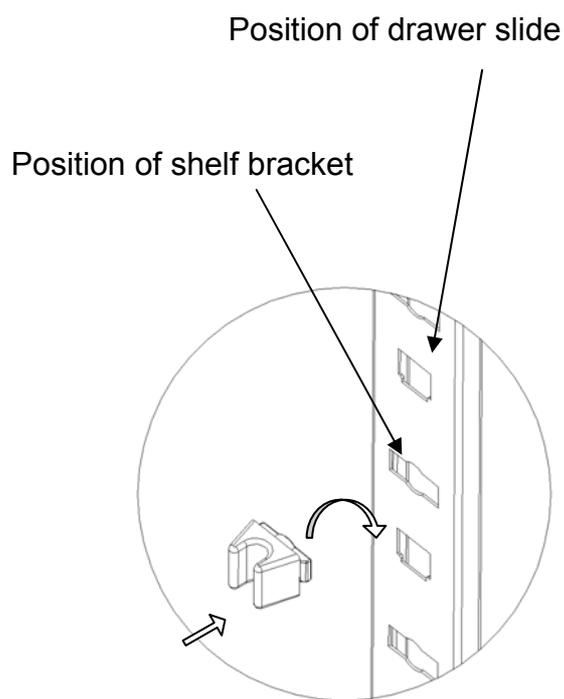


Fig.3

Fig.4

The wall-racks are even easily removable in order to allow a better cleaning of the interior of the appliance. The racks mounted in the front part can be removed pushing them upward (Fig.5), while the ones mounted in the rear side can be removed by first, unscrewing safety fixing screw (using a cross screwdriver) positioned in the top part (Fig.6), and then pushing against the internal wall the small plastic edge on the top part of the rack and simultaneously pulling the rack itself upward (Fig 5).

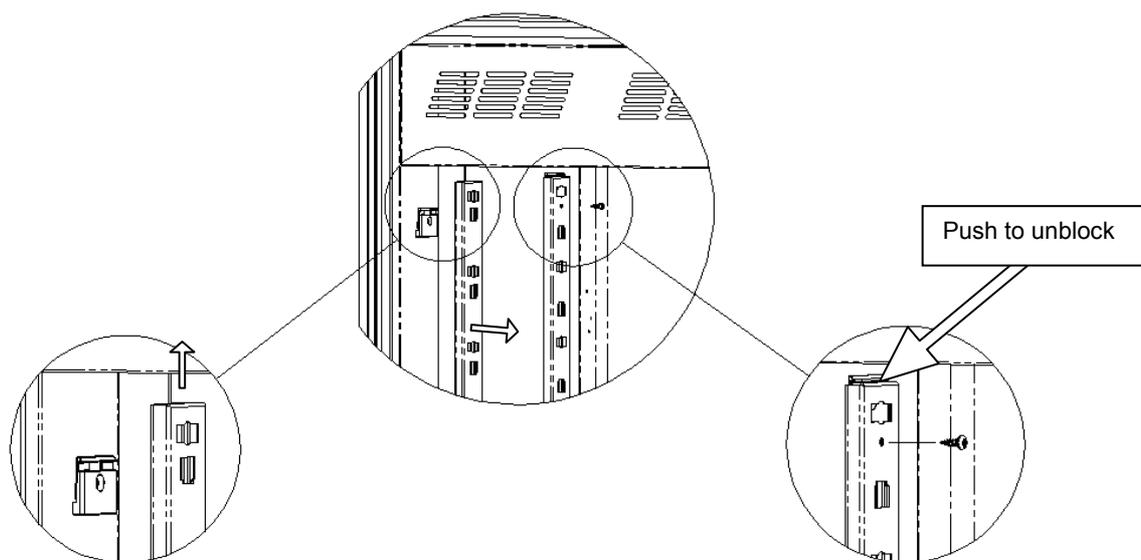


Fig.5

Fig.6

4.4.5 INTERNAL FITTING MODELS:

SUPER-ARTIC	600 – 700 (shelves)
PLASMA SUPERARTIC	600 – 700 (shelves)
SUPERARTIC 2T	700 (shelves)
PLASMA SUPERARTIC 2T	700 (shelves)

Place the shelves support on the rack at the desired position, insert them into the special slots (Fig. 4) and turn them at 90° to block them. After positioning no. 4 supports at the same height level, it will be possible to insert the shelf (Fig.3).

For some special models, the installation of the shelves is different from what described in the previous paragraph.

Place the shelves support in the desired position, insert first the support into the wall-rack, and then insert the edge of the side of the slide into the wall-rack mounted on the internal side part at the corresponding height of the fixing in the rear.

Finally, having inserted a pair of slides at the same height, insert the shelf between them (Fig.7).

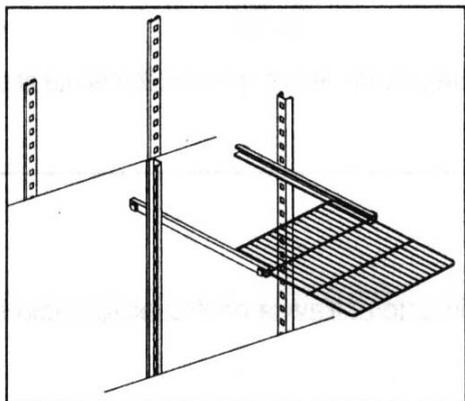
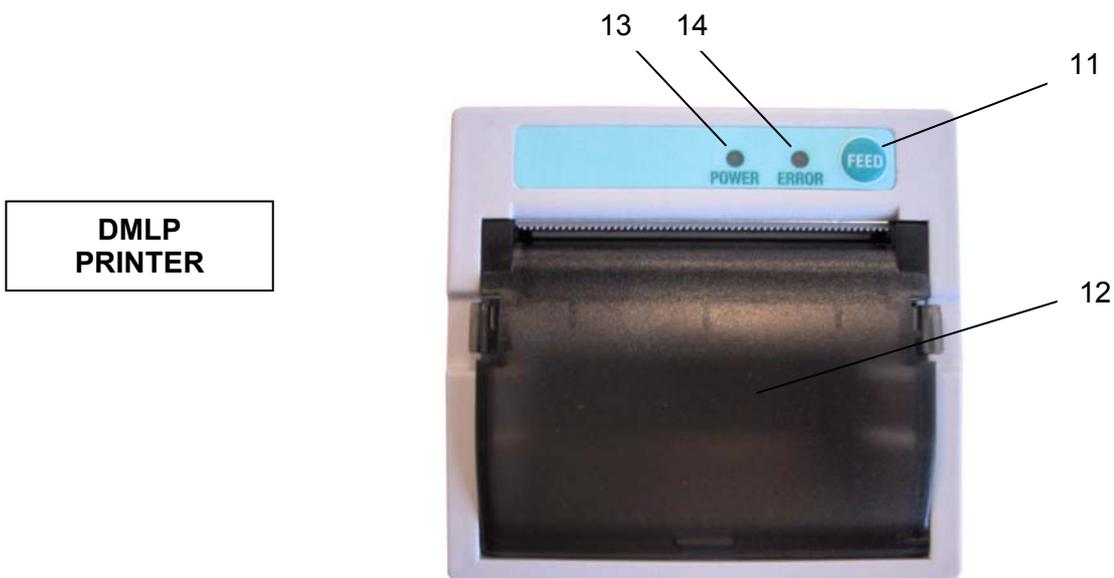
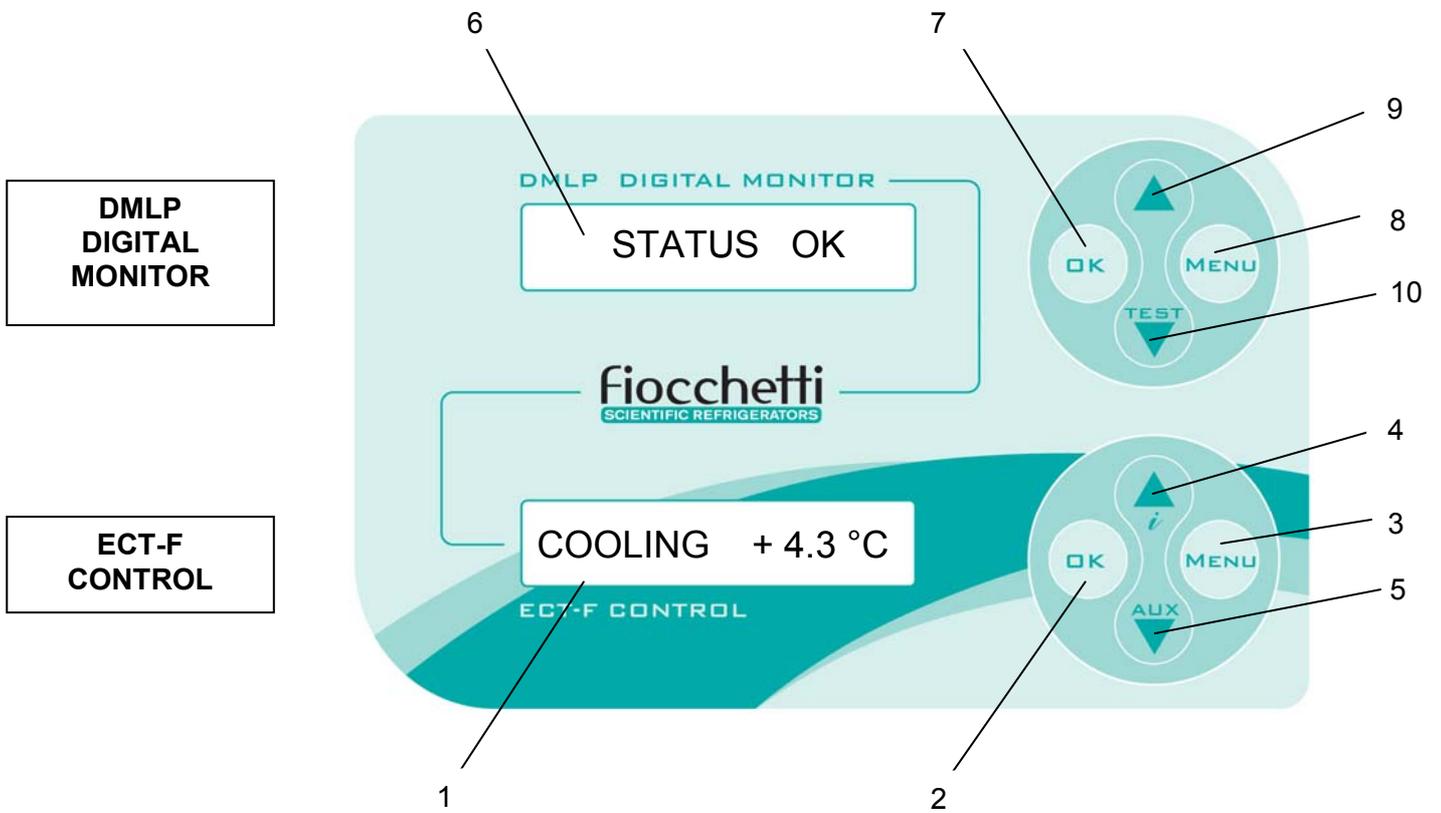


Fig.7

4.4.6 Internal fitting with metallic clips

For the models Medika 450 2t and Ter 80, the shelves are supported by metallic clips.

