

## **USER and MAINTENANCE MANUAL**

# TEKNALAB SCIENCE and TECHNOLOGY TEKNA SRL

# REFRIGERATORS PASS-THROUGH SERIES PT



SERIAL NO	 	 	

**ORIGINAL INSTRUCTIONS MANUAL** 



# USER AND MAINTEINANCE MANUAL BRAND TEKNALAB SCIENCE AND TECHNOLOGY™



The equipment has been projected and designed in accordance with the safety and performance requirements envisaged by the relevant European regulations.

TEKNA SRL, bearing the prestigious "TEKNALAB Science and Technology" brand, whose creation and diffusion dates back to 1990, operates in the biomedical and scientific research sector.

Currently the company has a staff of about 60 people, including specialized technicians, employees, workers, engineering and biology consultants and it is operating both in Italy and abroad with a sales network composed of scientific collaborators and dealers, as well as with a qualified and widespread assistance network.

TEKNA's commitment to manufacture devices for storaging, preservation and handling of pharmaceutical and biological substances is achieved through the synergistic effect of manufacturing innovations and marketing processes, the use of microelectronics, constant investments about thermodynamic research and integrated regulation systems; this allows us to offer an ergonomic and performing range of products with a high technological content and as well to be flexible, dynamic and reliable with particular reference to: **company quality, product safety, product reliability, product eco-compatibility.** 

TEKNA Srl study, project and produce refrigerated systems and devices for laboratory, pharmacy, hospital and medical use that are divided in 3 groups:

#### 1) REFRIGERATION

- Freezer having different Temperatures till -86°C, horizontal and upright, made to preserve and storage pharmaceutical products, biological samples and materials.
- Refrigerated cabinet having single or multiple temperatures to preserve and storage pharmaceutical products, vaccines and biological material.
- Refrigerated cabinet pass-through projected for pharmacies, clean rooms and laboratories.
- Blood banks and Plasma Freezers.
- Refrigerated cabinet sliding doors.
- Refrigerated transportable containers 12/24/110/220V, 50-60Hz, AC/DC
- Passive transportable containers for lab samples, vaccines, blood/plasma bags and blood components

#### 2) TEMPERATURE CONTROLLED DEVICES

- Platelets Incubators and Platelets agitators
- Warming cabinets for fluids, breast milk, blankets
- Plasma Thawers

#### 3) LABORATORY APPLIANCE

- Ice Cubes and Ice Flakes makers with different capacities

#### WARNINGS

The recommendations, shown below, must be read carefully by the user, as they provide important information regarding the safety of installation, use and maintenance and possible dismantling.

Before using the equipment, the operators must be trained on the contents of this instruction, use andmaintenance manual.

Keep this booklet carefully for any further consultation.



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#### 1 GENERAL INFORMATIONS

#### 1.1 CERTIFICATIONS

All refrigerators are built in compliance with the EC directives applicable at the time of their placing on the market.

All appliances are certified according to directives 2006/42/CE, 2006/95/CE, 2004/108/CE and subsequent amendments and are manufactured in compliance with the safety standards of electrical appliances used in laboratories (CEI EN 61010-1). Devices marked as medical devices Class IIA are projected and produced in compliance with directive EU/2017/745 MDR (conservation of blood and its derivatives).

#### 1.2 TEST AND WARRANTY

The refrigerator is tested at our premises in accordance with current regulations and is delivered ready for use.

The warranty is valid for 12 months from the date of delivery if it is not differently specified and covers the repair and / or replacement of defective parts, with the exception of electrical parts and electronic components.

Manifest defects, damage or discrepancies with respect to what was ordered must be communicated to us within 7 days of receipt of the refrigerator or they will not be covered by the warranty conditions.

Any hidden or other defects must be communicated to us seven days from their discovery and in any case within the maximum warranty period of six months. The buyer has the right to request only the repair or replacement of parts. The buyer has no right to claim compensation for direct or indirect damages of any kind. In any case, the right to repair or replace the materials must be exercised within the maximum term of the guarantee, stipulated contractually.

Repairs or replacement of defective materials will be carried out at the manufacturer's premises; the material sent must be shipped ex works and will be returned to the buyer at his expense.

#### 11.1 SCOPE, CONTENT AND MANUAL PROPOSITION

This manual has been prepared with the aim of providing all the necessary instructions for the correct use of the refrigerator and to keep 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 installs the appliance following the instructions included in this manual.