5.1 CONTROL PANEL – COMPLETE HARDWARE CONFIGURATION



5.1.1 COMPLETE HARDWARE CONFIGURATION - DESCRIPTION

ECT-F CONTROL	1	/	Alphanumeric LCD Display, back-lit
	2		To confirm
	3		To Enter and Esc from the menu
	4		To increase values, scroll menu and for INFO DOCTOR VIEW special function
	5		To decrease values, scroll menu and LIGHT ON (or aux)
DMLP DIGITAL MONITOR	6	/	Alphanumeric LCD Display, back-lit
	7		To confirm
	8		To Enter and Esc from the menu
	9		To increase values, scroll menu
	10		To decrease values, scroll menu and test
DMLP PRINTER	11		Feed paper
	12	/	Paper space
	13	Power	Led (green light) when printer is fed (during print out)
	14	Error	Led (red colour) will blink feebly when data are transmitted or with a brighter colour when no paper is available or paper is stuck.

NOTE: The DMLP ALARM DIGITAL MONITOR (points nr. 6, 7, 8, 9, 10) and the DMLP PRINTER (points nr. 11, 12) can be available as an option on certain models (to special order only)

5.2 ECT-F CONTROL- FUNCTIONING

Introduction

The refrigerator/freezer is equipped with a latest generation Electronic Controller, with a backlit LCD alphanumeric display, to display temperature and working operations with an accuracy of 0.1°C. The controller gives maximum safety in case of alarms and fault conditions, signalling critical conditions and registering every event in order to help the service engineer to speed up the analysis and thus the fixing of any problems. Safety is at the highest level with alarms for High and Low temperature, power-failure, door open as well as auto-test. The ECT-F Control is equipped with an internal clock to catalogue all the events, and is complete with an RS485 IN/OUT port (only without DMLP) for bi-directional telemetry (with dedicated modules, available as accessories). When the DMLP Digital Monitor is present, the RS485 port and the clock are installed only on the DMLP.

5.2.1 SWITCHING ON*

Connecting the power cord of the equipment, the display will show "STAND-BY", which indicates the presence of mains power. Pressing one of the buttons for two seconds will switch on the equipment: the display will show (in sequence) the welcome message, the software name and the firmware version. If the DMLP is not fitted, for a correct data storage please check hour and date (see 5.2.3) the first time the equipment is turned on. If they are not right, modify them (see 5.2.10).

(* Password protected menu. Unprotected if user password=00)

5.2.2 SWITCHING OFF

Press the button , on the display  appears, then press 

The controller requires a confirmation of the command:



To confirm, press again the button , or  to cancel (Esc) and return to main menu.

Important: to esc from the different menu, press  to go back to display of the actual working condition.

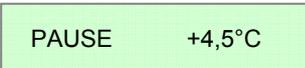
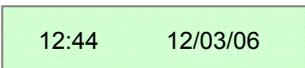
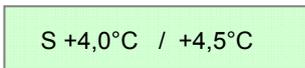
(* Menu protected by password. Unprotected if user password=00)

5.2.3 HOW TO CUSTOMISE THE DISPLAY

When ECT-F is switched on, the display can be customised with 4 different modes of

display using the button 

(Optional)

			
<u>Mode 1 (Default)</u>	<u>Mode 2</u>	<u>Mode 3</u>	<u>Mode 4</u>
Working status and Temperature	Date and time (not present with DMLP Digital Monitor)	Set point and temperature	Relative humidity % (only with humidity sensor installed)

Working status description on the display

STRING	DESCRIPTION OF THE OPERATION IN PROGRESS
PAUSE	Compressor is OFF, waiting next cooling cycle
COOL	Compressor is ON to reach set-point
WAIT DEFROST	After request of manual defrosting, the controller waits for the necessary conditions to proceed automatically with defrosting
ACCESS DENIED	Attempt to access a disabled menu or deny to run a manual defrost if the conditions are not suitable for such action.
DEFROST	The equipment defrosts, warming up the evaporator
DRIPPING	Last phase of the defrosting to allow dripping of condensate water
RECOVERY	Compressor ON after defrosting to re-acquire the set-point
DOOR	Door open (close immediately!)
HEATING	Warming-up phase (ONLY FOR PREPARED MODELS)

5.2.4 ECT-F CONTROL – MENU DESCRIPTION

With the button  access to the available functions. Scroll the menu using the buttons  and .

Switching off	TURN OFF m1	
Customise temperature set-point	CHANGE SET m2	
Customise humidity set-point	CHANGE Rh% m3	(ONLY FOR PREPARED MODEL)
Start defrosting	DEFROST m4	
Start compressor on a time-base	DEEP FREEZE m5	(ONLY FOR PREPARED MODEL)
Display ALARMS LIST	ALARMS LIST m6	
Choose LANGUAGE (IT/EN/FR/DE ES)	LANGUAGE m7	
Set the User password	PASSWORD m8	
Access SERVICE MENU	SERVICE MENU m9	
Set Date/Time	CLOCK SET m10	

Important!

The SERVICE Menu is accessible only with a password.

Clock Menu not present in case of Digital Monitor DMLP installed on the equipment.

5.2.5 HOW TO CHANGE THE TEMPERATURE SET-POINT *

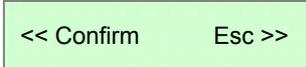
Press the button , reach using the buttons  or  the menu .

Confirm pressing : the display will start blinking the actual Temperature Set Point

This could be modified using  or , with increments of 0,1°C



Confirm pushing  the display will ask to confirm or to exit from the menu.



Confirm with : the display will show  and the controller will restart operation with the new Temperature Set Point

Press  to cancel the setting of a new Set Point and go back to previous menu.

(* Password protected menu. Unprotected if user password=00)

Important: to esc from the different menu, press  until the display will be set on the first display mode.

5.2.6 SPECIAL FUNCTION: DOCTOR VIEW

Pressing for few seconds the button  will start the function INFO DOCTOR-VIEW, that will show automatically the main settings of the Equipment and will start a buzzer test to verify its integrity, as follows:

- Buzzer Test (n.5 “bip”)
- Preset SetPoint
- Actual Evaporator Temperature
- Actual Condenser Temperature
- Low temperature alarm setting (LT) and high temperature alarm setting (HT), with delay time (only without DMLP)
- Door Ajar settings (delay time from door opening) (only without DMLP)

To abandon DOCTOR-VIEW function before the end of the checking, press 

5.2.7 ALARMS & ERRORS

Alarm Warning

The buzzer starts and the display blinks, showing (alternately) the alarm code and the mode of the pre-set visualisation mode. The event is registered in the ALARM LIST. The Controller stores the latest 12 alarms and, for every alarm, the following details:

- **TYPE OF ALARM**
- **CRITICAL TEMPERATURE REACHED**
- **DURATION** of the alarm (for High/Low temperature alarm)
- **DATE/TIME** alarm beginning and end (only for POWER FAILURE)

The Buzzer can be muted by pressing any button of the Controller (the display will keep blink continuously)

Alarms Codes Description

- HIGH TEMPERATURE: code < **HT** >
- POWER FAILURE: code < **B** >
- LOW TEMPERATURE: code < **LT** >
- DOOR OPEN: code < **Door** >

Failure/Alarm messages description

MESSAGE	TYPE OF CRITICAL CONDITION
PROBE S1	Faulty cabinet sensor (call Service)
PROBE S2	Faulty evaporator sensor (call Service)
PROBE S3	Faulty condenser sensor/ Aux (call Service)
LOW EVAP	Evaporation LOW temperature (see diagnostic paragraph no.12)
HIGH CONDENS	Condenser HIGH temperature (see diagnostic paragraph no. 12)
h00:m00	Clock-data loss (see diagnostic paragraph no. 12)
DEFROST TIME	Inadequate defrosting time(see diagnostic paragraph no. 12)
COMPRESSOR WORK	Maximum allowed continuous working % during the last 24 hours (see diagnostic paragraph no. 12)
32C	Events/Strings memory failure (call Service)
DIRTY COND	Inadequate thermal exchange: clean the condenser
ALARM NOTICED	Temperature alarm occurred, in the presence or absence of mains

IN CASE OF S1 FAILURE, THE EQUIPMENT WILL STILL CONTINUE TO FUNCTION CORRECTLY UNTIL THE ARRIVAL OF A SERVICE ENGINEER.

Alarm Warning

When the alarm condition is finished, the display will alternately (every 4 sec.) display the message > NOTICED ALARM < and the standard pre-set display ,

until the User will access to the ALARM LIST menu

ALARMS LIST m6

Recorded Alarm List Visualisation

Press the button  and button  or  to go to menu ALARMS LIST m6

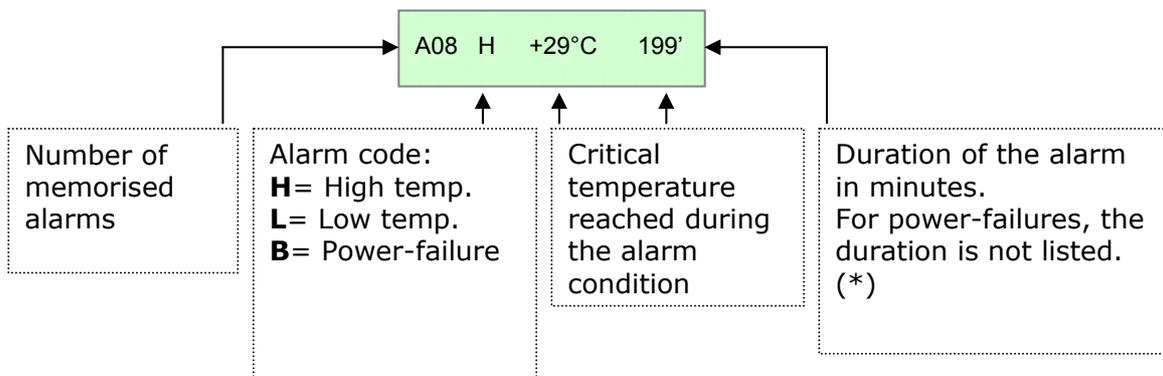
Confirm pressing  : the display will show DETECTED n. 07

The number indicated shows the total number of alarm occurrences since the last reset. In case of no alarms, the display will show “NO EVENT NOTICED”

In case of alarms, press  to access the alarm menu and display all the necessary information/details.

The list is displayed from the last one to the first one, pressing the button .

The reading of the data is as per here under diagram:



(*) For power failure alarms, **pressing continuously the button** , the beginning date/hour (S) and ending date/hour (E) are displayed.

S 14:10 24/08/06

E 14:34 24/08/06

Important: to Esc from the menu, press  until the pre-set visualisation is displayed.

In case the DMLP is installed, all the alarms of the ECT-F Control are inhibited and managed independently from the DMLP Digital Monitor. The functional failures are nevertheless ON.

5.2.8 DEFROSTING

The equipment developed with the ECT-F Control has an advanced managing of the defrosting cycles. **The defrosting is operated only if necessary, thus drastically reducing the number of cycles for a cost-effective operation. For this reason, a manual defrosting has never to be operated .**

If, for any reason and ONLY after contacting Service, a manual defrosting is necessary, follow this procedure:

Press the button  and with  or  go to the menu DEFROST m4

Confirm using the button  and the display will show the message:

<< Confirm Esc >>

Press  to confirm the operation of manual defrosting.

Press the button  to cancel (Esc) and go back to the main menu.

Confirming with the button  will start the operation of manual defrosting. On the display appears the message “DEFROST” followed by “DRIPPING” and “RECOVERY” (phases of the defrosting). **We’d like to draw your attention to the advanced defrosting function that normally avoids the use of this procedure:** if the manual defrosting operation is confirmed, the Controller awaits the necessary condition to start the cycle. In this phase, the display will continue to show every 4 seconds the operations in progress, alternately to the message

WAITING DEFROST

If the conditions for a defrost are totally absent, the controller will display the message:

ACCESS DENIED

5.2.9 PASSWORD

Press the button  and with  or  go to the menu

PASSWORD m8

This menu will give you the possibility to set a new USER PASSWORD to protect SWITCHING ON and SWITCHING OFF the Control, together with the TEMPERATURE SET-POINT. The controller is factory set with password = 00, which allows the user to turn on, off the equipment and to modify the set point freely.

Set the PASSWORD

Press the button  and choose a number between 1 and 255 using  and , to confirm using the button .

Modify the PASSWORD

Press the button : the actual password is now required. Use  and  to insert the password (from 1 to 255) and confirm with the button . When correct, it is now possible to modify the old one. To finish the procedure, press again .

If the PASSWORD is wrong, the display will show “WRONG PASSWORD ” and the Control will automatically go to the main menu. If the PASSWORD is set to ZERO, the protection will be deactivated.

ATTENTION!: if the USER PASSWORD is lost, there is no possibility to retrieve it.

5.2.10 HOW TO SET THE CLOCK (Not present with DMLP Digital Monitor)

Press the button  and with  or  go to the menu 

Press then  : the display will blink with actual date and time. Modify the values

with  and , then press  to confirm the value; continue until all the values are set.



To ensure correct storage of the information, the ECT-F Control has an alarm to signal

eventual loss of date/hour, shown on the display with a blinking 

message (discharged clock battery).

5.2.11 ELECTRICAL PROTECTION

The equipment is supplied with safety fuses on the phase and on the neutral, to acquire an integral protection against electric shocks, short circuits and over-currents, accessible from the front side of the appliance.

As standard, a spare fuse is supplied.



ATTENTION: For double-temperature models with one-on-one compartments:

Model **MEDIKA 400 2T**, **MEDIKA 500 2T** and **LABOR 700 2T**: the Control on the right is for the lower compartment, the Control on the left is for the upper compartment.

5.3 DMLP DIGITAL MONITOR - FUNCTIONING

Introduction

The equipment can be supplied with DMLP Digital Monitor (completely independent from the ECT-F Control) to record the temperatures, the temperature alarms and the power failures (using a back-up battery supplied as standard, automatically recharged)

The DMLP Digital Monitor is developed with a back-lit LCD alphanumeric display to monitor and record **every minute** of operation, with maximum temperature precision (0,1 °C).

The products are completely safe and monitored, using the High/Low temperature alarms, power failure alarms, door ajar and diagnostic tests.

The storage of all the data is obtained with two internal memory units: the first for a quick access to the last 45 days of operation, the second with an SD Secure Digital multi-media card of 128MB, a “black-box” to grant at least **five years** of data storage.

The information stored on the SD Card is:

- Day of the week, date and hour
- Temperature zone A and B (sensors A and B)
- Door position zone A and B (sensors A and B)
- Door opening time zone A and B (sensors A and B)
- Relay Status (Dry Contact)
- Automatically recharged battery status, mains/power failure
- High/Low Temperature Alarms limits of both zone and alarm delay time
- Failures and Alarms codes
- Modification to the pre-set parameters

The DMLP Digital Monitor is equipped with an internal clock to register all the events, with two dry contacts and an RS485 IN/OUT port (all fitted as standard) for bi-directional remote control/monitoring of the appliance through the dedicated optional modules (Web Light Server and/or GSM Communicator).

5.3.1 SWITCHING ON*

Connecting the power cord of the equipment, the display will show “STAND-BY”, which indicates the presence of the mains power. Pressing one of the buttons for two seconds will switch on the DMLP Digital Monitor: the display will show (in sequence) the welcome message and the firmware version.

For a correct data storage check date and hour (see 5.3.3) the first time the equipment is turned on. If they are not right, modify them (see 5.3.10)

(* Password protected menu. Unprotected if user password=00)

5.3.2 SWITCHING OFF*

Press the button , on the display , then press 

The control requires a confirmation of the command : 

to confirm, press again the button , or  to cancel (Esc) and return to main menu

Important: to Esc the different menu press  until the first visualization mode is reached

(* Password protected menu. Unprotected if user password=00)

5.3.3 HOW TO CUSTOMISE THE DISPLAY

When the DMLP is ON, the display can be customised with 2 different displays

pressing in sequence the button 

STATUS OK

12:44 12/03/06

Mode 1 (default)
Functioning status

Mode 2
Date/Hour

5.3.4 4 DMLP DIGITAL MONITOR – MENU DESCRIPTION

With the button  there is access to the list of available functions. Use buttons  and  to access the different procedures.

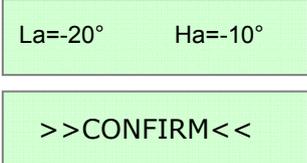
SWITCH OFF THE DMLP	TURN OFF m1
ALARMS LIST	ALARMS LIST m2
TEMPERATURES ALARM LIMITS	LIMITS m3
DOOR OPENINGS	DOOR OPENINGS m4
PASSWORD SETTING	PASSWORD m5
DATE/HOUR SETTING	SET CLOCK m6
PRINT MENU	PRINTER MENU m7
SERVICE MENU	SERVICE MENU m8
CORRECT SD EXTRACTION	SD EXTRACTION m9
SET DEFAULT LANGUAGE	LANGUAGE m10
ACCESS TO THE MENUS OF COMPARTMENT EXCLUSION	MODALITY m11

5.3.5 HOW TO CHANGE TEMPERATURE LIMITS

Press the button  and then  or  until display of 

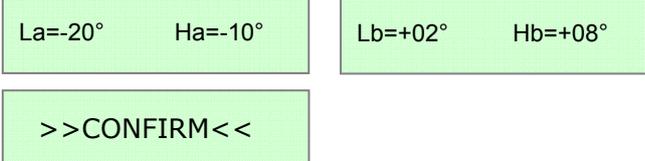
Confirm using the button . There will now be shown the pre-set alarm limits: the LOW temperature alarm limit is blinking. Change the values with the button  and  then confirm with the button . Now the HIGH temperature alarm limit is blinking change the value with the buttons  and , then confirm pressing .

Sequence with one sensor (A):



La=-20° Ha=-10°
>>CONFIRM<<

Sequence with two sensors (A – B):



La=-20° Ha=-10° Lb=+02° Hb=+08°
>>CONFIRM<<

To instantly display the set limits keep the button  pressed for a few seconds.

Attention: for the models equipped with the ballasted probe for product temperature simulation (optional)

For single temperature refrigerators equipped with no. 2 probes in the chamber, probe Sa will be the sensor for product temperature simulation, while sensor Sb will detect air temperature.

(* Password protected menu. Unprotected if user password=00)

5.3.6 SPECIAL FUNCTION: TEST

Press the button  for few seconds to activate the function TEST that will verify the integrity of the alarm system, running a test of the following functions:

- Battery test
- Buzzer integrity (continuous sound for four seconds)
- Acoustic and Visual simulation of the HIGH temperature alarm (sensor A)
- Acoustic and Visual simulation of the LOW temperature alarm (sensor A)
- Acoustic and Visual simulation of the HIGH temperature alarm (sensor B, when present)
- Acoustic and Visual simulation of the LOW temperature alarm (sensor B, when present)
- Door Micro switch integrity (request of door opening by the user)
- Dry contacts test
- Latest memory reset test

5.3.7 ALARMS & ERRORS

Alarm warning

The buzzer will sound and the display will start to blink, showing the alarm code and the time of the beginning of the alarm itself, alternately with the actual cabinet temperature. The event will be subsequently registered in the ALARMS LIST. The DMLP Digital Monitor memorises the latest 16 alarms and, for every alarm, it memorises the following data:

- **TYPE OF ALARM**
- **CRITICAL TEMPERATURE ACQUIRED**
- **DATE/TIME** alarm beginning
- **DURATION** of the alarm for HIGH/LOW temperature alarms
- **Date/time** beginning and ending of POWER FAILURE alarms.

It is possible to mute the alarm by pressing any of the DMLP buttons. After 15 minutes, in case no maintenance has been carried out, the DMLP Digital Monitor buzzer will be automatically re-activated.