**User:** the person who, after reading this manual, uses the appliance in accordance with its intended use. The user is obliged to carefully read the manual and consult the information contained.

Ordinary maintenance technician: qualified technician able to carry out routine maintenance of the appliance following the instructions in this manual.

Extraordinary maintenance worker: qualified technician, authorized by the manufacturer to carry out extraordinary maintenance on the refrigerator.



The manufacturer declines all responsibility for improper use or unforeseen uses of the equipment and for all operations performed that do not comply with the instructions given in this manual.

This manual must be kept in a place that is accessible and known to all operators (installer, user, routine maintenance person, extraordinary maintenance person).

This manual must not be reproduced or disclosed, in whole or in part, using any means or in any form.

#### 1.3 CUSTOMER RESPONSABILITY

The customer is required to:

- Prepare what is necessary for the electrical connection of the appliance
- Prepare the installation site
- Provide cleaning products
- Carry out routine maintenance

#### 1.4 SERVICE REQUESTS AND TECHNICAL SUPPORT

For any technical problem and for any request for technical assistance, refer exclusively to your local dealer or directly to the manufacturer, specifying the model and serial number of the appliance shown on the serial number label of the refrigerator, on the accompanying documents, in the info thermostat display.

#### 2 PRODUCT DESCRIPTION

#### 2.1 TECHNICAL DESCRIPTION

The refrigeration of the cabinet is obtained through the low pressure evaporation of the refrigerant liquid, such as HCFC or HFC, in a heat exchanger (evaporator). The vapor obtained is brought to the original liquid state through a mechanical compression at higher pressure (compressor), followed by a cooling phase in another heat exchanger (condenser).

The uniformity of the temperature inside the cell is guaranteed by the uniform circulation of cold air in the chamber through one or more fans (no-frost system).

The appliance is made up of a steel panel structure covered with PET film and insulated with polyurethane foam, density 43 Kg / m³.

The display is placed in the upper front part and the power button is always at the top but in the back.

The inside of the refrigerator is equipped with special racks to accommodate wire shelves, pullout drawers, stainless steel shelves and / or wire baskets, in both single and mixed configuration. The doors are equipped with an automatic closing device with 90 ° opening and magnetic seals. The refrigerator is equipped with automatic defrost phases with evaporation of the accumulated water. The refrigerator is equipped with one or more LED lights for internal lighting with the possibility of total exclusion, activation only on door opening or always active. The maximum load for grids, drawers or shelves is 30 kg, it is recommended to distribute the weight as evenly as possible inside the refrigerator.



#### 3 SAFETY

#### 3.1 GENERAL SAFETY TIPS

Read carefully and follow the instructions described below.

The user assumes full responsibility for any operations performed without observing the instructions given in this manual.

#### Primary general safety rules:

- Do not touch the appliance with wet hands and / or bare feet
- Do not insert screwdrivers or other sharp objects in the air intakes or in the refrigerator moving parts.
- Do not pull the power cable to disconnect the appliance from the mains
- Make sure that the refrigerator is used only by authorized personnel
- Before carrying out any cleaning or maintenance operation on the appliance, disconnect it from the mains by switching it off and disconnecting the plug.
- In the event of breakdowns or malfunctions, switch off the appliance and do not try to repair it yourself. It is absolutely necessary to contact qualified technicians or call the Assistance Service TEKNA.

#### 3.2 USE & SCOPE

Hospitals, laboratories, pharmacies, etc. are the intended use of the refrigerator. The storage of the products takes place at a controlled temperature, within the following temperature ranges:

#### SERIE PM +2°\+10° C

 $\frac{\text{Models:}}{\text{--}7100\text{NFP}} - \text{LP670NFP} - 0021\text{NFP} - 0041\text{NFP} - 0051\text{NFP} - 2100\text{NFP} - 4100\text{NFP} - 5100\text{NFP} - 9100\text{NFP} - 7100\text{NFP} - 7100\text{NFP} - 7100\text{NFP} - 8100\text{NFP} - 5010\text{NFP} - 5020\text{NFP} - 5030\text{NFP} - 10010\text{NFP} - 9501\text{NFP} - 9502\text{NFP} - 10000\text{NFP} - 9018\text{NFP} - 1510\text{NFP} - 2010\text{NFP} - 9100\text{NFP} - 7100\text{NFP} - 10100\text{NFP} - 9018\text{NFP}$ 

#### SERIE PM 0°\-25°C

 $\frac{\text{Models:}}{-7100\text{XL}} \text{ LP460NFN} - \text{LP670NFN} - 0021\text{NFN} - 0041\text{NFN} - 0051\text{NFN} - 2100\text{NFN} - 4100\text{NFN} - 5100\text{NFN} - 9100\text{NFN} - 7100\text{NFN} - 7100\text{NFN} - 8100\text{NFN} - 5010\text{NFN} - 5020\text{NFN} - 5030\text{NFN} - 10010\text{NFN} - 9501\text{NFN} - 9502\text{NFN} - 10000\text{NFN} - 9018\text{NFN} - 1510\text{NFN} - 2010\text{NFN}$ 

#### SERIE LB +2°\+10° C

#### SERIE LB 0°\-25°C

#### SERIE DFP 0°\-45°C

Moderls: 1SBM NFA - 0040NFA - 0050NFA - 4000NFA - 5000NFA - 5010NFA - 5020NFA - 5030NFA - 10010NFA

#### SERIE WAC +25°\+90°C

#### SERIE CB +2°\+8°C; 0°\-25°C.

 $\frac{\text{Models:}}{4\text{T} - 8100\text{ }4\text{T} - 8000\text{ }6\text{B} - 4102\text{CB} - 4000\text{CB} - 9102\text{CB} - 9000\text{CB} - 9120\text{CB} - 9020\text{CB} - 5010\text{CB} - 5020\text{CB} - 5030\text{CB} - 8000\text{CB} - 80000\text{CB} - 80000\text{CB}$ 

#### SERIE BB +4°C

Models: 0021NFP EMO - 0041NFP EMO - 0051NFP EMO - 2100NFP EMO - 4100NFP EMO - 5010NFP EMO - 5020NFP EMO



- 5030NFP EMO - 7100NFP EMO - 7100XL NFP EMO - 9501NFP EMO - 9502NFP EMO

SERIE UC 0°C\-25°C:+10\+2°C

 $\underline{\text{Models}}$ : 0SBM NFP - 0SBM NFN - 1SBM NFP - 1SBM NFN - 2SBM NFP - 2SBM NFN - 2SBM CB - 3SBM NFP - 3SBM NFN - 3SBM CB - 4SBM NFP - 4SBM NFN - 4SBM CB - TKL200

SERIE PT +10\+2°C

Models: 0041PT - 4100PT - 5010PT - 5020PT - 5030PT - 8100PT - 10010PT

Upon request, we can produce the series indicated above with different temperature ranges or with enhanced performance to maintain work performance even in very hot environments (tropicalized). We declare that any use other than those permitted for the appliance is considered "improper use", therefore the manufacturer declines all responsibility.

<u>IMPORTANT</u>: to ensure correct operation of the appliance, the set temperature must always be lower than the ambient temperature, except for the WAC series.

#### 3.3 CONTRAINDICATIONS

It is forbidden to use the refrigerator in the following cases:

- Place the refrigerator outside
- Connect the refrigerator to multiple sockets, reductions and in any case to sockets below 16A.
- In places exposed to fire or explosion hazards
- Near heat sources

In the event that the appliance is inserted inside a furniture, a correct flow of air must be allowed towards the condensing unit (compressor and motor fan), under penalty of forfeiture of the warranty period.

#### 3.4 SAFETY AND ACCIDENT PREVENTION

The appliance includes various functions designed to ensure safety and protect the user's health. The protections adopted against mechanical risks are as follows:

- Stability: the appliance is designed and built to guarantee its stability even in the event that the shelves / drawers are completely extracted, avoiding overturning, falling or sudden movements.
- Surfaces, edges, corners: the accessible parts of the appliance have no sharp edges, sharp edges or rough surfaces that could cause injury.
- Moving parts: they are designed, built and configured to avoid risks. The moving parts are protected by fixed guards to prevent accidental contacts that could cause injuries

Measures you take towards further risks:

- Electricity: the appliance is designed, built and assembled with the aim of preventing the risk of electric shock in accordance with established safety standards
- Noise: the appliance is designed and built to reduce the risks associated with the emission of acoustic noise (less than 60 dB) to a minimum.