Alarm messages description:

The display warns the User of the anomaly with different messages, divided in 4 sub-categories, as follows:

- Temperature alarm (T)
- Door ajar (P)
- Functional failure (G)
- Power failure (E)
- Info (I)

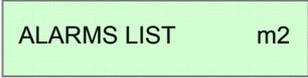
MESSAGE	T	TYPE OF ANOMALY
HIGH TEMP	T	Pre-alarm of Hi temperature, or Hi temperature alarm (blinking and buzzer)
HIGH TEMP A	T	Pre-alarm of Hi temp. zone A, or Hi temp. alarm (blinking and buzzer)
HIGH TEMP B	T	Pre-alarm of Hi temp. zone B, or Hi temp. alarm (blinking and buzzer)
LOW TEMP	T	Pre-alarm of Low temp., or Low temp. alarm (blinking and buzzer)
LOW TEMP A	T	Pre-alarm of Low temp. zone A, or Low temp. alarm (blinking and buzzer)
LOW TEMP B	T	Pre-alarm of Low temp. zone B, or Low temp. alarm (blinking and buzzer)
DOOR ALARM	P	Door open alert, or Door alarm (blinking with buzzer)
DOOR A ALARM	P	Door A open alert, or Door alarm (blinking with buzzer)
DOOR B ALARM	P	Door B open alert, or Door alarm (blinking with buzzer)
SWITCH	G	Possible faulty micro switch (for one or two doors) - See diagnostic par. 12
PROBE S1	G	Faulty sensor S1
PROBE S2	G	Faulty sensor S2
SD ABSENT	G	Memory card SD enabled but not present
SD PROTECTED	G	Memory card SD enabled but protected with switch
INVALID SD	G	Memory card SD enabled but not formatted for the DMLP - See diagnostic paragraph no. 12
EXTRACT SD	I	Requires the extraction of SD card within one minute
INSERT SD	I	Sd extracted for data downloading but not yet re-inserted
BATTERY NOT CONNECTED	G	Battery not connected or low . See diagnostic paragraph no. 12.
FAULTY BATTERY	G	Battery with current under 7,0 V after charge cycle. See diagnostic par. 12
POWER FAILURE	E	Power failure
MAINS ABSENT	E	Power failure (over 30 minutes)
PRINT CANCELLED	I	Cancelled print (whatever button is pressed during printing)
PRINT STOPPED	I	Print request with low power or power failure See diagnostic par. 12

Alarm Warning

When the alarm condition is finished, the display will alternately display the message  and the standard pre-set visualisation, until

the user will access to the ALARM LIST menu 

Alarms List Visualisation

Press the button  and button  or  to go to menu 

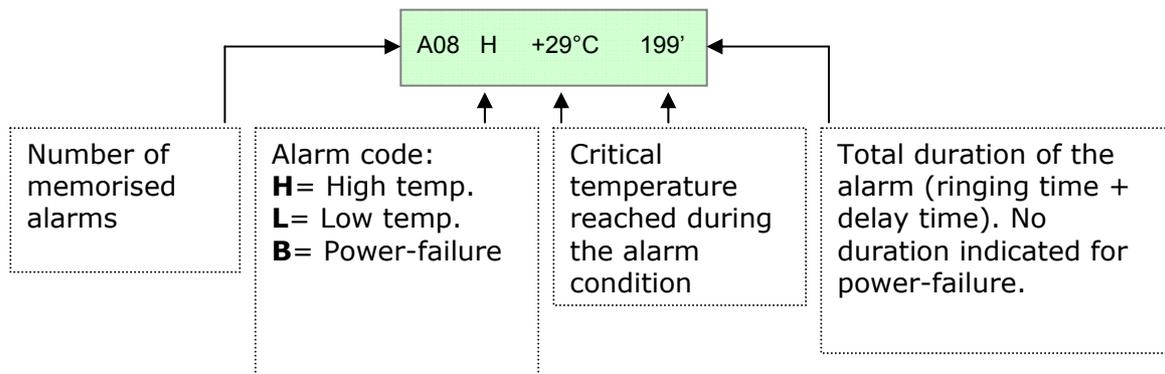
Confirm pressing  : the display will show 

The number indicated shows the total number of alarms that occurred since last reset. In case of no alarms, the display will show "NO EVENT"

In case of alarms, press  to access the alarm menu and display all the necessary information/details.

The list is displayed from the last one to the first one, pressing the button .

The reading of the data is as hereunder in the diagram:



In case of double-sensor configuration (n. two sensors), the alarm codes are respectively:

- Ha**= High Temperature sensor A
- La**= Low Temperature sensor A
- Hb**= High Temperature sensor B
- Lb**= Low Temperature sensor B

Pressing continuously the button , the beginning date/hour of the alarm are shown.

Important: to Esc from the menu, press  until the pre-set visualisation mode.

Remark: DMLP Digital Monitor is equipped with a buffer 12V battery, type 2,1Ah, placed inside the equipment. The life of the battery goes generally from 2 to 4 years, according to the number of recharge cycles and ambient temperature. After this period, the battery will have to be replaced with a unit with the same features. The DMLP Digital Monitor will display a message informing the user that the replacement is necessary. In case of long term disconnection of the equipment from the mains, or if the DMLP is kept switched off (3-6 months) for a long time, the life of the battery will be shortened. For this reason, we suggest to keep the system always ON. In case of power failure, a battery in good conditions will maintain

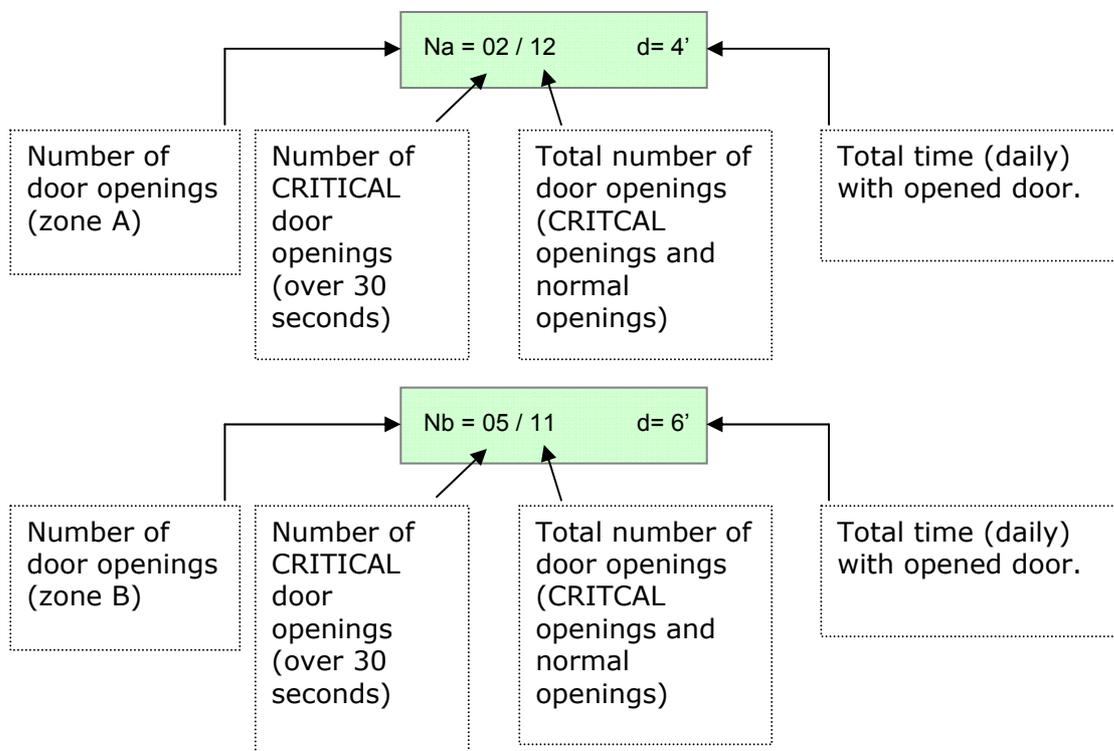
the DMLP active for 12 to 14 hours, during which the data recording is guaranteed. After this time, the DMLP will automatically turn off. After the restoring of normal power conditions, the equipment will turn on automatically and restart. A message of No battery or Faulty Battery could be caused by a low battery tension value related to the protection fuse placed on the electronic board. The reason of that could some power peaks or fluctuations. In this case, the fuse (5x20 2A) or the battery will have to be replaced with some similar features parts.

5.3.8 DOOR OPENINGS

The DMLP Digital Monitor registers the total number of door openings and the total daily time with the door opened for the latest 32 days.

Press the button  and then  or  to go to menu DOOR OPENING m4

Confirm using button . The display will show the latest door opening stored:



Confirm with the button  and then  or  to analyse another day of operation.

DOOR 05/07/06

5.3.9 PASSWORD

Press the button  and with  or  go to the menu PASSWORD m5

This menu will give you the possibility to set a USER PASSWORD to protect SWITCHING ON and SWITCHING OFF the DMLP, together with the TEMPERATURE ALARM LIMITS, the DATE/HOUR settings and access to the MODALITY menu.
The DMLP Digital Monitor is factory set with password=00.

Enter the password

Press the button  and choose a number between 0 and 255 with  and , then confirm pressing again .

Modify the PASSWORD

Press the button : the actual password is now required. Use  and  to insert the password (from 0 to 255) and confirm with the button . When correct, it is now possible to modify the old one. To finish the procedure, press again .

If the PASSWORD is wrong, the display will show "PASSWORD ERROR" and the Controller will automatically go to the main menu. If the PASSWORD is set to ZERO, the protection will be deactivated, the control can be switched on and off, and limits and hour/date can be modified freely.

ATTENTION!: If the end user password is lost, there is no possibility to retrieve it.

5.3.10 HOW TO SET THE CLOCK*

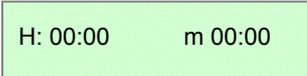
ATTENTION: We suggest to set (if necessary) date and hour only when the equipment is turned on for the first time, and avoid modifying them later. Changing DMLP Digital Monitor date and hour will mean **an immediate erasing of the recorded data**, i.e. those referred to the latest 45 days of thermoregulation. The information will not be lost anyway, since it will always be stored and available inside the SD card. In case you wish to modify date and hour later, we inform you that DMLP Digital Monitor records the date of the last MEMORY RESET and it is possible to access quickly this function through the TEST function.

Press the button  and with  or  go to the menu 

Press then : the display will blink with actual date and time. Modify the values

with  and  then press  to confirm the value; continue until all the values are set.



To give correct storage of the information, the DMLP Digital Monitor has an alarm to signal eventual loss of date/hour, shown on the display with a blinking message (clock battery discharge). 