#### 3.5 SAFETY DEVICES AND SAFETY STANDARDS



It is forbidden:

- tamper with or remove the evaporator cover which protects the user from the risk of cutting the fan motor blades
- remove the data plates showing the technical specifications and the earth connection
- remove the slotted covers for the passage of air from the frame which act as protection towards the electrical and movement parts of the condensate unit
- Extend the power cable with flying cables

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

#### 4 TRANSPORT AND MOVING

#### 4.1 TRANSPORT AND SHIFTING

The appliance must be transported and handled only in a vertical position, paying attention to the instructions printed on the packaging.

This precaution is necessary to avoid contamination of the refrigerant circuit with the compressor lubricating oil, thus causing damage to the valves, expansion and engine starting components. The manufacturer declines all responsibility for problems due to transport carried out in conditions other than those specified above.

The internal arrangements (shelves, grids, drawers, etc.) are shipped inside the unit. The device is fixed on a wooden pallet by means of straps, wrapped with polyethylene film and packed in cardboard and / or wooden crate.

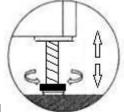
The appliance must be handled with a lift truck with suitable forks (length of the forks at least 2/3 of the length of the unit).

If the appliance needs to be laid out to take it to the place of installation, it is absolutely necessary to wait at least 12 hours before switching it on.

#### **POSITIONING**

Incorrect positioning can cause damage to the refrigerator and create dangerous conditions for users. Therefore, the installer must observe the following general rules:

- Make sure to keep a minimum distance of 10 cm from the walls
- The room must be well ventilated
- Keep the equipment away from heat sources
- Avoid direct exposure to the sun
- Remove the packaging material
- Remove the accessories from inside the unit and the wooden pallet under the equipment
- Position the appliance with the help of a level.



- If necessary adjust the refrigerator leveling feet (Fig.1) Fig-1
- Remove the protective PVC film from the external surfaces of the unit.
- Clean the inside of the chamber with a cloth and detergent to remove the protective oil.



**SPECIAL TIPS FOR PASS-THROUGH POSITIONING:** the models Series PT must be placed on a smooth and plane surface and they have to be LEVELED adjusting the 4 feet in order to avoid wrong and difficult doors closing.

#### 4.2 POWER CONNECTION

The electrical installation and connection must be carried out by qualified personnel. For safety reasons, the user must pay attention to the following indications:

- Check that the electrical socket assigned is suitably sized for the unit's absorbed power
- If the electrical socket and the power cord plug are incompatible, replace the plug with a suitable component, ensure that the spare part is approved according to the laws in force.
- Do not use multiple reductions or adapters

It is important to connect the appliance correctly to an efficient grounding system, in accordance with current legislation.

If the power cord is damaged, it must be replaced by the manufacturer, an authorized aftersales service or a specialized technician to avoid any possible risk.

#### 4.3 PREVENTIVE OPERATIONS

To prevent errors and accidents, a series of checks must be performed for any damage caused during transportation, installation and connection operations before connecting the unit.

#### 4.3.1 Preventive check-up:

- Check the integrity of the power cable, there must be no cuts or abrasions
- Check that the feet, the door hinges and the supports for the internal structure are stable
- Check the conditions of the internal and external components (pipes, heat exchangers, fans, electrical components, etc.); also check that all parts are securely locked in place
- Check that the door seals and hinges have not been damaged (broken or scratched) and that the doors close and close properly.
- Check that the display is not damaged
- Check that the ON-OFF button is not damaged

#### ATTENTION:

Even if the refrigerator meets the requirements of the regulations on electromagnetic disturbances, it is recommended that it is not installed near: infrared rays, radio transmitters, telephones and other sources of disturbs

#### 4.3.2 Tips for a correct use of the device:

Do not block the engine compartment vents

- Arrange the material on the appropriate shelves or drawers. Do not place the products directly on the base of the chamber, against the walls, doors or fixed guards of the unit
- Make sure the door is closed properly
- Limit the frequency and duration of door openings in order not to alter the internal temperature, thus avoiding possible ice formation in the evaporator
- Carry out periodic maintenance (see "Cleaning the condenser" Par. 9.3)
- Gradually load the material at room temperature to allow proper refrigeration
- The power socket must be suitable for the technical data shown on the serial number label (+/- 10%)
- The refrigerators are designed and built to work at certain ambient temperatures (see the reference climate classes Par. 13.1) and at a relative humidity of 60%. In environmental



conditions other than those specified, it will not be possible to achieve the declared performance.

#### Special tips for devices Series UF e DFP:

These devices have been designed and built to store and maintain products at a controlled temperature. The storage of the products must take place at a temperature not exceeding - 30 ° C. The lowest working temperature is -86 ° C and the rotation of the stored products cannot exceed 10% per day.

#### 4.3.3 Internal Configuration, Dimensions and Weights

Tekna produces many models of various sizes, weights and internal configurations. To know these values, refer to the values shown in the general catalog or published on the website <a href="http://www.teknalab.teknaline.com/">http://www.teknalab.teknaline.com/</a>

#### 5 ORDINARY MAINTENANCE

#### **ATTENTION:**

Before cleaning, turn off the refrigerator and unplug the power cord.

#### 5.1 NO REMOVAL SAFETY SYSTEM

Avoid to remove any safety system from the device. In case of extraordinary maintenance we suggest to remove any electric safety system and replace it before trial test as per manufacturing standard.

#### 5.2 REFRIGERATOR / FREEZER CLEANING

The units should be cleaned using NOT AGGRESSIVE OR CORROSIVE products. Any product made for medical and anti-bacteria purposes can be used to disinfect the internal and external surfaces. Do not use alcohol 95°C to clean acrylic surfaces.

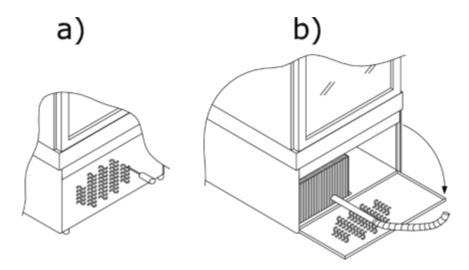
The cooling system and electronic parts can be dusted using soft brushes or blowing them with compressed air. The cleaning operation to remove dust can be carried on by an authorized technician and it has to be done at least quarterly in order to keep clean and functional the unit.

#### 5.3 CONDENSER CLEANING

- At least quarterly, check if necessary to reduce these intervals in relation to the operating environment.
- The refrigerator is equipped with a safety function that alerts you when the condenser is clogged in order to safeguard the life of the compressor
- Remove the fixing screws of the front door with a screwdriver and open it by rotating it downwards. (to)
- Wear a pair of gloves to avoid injuring yourself with the condenser cooling fins



- Remove any dirt accumulated between the condenser fins with a jet of air, a vacuum cleaner or a non-metallic brush. (b)



#### **5.4 CONDENSATION WATER**

The defrosting process creates condensation. The water deposited inside the engine casing evaporates automatically. Occasionally check that there are no accumulations of liquid or dirt inside the condensate collection tray

#### 5.5 BACK-UP BATTERY CHANGING

All models with the IR33U, FLEX PHARMA, Pro1 / Pro2 and Display D3 controllers, a battery is fitted as standard which allows the recording of machine variables even in the absence of voltage, this battery is monitored and charged by the system. It is good practice to replace it at least every 2 years to keep the system in good working condition. The battery is a lead acid type 12 Vdc 2 A. However, the system issues an alarm in the event of a fault.

#### 6 EXTRAORDINARY MAINTENANCE AND REPAIRS

- Extraordinary maintenance and repairs must only be carried out by specialized technicians authorized by the manufacturer.
- The manufacturer declines all responsibility in the event of intervention by the user, by unauthorized personnel or if non-original spare parts are fitted in the refrigerator.
- All malfunctions due to the installation of non-original spare parts or not approved by our technicians will cause the immediate expiry of the warranty.

#### **6.1 PROTECTIONS REMOVAL**





To carry out extraordinary maintenance and repairs, the protective covers must be removed correctly as described below:

#### 6.1.1 BOTTOM PANELS COOLING SYSTEM FRAME

- Using a Phillips screwdriver (PH2) remove the rear and front door of the refrigerator
- Remove the fixing screws of the side covers and slide them out downwards.