(* Password protected menu. Unprotected if user password=00)

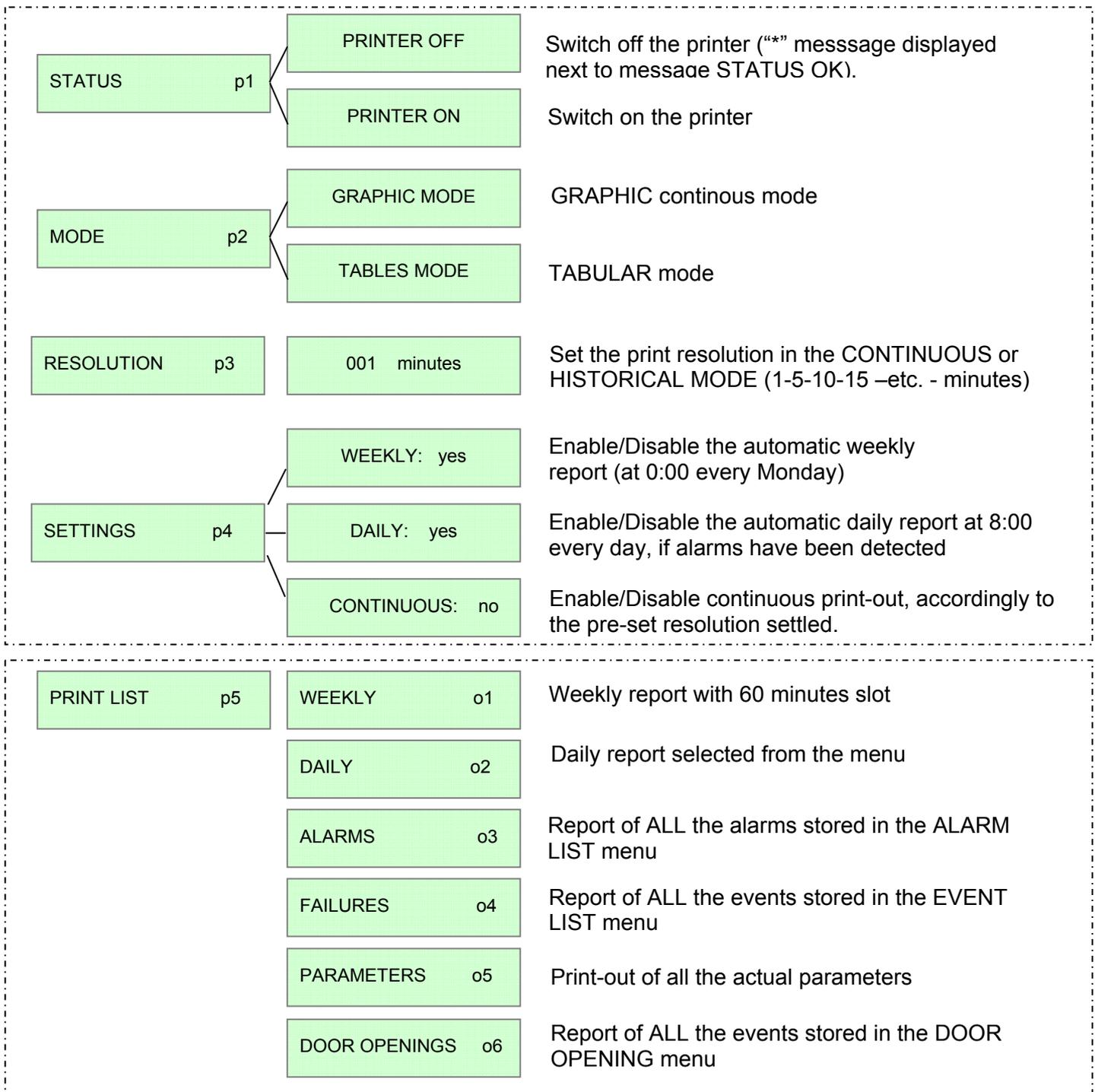
5.3.11 PRINTER

Press the button , then use  and  to go to menu PRINTER MENU m7

Press the button  to access the customisation of the print-out.

Default Configuration:

- STATUS : ON
- MODE : TABULAR
- SLOT : 30 Minutes
- SETTINGS: WEEKLY: YES
- DAILY: YES
- CONTINUOUS: NO



PRINT MENU : WEEKLY

To enter in the menu, confirm using the button  type the beginning date of the report using  and  to set the day , and press  to confirm

of 13 / -- / --

continue with the same procedure for the month and the year until the visualisation of the message <<Confirm Esc>> . Confirm using the button  to start the print, or cancel the operation pressing  .

Example:

```

-----
          STAMPA SETTIMANALE
          S/n 255.255.255
          10/09/07 16/09/07
-----
Ora  Lu10 Ma11 We12 Gi13 Ve14 Sa15 Do16
-----
00:00 +4 +4 +4 +4 +4 +4 +4
01:00 +4 +4 +4 +4 +4 +4 +4
02:00 +4 +4 +4 +4 +4 +4 +4
03:00 +4 +4 +4 +4 +4 +4 +4
04:00 +4 +4 +4 +4 +4 +4 +4
05:00 +4 +4 +4 +4 +4 +4 +4
06:00 +5 +5 +4 +4 +4 +4 +4
07:00 +4 +4 +4 +4 +4 +4 +4
08:00 +4 +4 +4 +4 +4 +5 +5
09:00 +4 +5 +4 +4 +4 +4 +4
10:00 +5 +4 +4 +4 +4 +4 +4
11:00 +4 +4 +4 +4 +4 +4 +4
12:00 +4 +4 +4 +4 +4 +4 +5
13:00 +4 +4 +4 +4 +4 +4 +4
14:00 +4 +4 +4 +4 +4 +4 +5
15:00 +4 +4 +4 +5 +4 +4 +4
16:00 +5 +4 +4 +4 +4 +4 +4
17:00 +5 +4 +4 +4 +5 +4 +4
18:00 +4 +4 +4 +4 +4 +4 +4
19:00 +4 +4 +5 +5 +4 +5 +4
20:00 +5 +4 +4 +4 +4 +4 +5
21:00 +5 +4 +4 +5 +4 +4 +4
22:00 +4 +4 +4 +4 +4 +5 +4
23:00 +4 +4 +5 +4 +4 +4 +4
-----
          S/n 255.255.255
          17/09/07
-----
          LISTA ALLARMI
-----
13/09/07 h 15:21 Ha +11°C d=002 min
    
```

Type of print
Serial number of the DMLP
Report beginning and end

Warning 1
To indicate that between
03:00 pm and 04:00 pm
there has been an alarm

Report of the pre-set
temperature limits with
date and time, High/Low
and delay. If modified by
the User, these details
will be indicated in the
print with date and time

The indication in white-over-black indicates that a temperature alarm occurred. Details are highlighted on the same print report.

PRINT MENU: DAILY

To enter in the menu, confirm using the button  Type the beginning date (DD/MM/YY) of the report

using  and  to set the day, and press  to confirm

of 03 / -- / --

continue with the same procedure for the month and the year until the display of the

message  . Confirm using the button  to start the print,

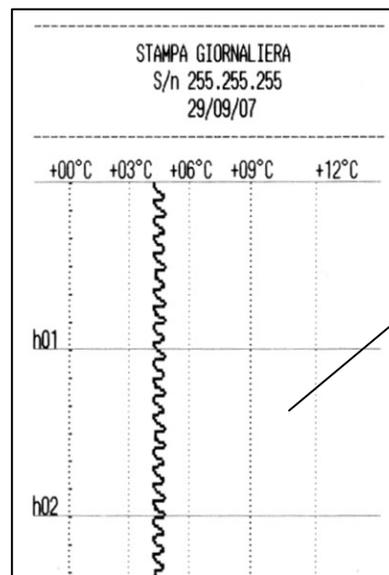
or cancel the operation pressing  .

To print another day, press  and repeat the procedure.

Example: Tabular and Graphical daily report

Tabular report with sensor A (left) and B (right), with 10-minutes slot

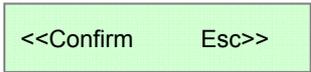
STAMPA GIORNALIERA BIZONA			
S/n 255.255.255			
03/08/07			
Data	Ora	Vano A	Vano B
03/08/07	09:54	+04.1°	+21.6°
03/08/07	10:04	+04.0°	+21.2°
03/08/07	10:14	+03.9°	+21.4°
03/08/07	10:24	+04.7°	+21.4°
03/08/07	10:34	+04.5°	+21.5°
03/08/07	10:44	+03.8°	+21.5°
03/08/07	10:54	+04.7°	+21.4°
03/08/07	11:04	+04.4°	+21.4°
03/08/07	11:14	+05.5°	+21.8°
03/08/07	11:24	+03.8°	+21.5°
03/08/07	11:34	+04.7°	+21.8°
03/08/07	11:44	+04.2°	+21.8°
03/08/07	11:54	+05.6°	+22.9°
03/08/07	12:04	+03.6°	+22.5°
03/08/07	12:14	+04.5°	+22.5°
03/08/07	12:24	+03.8°	+22.8°
03/08/07	12:34	+05.2°	+22.7°
03/08/07	12:44	+03.4°	+23.0°
03/08/07	12:54	+04.1°	+22.7°
03/08/07	13:04	+03.9°	+23.3°
03/08/07	13:14	+04.9°	+22.8°
03/08/07	13:24	+03.9°	+23.5°
03/08/07	13:34	+03.8°	+23.0°



Graphical report, historical or continuous

PRINT MENU: ALARMS / FAILURES / DOOR OPENINGS / PARAMETERS

To enter in the different Menu, press the button .



Confirm pressing button  or cancel the operation pressing .

Examples:

```
-----
S/n 255.255.255
17/09/07
-----
LISTA ALLARMI
-----
13/09/07 h 15:21 Ha +11°C d=002 min
08/09/07 h 12:05 Ha +14°C d=011 min
08/09/07 h 12:02 Ha +12°C d=000 min
08/09/07 h 09:25 Ha +13°C d=006 min
08/09/07 h 09:13 Ha +10°C d=001 min
07/09/07 h 14:54 Ba +11°C d=009 min
07/09/07 h 09:47 Ha +10°C d=000 min
06/09/07 h 19:10 Ha +18°C d=016 min
06/09/07 h 11:21 Ha +12°C d=002 min
05/09/07 h 17:33 Ha +05°C d=087 min
```

Print **Alarm List** with Alarm Code, date and hour, maximum temperature reached and duration of the event

```
-----
S/n 255.255.255
17/09/07
-----
APERTURE VANO A
-----
15/09/07 TOT n^005/001 min; n^002>030 sec
14/09/07 TOT n^003/000 min; n^000>030 sec
13/09/07 TOT n^031/005 min; n^002>030 sec
12/09/07 TOT n^001/000 min; n^000>030 sec
8/09/07 TOT n^014/012 min; n^005>030 sec
7/09/07 TOT n^020/003 min; n^005>030 sec
6/09/07 TOT n^019/009 min; n^005>030 sec
5/09/07 TOT n^002/007 min; n^002>030 sec
```

Print door **Openings**, date and hour with number and total time, and total number of critical openings

```
-----
S/n 255.255.255
17/09/07
-----
PARAMETRI
-----
ADR 000 flg IOS 245 flg CA1 +0.0 °C
CA2 +0.0 °C DAA 060 min DSA 000 min
LAA -00 °C HAA +10 °C DAB 060 min
DSB 001 min LAB -00 °C HAB +10 °C
BUR 015 min BOD 010 min BAT 001 flg
TRB 012 ora PRE 000 flg RES 030 min
DOA 030 sec DOB 030 sec ROL 000 flg
UMT 000 flg PSC 000 flg SNA 001 flg
SNB 001 flg
```

Print settled DMLP Digital monitor **Parameters**

```
-----
S/n 255.255.255
17/09/07
-----
LISTA GUASTI
-----
07/09/07 14:39 GUASTO RETE
07/09/07 09:20 GUASTO RETE
06/09/07 18:54 GUASTO RETE
06/09/07 11:10 SWITCH
06/09/07 09:39 SONDA Sa
06/09/07 09:39 SONDA Sa
06/09/07 09:39 BATTERIA ASSENTE
06/09/07 09:38 BATTERIA ASSENTE
05/09/07 19:05 GUASTO RETE
05/09/07 19:05 BATTERIA ASSENTE
05/09/07 19:04 BATTERIA ASSENTE
05/09/07 17:08 SONDA Sb
05/09/07 16:59 SONDA Sb
```