#### 6.1.2 UPPER PANEL COVER BOX

- Remove the fixing screws of the top cover with a screwdriver (PH1) and remove it so as to have access to the control electronics and upper wiring.
- If necessary, with a screwdriver remove the fixing screws of the aluminum frame in which the display is housed, disconnect the 4-pole connector and the cables from the ON-OFF switch and make the upper frame.

#### 6.1.3 INNER EVAPORATOR FAN COVER

- Open the door and with a screwdriver loosen the Phillips screws that hold the perforated fan cover grid in place
- Remove the grille by pulling it towards you and free it from the screws to gain access to the motor fan and the temperature probes
- If necessary, unscrew the screws on the fan door panel and access the evaporating part of the refrigerator.

#### **6.2 MOTOR AND CONDENSER MOTOR**

#### 6.2.1 Motor removal

To remove the motor (compressor) follow the instruction as per point 6.1.1.

After the panels removal will be completed and before to remove the motor (compressor) discharge the cooling gas using a vacuume pump.

Turn off the refrigerator and disconnect the plug.

Once the gas has been removed completely and the unit has been unplugged proceed to disconnect the cable from the power box and cut the IN and OUT pipes.

Remove the mounting screw that joint the compressor to the frame using a spanner 8 size.

#### 6.2.2 Condenser motor removal

Before to remove it disconnect the cables 220V from the white power box placed on the bottom frame close to the rear panel and remove the condenser motor assembly unscrew the 4 screw that joint the motor mounting frame to the frame using a spanner 6 size.

Before to start be sure to wear a pair of glows to prevent any skin cutting due to the condenser cooling blades.

#### **6.3 CONTROL PANEL**



To remove the control panel unscrew the 3mm screws placed on the cover and remove the steel sheet that close the upper compartment.

Once you get access to the upper compartment disconnect the communication cable (MOD-BUS connection) between the control board and the monitor. Remove the steel holders placed at the back of the D3 Monitor, disconnect the USB cable from the monitor and extract carefully the monitor from the front panel.

#### 7 INTERACTIVE DATA LOGGER AND CONTROL SYSTEM

7.1 MONITOR DYSPLAY D3 DATA LOGGER Refer to separate enclosed User Manual D3

7.2 CONTROL BOARD AND PROCESSOR PRO1 / PRO2 Refer to separate enclosed Technical Manual PRO1 / PRO2

7.3 DISPLAY FLEX PHARMA DATA LOGGER Refer to separate enclosed FLEX\_PANEL\_R44085-lta\_Eng

7.4 DIGITAL CONTROLLER IR33U Refer to separate enclosed User Manual IR33

#### 8 DISPOSAL

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

The symbol—on the product means that it must not be considered as domestic waste but be must handed over to the competent authority which recycles electrical and electronic appliances. Before scrapping the machine, make it unusable. First of all cut the connection cable, remove the doors, shelves and drawers so that children cannot go inside the appliance. Don't leave it unattended for even a few days.

For more information on product handling, recovery and recycling, contact your local office, waste collection service or distributor.

Respect the laws in force.

The refrigerant gas present in the cooling circuit must be extracted by authorized personnel using suitable recovering tools.

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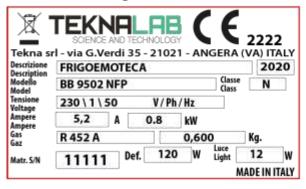
#### 9 ENCLOSED

The following documents are attached:

- Declaration of conformity with directive 2006/42 / EC
- Declaration of conformity with directive 2006/95 / EC
- Declaration of conformity with directive 2004/108 / EC
- Declaration of conformity with directive UE/2017/745 MDR (applicable only to medical devices)
- Pull-down test board
- Display D3 User manual (if installed)
- Pro1 / Pro2 Technical manual (if installed)
- Flex Pharma User Manual (if installed)
- IR33U (if installed)
- Wiring diagrams

#### 10 S/N and PRODUCT LABEL (example)

#### 9.1 Labelling, Serial Number and Device Data





Description

	Beschption			
1	Company Name	9	Defrosting System power resistance	
2	Product Description	10	Refrigerant Gas quantity	
3	Model	11	Inner Light Power	
4	Power	12	Climate Class *	
5	Amper Power	13	Year of production	
6	Refrigerant Gas			
7	Serial Number			
8	Watt Power			



#### \* Climate Classes Description

**TEKNA SRL** 

SN = Subnormal: operation at ambient temperature from +10 ° C to +32 ° C

N = Normal: operation at ambient temperature from +16 ° C to +32 ° C

ST = Subtropical: operation at ambient temperature from +16 ° C to +38 ° C

T = Tropical: operation at ambient temperature from +16 ° C to +43 ° C

CLIMATE CLASS	TEMPERATURE	RELATIVE HUMIDITY	CONDENSATION POINT	MASS OF WATER VAPOR IN THE AIR
3	25°C	60%	16,7°C	12,0 g/kg
4	30°C	55%	20,0°C	14,8 g/kg
5	40°C	40%	23,9°C	18,8 g/kg
7	35°C	75%	30,0°C	27,3 g/kg



#### WARNING LABEL

**TEKNA SRL** 

PRIMA DI APRIRE LA PROTEZIONE TOGLIERE LA TENSIONE TURN OFF AND UNPLUG AC BEFORE OPENING COVER AVANT D'OUVRIR LA PROTECTION ÔTER LA TENSION BEVOR DER SCHUTZ ZU OEFFNEN, ZU ENTSPANNEN	DISCONNECT THE DEVICE REMOVING THE MAIN PLUG
ATTENZIONE TENERE PULITO IL CONDENSATORE  ATTENTION KEEP THE CONDENSER CLEAN	PERIODICALLY CONDENSER CLEANING
	GROUND CONNECTION
ATTENZIONE SOSTITUIRE LA BATTERIA OGNI 24 MESI  ATTENTION CHANGE BATTERY EVERY 24 MONTHS	BATTERY BACK-UP CHANGING

#### 11 DIAGNOSIS - TROUBLE SHOOTING

The table below shows the most common defects, possible causes and measures to be taken. Many of these notes are also reported inside the manual of DTLSD3/D4 and in the PRO1, FLXP FLEX PHARMA or IR33U technical-user manual.

PROBLEM	POSSIBLE REASONS	POSSIBILE SOLUTIONS
	The main switch ON-OFF has not	
The 19 15 15	been switched on	Press the switch on the back side
The unit doesn't	Display is in stand-by mode	Keep the finger on the monitor for 3"
start up	No mains	Check the socket and the main power
	Control board is foulty / Fuse	Call assistance service
		Check the control board exits connection and
		monitor connection, check if they are
	General fault	properly plugged
		Visualize the error through the monitor and
	Running Protection alarm	RESET the alarm
		Check if the door is properly closed and if
The unit doesn't	Door Open	there is any obstacles which couse the issue.
cool		Perform a TEST going to the SERVICE MENU
	Evaporator FAN doesn't spin	OR call assistance service
	Condense FAN describer	Check the parameters is they are correct OR
	Condenser FAN doesn't spin	call assistance service
	Matan (samanasan) da santi want	The condenser fan doesn't work, compressor
	Motor (compressor) doesn't work	is shortage, call assistance service
	Refrigerant GAS leackage	Call assistance service
	The state of the first of the state of the s	Rise the adjustable feet until the unit is
	The unit isn't levelling on the ground	straight
The unit is noisy		Check from where the noise come from:
	Movable parts are touching or there	Separate or create a gap between the parts
	are lose screws	Tight the screws
		Call the assistance service
		Check if any items store inside touch or it is
Abnormal ice		to close to the upper cover or to the back
formation on the		side; remove it/them and leave at least 10cm
evaporating unit		gap for the air circulation.
OR inside the		Perform a manual defrost.
freezer/refrigerator	Wrong use of the unit	Call assistance service.
, 52 1361		Check the parameters
	Evaporator fan doesn't spin	Call assistance service



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		The gasket isn't air tight	Check if it is broken, damaged or if it is outside the rail.
ļ	The unit doesn't reach the SET POINT	Room temperature is too high	Reduce the temperature or shift the unit to another place
		Evaporator fan doesn't spin	Call assistance service
		Refrigerant gas leackage	Call assistance service
		Ice formation on the evaporating unit	Turn off the unit and leave the door open for 12 hours
	Repeating temperature alarms	Wrong temperature Limits	Reset the correct limits and erase the error from the log

It is possible to detect the individual machine and variable states by interacting with the temperature display located in the upper part of the machine. Any warning or alarm status is also reported. By consulting the D3/D4 and Pro1, FLEX PHARMA, IR33U manuals it is possible to interpret and solve problems. any



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