Print **Failure list** with date, hour and type of failure

Automatic print of **Alarm detail** when alarm is over

```
-----
STAMPA GIORNALIERA ALLARMI VANO A
S/n 255.255.255
08/09/07
-----
ALTA TEMP. NO RETE: max +11° Durata 009'
ALTA TEMPERATURA : max +10° Durata 000'
-----
Limiti senza variazioni: +00°/+10° R 000'
```

Daily automatic Report in case of temperature alarm with type of alarm, maximum temperature reached and duration of the event. The limits and related delay time are indicated, along with any modification occurred.

```
13/09/07 h 15:21 Ha +11°C d=002 min
```

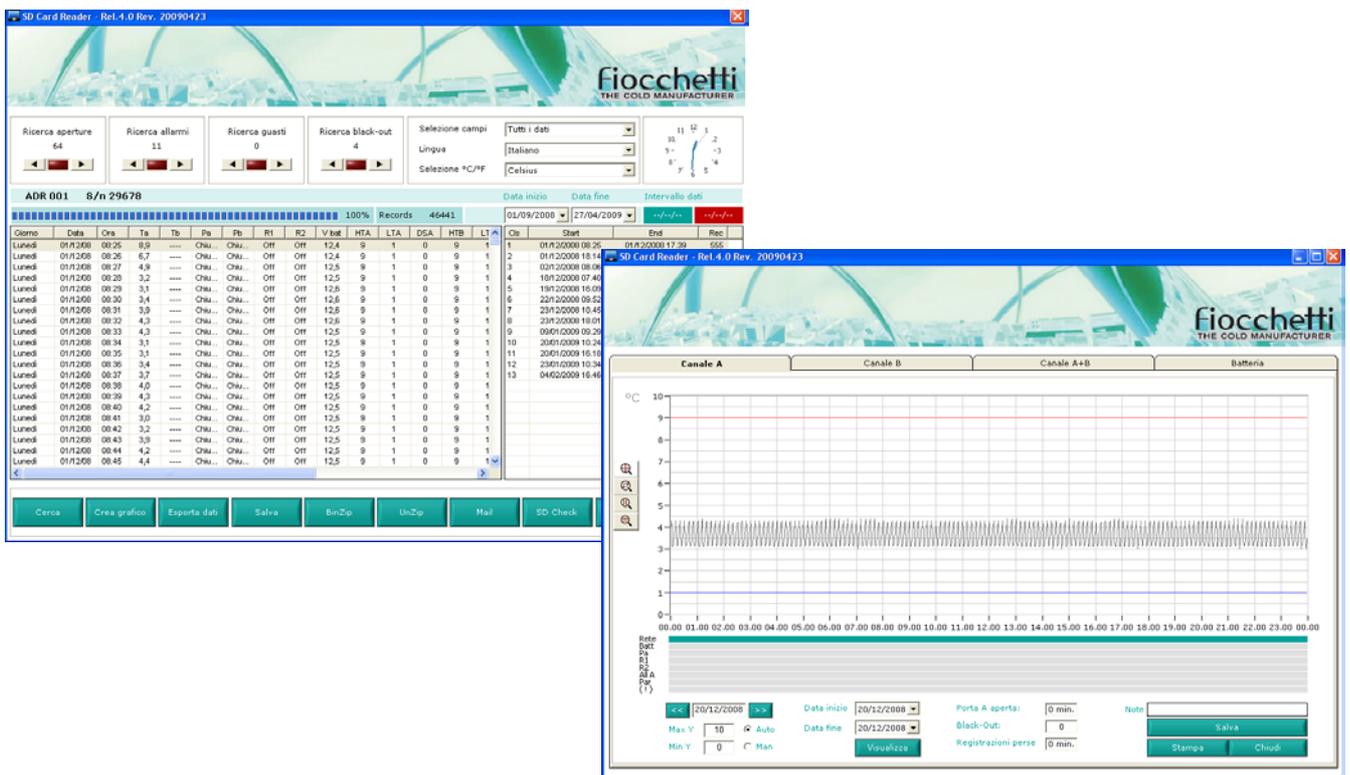
5.3.12 SECURE DIGITAL (SD) EXTRACTION AND READING

Press the button  and with  or  reach the menu SD EXTRACTION m9

Confirm with . Within 60 seconds extract the SD placed in the back rear part of the equipment for the models with cooling unit placed on the top, and on the left side for models 140/280. The position of the SD is indicated by a sticker.

To extract the SD, press on it with a finger. Insert the SD inside the supplied Card Reader and connect the device to the USB port of the PC. Install the program “SD Card Reader Capture” executing the file “Setup.exe” and follow the instructions on screen. Once installation is finished, open the program “SD Card Reader Capture1.0”, enter the dates of search beginning and end, select information required and click on “Browse”. Click now on file “DATALOG.bin” (inside the SD). After loading all necessary Data and Records (this operation may last a few minutes) it will be possible to:

- Analyse them in the scheme shown below
- Export them in a “Data file” for processing them with other programs (for instance: Excel....)
- Create immediately a daily temperature graph.



For a back-up of the data, open the SD card content and make a copy of the file “DATALOG.bin”. Pay attention not to cancel or move the file erroneously. This operation could definitely damage the data recorded on the SD card.

IMPORTANT! After the SD card has been extracted (please make sure to follow the above mentioned correct procedure) all data will be saved in the DMLP Digital Monitor memory for maximum 120 minutes. At the reinsertion, all the saved data will be recorded on the SD, while those referred to the exceeding time will definitely be lost. **For maintaining a complete historical list of all the data, we would advise not to extract the Secure Digital card for a longer time than indicated.**

5.3.13 MODALITY

This function is available only with double temperature equipment, (i.e. Mod.280 2T, 400 2T, 500 2T, 600 2T, 700 2T) and allows the eventual exclusion of one of the two available compartment disabling the Alarms signals in case the compartment is not in use or in case of faulty conditions.

Press the button  and select with the buttons  or  the menu

MODALITY	m11
----------	-----

Confirming with the button  the display visualises:

PROBE Sa	on
----------	----

Through the buttons  or  visualise the following compartment

PROBE Sb	on
----------	----

Confirming with the button  on the wished compartment “A” = Top /Left
“B” = Down / Right

The string “on” will start blinking.

Using the buttons  or  to select “off”

Confirming with the button  the display shows the message of further confirmation or exit from Menu.

<< Confirm	Esc >>
------------	--------

Confirm with the button  the display visualises the message

>> CONFIRM <<

Go back to the main menu.

To underline that the functioning of DMLP Digital Monitor has been limited, next to the main message the symbol “*” will appear

STATUS OK *

The information in this section is addressed to the end users, either as non-specialized personnel or as routine maintenance technician.

6.1 PROHIBITION OF THE REMOVAL OF THE SAFETY DEVICES

It is strictly forbidden to remove guards or safety devices when performing routine maintenance works. The manufacturer disclaims all liability that may arise if this regulation is not observed.

6.2 CLEANING THE INTERIOR AND EXTERIOR OF THE APPLIANCE

The appliance is thoroughly cleaned in our factory before delivery. We recommend, however, that you clean the interior of the appliance before use. Before any cleaning operation, make sure that the appliance power cord is disconnected. Also it is suggestible to clean both the interior and the exterior surfaces of the appliance at least twice in a year.

For more details see the below paragraph.

For this scope is suggestible:

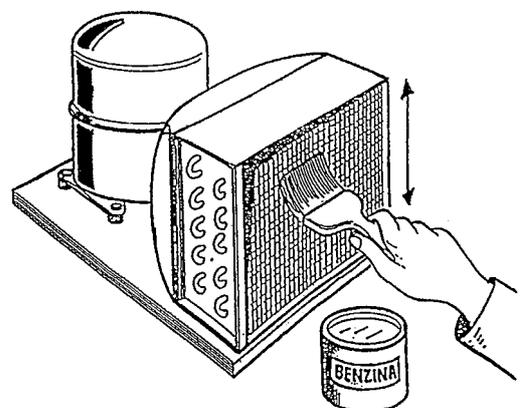
- Cleaning products: water and non-abrasive neutral detergent. **DO NOT USE SOLVENT OR THINNERS**
- Cleaning method: use a cloth or sponge soaked in a suitable cleaning product to clean the interior and exterior parts of the cabinet
- Sanitation: do not use substances that could alter the basic characteristics of the stored material
- Rinsing: use a cloth or sponge soaked in clean water. **DO NOT USE WATER JETS**
- Frequency: at least twice in a year or at different intervals in accordance with the type of pharmaceutical products conserved

6.3 CONDENSER CLEANING

In the models with the motor in the bottom part remove the protection guards as described in the paragraph 7.1.1

In the models with the motor in the top part, the condenser is directly accessible using a step ladder to reach the top of the appliance.

Clean with MONTHLY frequency the condenser (depends from the dust present in the ambient). Remove any dust or fluff that has deposited on the heat exchanger fins using an air jet or dry brush and, working with up and down movements. **DO NOT USE ANY METAL BRUSH**



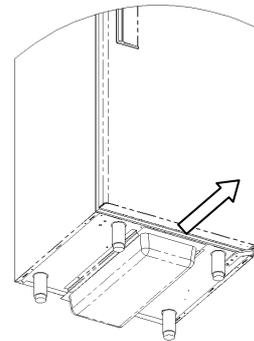
ATTENTION:

BEFORE CLEANING THE CONDENSER SWITCH OFF THE APPLIANCE, DISCONNECT THE POWER CORD.

In order to guarantee an optimal working of the appliance follow the indication given from the manufacturer and arrange the ordinary maintenance through qualified technician.

6.4 CONDENSATE WATER DRAINING

The defrosting process creates condensate water. In the equipment with the motor placed in the upper part the water is drained into a tray, supplied as a standard accessory, that has to be positioned under the appliance itself, supported by pre-arranged slides. This tray has to be emptied cyclically.



List of the models with the motor in the top part:

MEDIKA	600
MEDIKA 2T	450 2T
LABOR	400 – 600
EMOTECA TWIN	700 – 1500
FREEZER	400 – 600 – 700
PLASMA FREEZER	400 – 600 – 700
ARTIC	400 – 600 – 700
PLASMA ARTIC	400 – 600 – 700
SUPER-ARTIC	600 – 700
PLASMA SUPER-ARTIC	600 – 700
SUPER-ARTIC 2T	700 2T
PLASMA SUPER-ARTIC 2T	700 2T
LABOR 2T	700 2T
PLASMA LABOR 2T	700 2T
SPARK-PROOF	400 – 700
VISION	700
PLASMA VISION	700
VISION 2T	700
PLASMA VISION 2T	700
TER	400

The models with the motor in the top part may be fitted with a special heated tray (electrically operating) - optionally available- that will evaporate the defrosting water automatically.

In all the models with the motor placed in the bottom part the defrosting water will evaporate automatically.

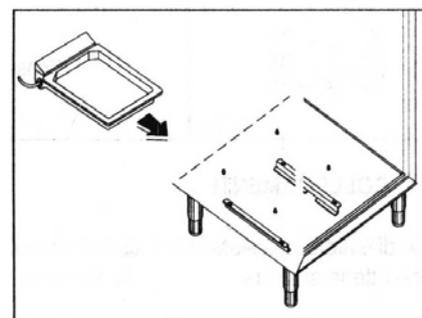


Fig.8

Some equipment, having the cooling unit “monoblock type” located in the top part, will evaporate the defrosting water automatically, without the need of any extra device.

6.5 SD CARD DATA BACK-UP (only in case of DMLP Digital Monitor)

It is strongly recommended to save on a pc or any similar storage device the data contained on the SD Card at least once a month, in order to have a back-up file allowing retracing the information in case the digital support is damaged or lost. The instructions to run these procedures are described in paragraph 5.3.12.

Extraordinary maintenance and reparations are to be performed exclusively by specialized technicians authorized by the manufacturer.

The manufacturer declines all liability in case of intervention performed by the user or unauthorized personnel, or if non-original spare parts are fitted to the appliance.

All malfunctioning due to the fitting of non-original spare parts will not be accepted from our technicians and will cause the immediate expiry of the **GUARANTEE**.

7.1 PROTECTIONS REMOVAL (for the models the motor in the bottom part).

To perform extraordinary maintenance and reparations the protection guards should be removed correctly the as described below:

7.1.1 Bottom guard

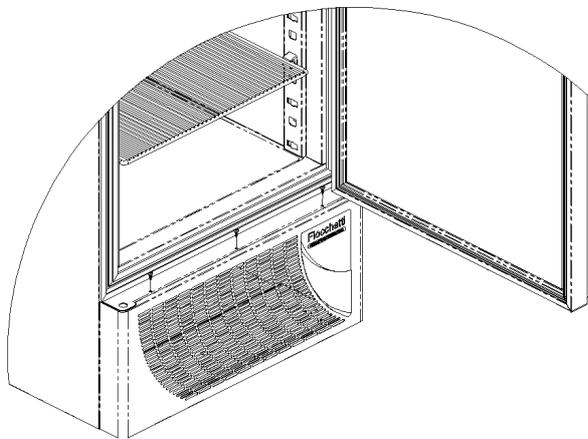


Fig.13

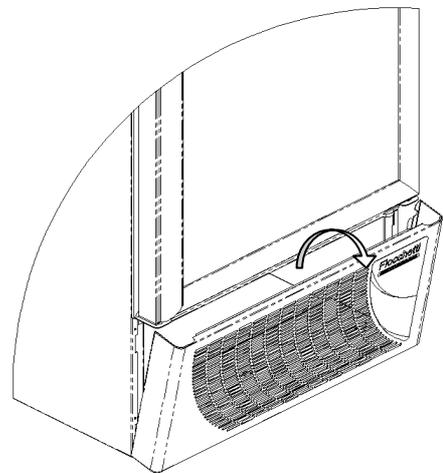


Fig.14

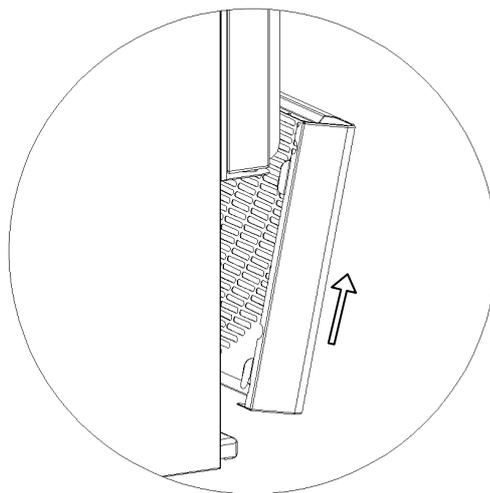


Fig.15

1 Open the appliance door e remove, using a cross screwdriver, the 3 screws fixing the bottom guard. (Fig.13)

2 Close the door. The guard is blocked in the bottom part with 2 “hooks”, so, must be inclined frontward (Fig.14) and slide it out from the top (Fig.15).

7.1.2 Top front panel for equipment with motor in bottom part and electric circuit cover

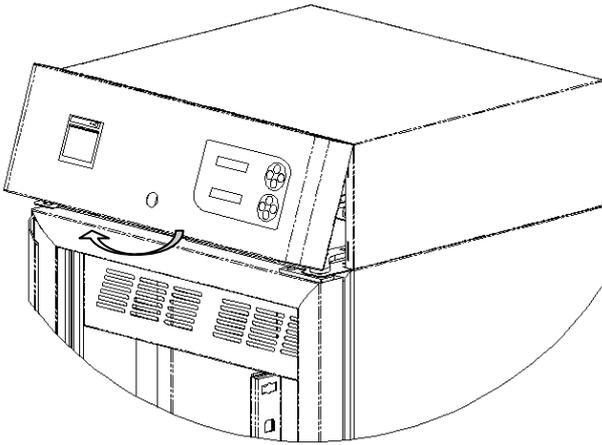


Fig.16

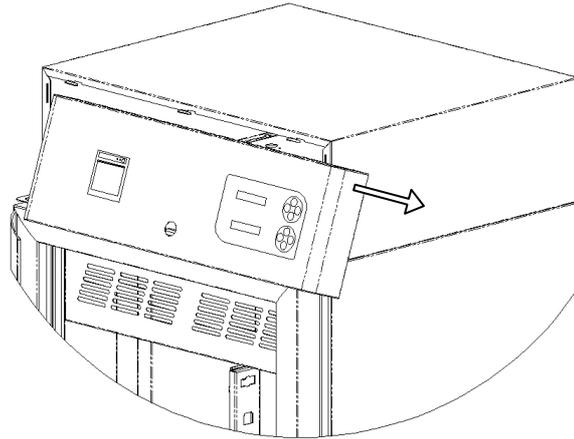


Fig.17

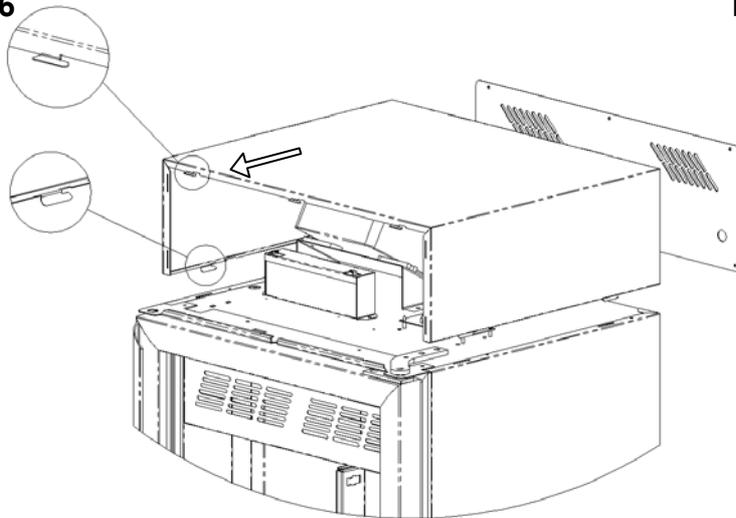


Fig.18

To remove the control panel and have the access to the electric circuit follow the below listed operations:

Phase 1 Open the appliance door and remove, using a cross screwdriver, the 3 screws fixing the control panel.

Phase 2 The control panel blocked in the bottom part with 2 “hooks”, so, must be inclined frontward (Fig.16) and slide it out to the right side (Fig.17).

Phase 3 To remove the top cover, unscrew, using a cross screwdriver, the fixing screws of the rear-side guard and push the top cover frontward until its complete unblocking from the fixing hooks (Fig.18).

Repeat the same operations, but inverting the sequence to reposition all the components.

8

DEMOLITION

This appliance complies with the 2002/96/EC European Directive.

The symbol  on the product means that it must not be considered as a domestic waste but it must be handed near the competent authority that recycles electric and electronic appliances. Before scrapping the machine, make it unusable. First of all cut the connecting cable, remove the doors, tiers and drawers to do not let children go inside the equipment. Do not leave it unattended even for a few days.

For further information about management, retrieval and recycle of the product, please contact the local office, the domestic wastes picking service or the distributor.

Respect the applicable laws.

The refrigerant gas present into the cooling circuit must be extracted by authorized personnel.

9

ATTACHMENTS

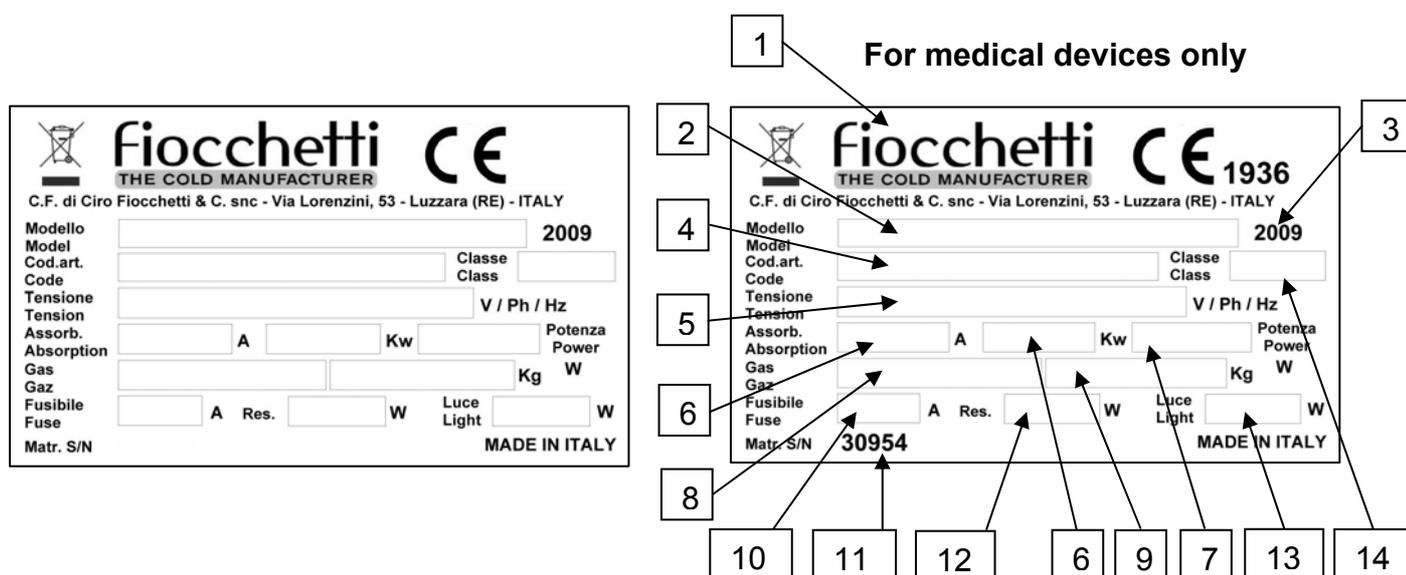
The following documents are attached:

- Declaration of conformity with the directive 2006/42/CE
- Declaration of conformity with the directive 2006/95/CE
- Declaration of conformity with the directive 2004/108/CE
- Declaration of conformity with the directive 93/42/CE (applicable to medical devices only)
- Production and test sheets
- Electrical circuit diagrams

10

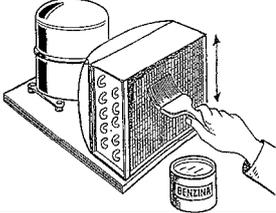
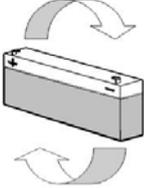
DATA PLATES

10.1 DATA PLATES WITH THE CHARACTERISTICS OF THE APPLIANCE



- 1 Manufacturer's name and address
- 2 Model (C.F.Fiocchetti)
- 3 Manufacturing year
- 4 Internal code (C.F.Fiocchetti)
- 5 Power tension (V-Ph-Hz)
- 6 Power absorbance (A/Kw)
- 7 Cooling power (W)
- 8 Refrigerant type
- 9 Quantity of gas contained (gram)
- 10 Fuse (A.)
- 11 Serial number
- 12 Defrost heater power (W)
- 13 Light power (W)
- 14 Climatic class -- **SN** (from +10°C to +32°C), **N** (from +16°C to +32°C) **ST** (from +18°C to +38°C), **T** (from +18°C to +43°C), **C** (from +10°C to +25°C).

10.2 OTHER INDICATION LABELS

 <p>PRIMA DI APRIRE LA PROTEZIONE TOGLIERE LA TENSIONE TURN OFF AND UNPLUG AC BEFORE OPENING COVER AVANT D'OUVRIER LA PROTECTION ÔTER LA TENSION BEVOR DER SCHUTZ ZU OEFFNEN, ZU ENTSPANNEN</p>	<p>Turn off and unplug AC before opening covers</p>
	<p>Periodic condenser cleaning</p>
	<p>Earthing</p>
<p>ATTENZIONE SOSTITUIRE LA BATTERIA OGNI 24 MESI</p> <p>ATTENTION CHANGE BATTERY EVERY 24 MONTHS</p> 	<p>Change battery (only in case of DMLP Digital Monitor)</p>

11

CONSUMABLES

Code	Type/features	Equipment	Spare/accessory picture
BAT001	LEAD BATTERY 12V 2.1 Ah	DMLP Digital Monitor	
BAT003	LEAD BATTERY 12V 2.1 Ah	Web Light Server	
ROT007	THERMAL PAPER ROLL (2 PIECES KIT)	DMLP Printer	
BAT004	Lithium BATTERY 3V, type CR 1220	ECT-F Control DMLP Digital Monitor	

In the below sheet are listed the most common faults, the possible causes and the action to be taken.

FAULT	POSSIBLE CAUSE	ACTION
Appliance does not switch on	Controller set to 'OFF' Power failure Faulty controller	Set controller to 'ON' Check plug, socket, fuses, electrical line Contact service department
Equipment is not cooling	No gas in the circuit or faulty cooling system	Contact service department
The refrigeration unit is noisy	Appliance not levelled Moving parts touching guards Screws unscrewed	Check that the appliance is levelled Check that fans or piping are not in touch with other parts Fix the screws Search for vibrations of metallic parts/piping Contact service department if problem persists
Water or ice deposits in the drip tray	Drain outlet is clogged Appliance not levelled.	Clean drain and drain outlet and check that the appliance is levelled Contact service department
Presence of ice on evaporator or on stored goods	Improper use of the equipment Door seals are not efficient	Limit door openings at the minimum Turn off (see par. 5.2.2) the appliance and disconnect from mains until a complete defrosting is obtained and turn on the equipment again (see par. 5.2.1) Check door gaskets Contact service department if problem persists
Refrigerator doesn't reach set temperature	Ambient temperature is too high or cooling unit is out of gas	Bring ambient temperature to the pre-defined ones (see climatic class on the technical data plate) Contact service department
High/Low temperature alarms frequently repeating (only for equipment with DMLP Digital Monitor)	Wrong High/Low alarm limits	Check the set limits with reference to the working set point

ECT-F CONTROL message errors

<p>LOW EVAP</p>	<p>The evaporator fan is stuck and/or ice has formed on the evaporator</p> <p>Faulty defrost heater</p>	<p>Check the evaporator fan placed inside the equipment. If the fan works, turn off the unit (see par. 5.2.) and disconnect the refrigerator from the mains, as long as the ice won't have melted completely. Switch on the unit again (par. 5.2.1). If problem persists, contact service department.</p>
<p>HIGH CONDENS</p>	<p>The condenser fan has probably stopped working.</p> <p>The condenser is clogged.</p>	<p>Check that the equipment is placed in an ambient with a suitable air circulation and with a correct temperature/humidity level (see climatic class on technical data plate) The air cooling grids should not be covered anyhow (our equipment is not meant to be embedded in other type of furniture). Check the correct working of the condenser fan and its possible obstruction. If the above mentioned conditions are absent, turn off (see par. 5.2.2) the unit from the mains and switch if on (see par. 5.2.1.) again. If problem persists, contact service department.</p>
<p>DIRTY COND</p>	<p>The condenser is probably clogged by dirt or dust</p>	<p>Turn off the equipment (see par. 5.2.2), disconnect it from the mains while cleaning the condenser as per given instructions (see par. 5.2.1) If problem persists, contact service department.</p>
<p>COMPRESSOR WORK</p>	<p>Continuous working of compressor for 24hours</p> <p>Too hot ambient temperature</p> <p>Leakage of cooling gas</p> <p>Wrong use of equipment, i.e. too many door openings</p>	<p>Check that the equipment is placed in an ambient with a suitable air circulation and with a correct temperature/humidity level (see climatic class on technical data plate) The air cooling grids should not be covered anyhow (our equipment is not meant to be embedded in other type of furniture). Check the correct working of the condenser fan and its possible obstruction. If the above mentioned conditions are absent, turn off (see par. 5.2.2) the unit from the mains and switch if off (see par. 5.2.1) again. If problem persists, contact service department.</p>

DEFROST TIME	Faulty defrost heater causing ice build up on the evaporation coil or in discharge pipe Ambient temperature lower than 10°C	Turn off the equipment (see par. 5.2.2), disconnect it from the mains while cleaning the condenser as per given instructions (see par. 5.2.1) Check the climatic working range of the model on data plate If problem persists, contact service department.
h:00 m 00	ECT-F control board clock battery low (Battery part code BAT004)	Turn off the equipment (see par. 5.2.2), disconnect it from the mains while replacing the battery (see par. 5.2.1) If problem persists, contact service department.
AUXIL PLANT <u>Only for TWIN models</u>	Possible break down of one of the two cooling systems (A or B) or temporary communication failure between the two	Turn off (par. 5.2.2) and disconnect from the mains the equipment for a few seconds; turn it on again (par. 5.2.1) If problem persists, contact Service. The faulty cooling unit will stop working, while the correct functioning of the equipment will be guaranteed by the auxiliary unit.

DMLP DIGITAL MONITOR message errors on display

ABSENT BATTERY	No connection with battery or battery tension lower than 7 volts or damaged (2A) fuse on control board. (Battery part code: BAT001)	Verify the connection between the battery and the control board Check the fuse on the electronic board Check the tension of the buffer battery If problem persists, contact service department for battery replacement.
FAULTY BATTERY	The buffer battery is faulty and can't recharge after the maximum time allowed for recharge. (Battery part code: BAT001)	Replace the buffer battery (12V) If problem persists, contact service department.
SD INVALID	The SD Card shows some data storing problems	Switch off the DMLP (see par. 5.3.2.). Extract the SD from the slot, disconnect the equipment from the mains, and then turn it on again. When the message "SD ABSENT" appears, insert SD card. If problem persists, contact service department.
SWITCH	Possible faulty door micro switch	Check if the message is correct by opening and closing the door. If the message is wrong, switch off the unit (see par. 5.3.2), disconnect it from the mains, and then turn it on again (see par. 5.3.1.) If problem persists, contact service department.

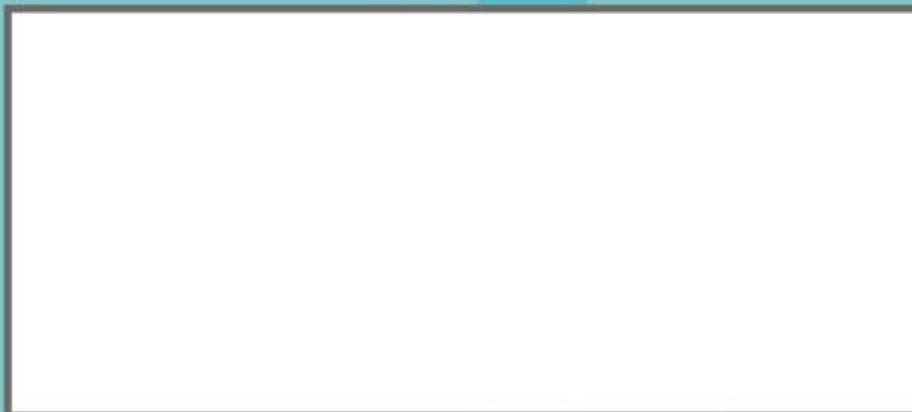
SET DATE/HOUR	DMLP control board clock battery low (battery part code: BAT004)	Turn off the equipment (see par. 5.3.2), disconnect it from the mains while replacing the battery (see par. 5.3.1). The Dmlp will ask to set date and hour. If problem persists, contact service department
PRINT STOPPED	The tension of the buffer battery too low	The buffer battery is probably malfunctioning. Verify it using the TEST function (see par. 5.3.6), thus visualizing the instant battery tension. If the tension is <11 volts, wait for 24 hours and run another test. If the tension is still <11, contact service dept. for battery replacement

In order to be able to arrange a prompt intervention, at the moment of the calling, please provide the model of the appliance the relative serial number that can be found on the data plate placed in the rear side of the appliance or on the present manual.

Space reserved for the data sheet with the characteristics of the appliance



Space reserved for the stamp of the distributor



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MNL013 Rev. 07-09