

**11/2013**

# **Mod: RON/79AV**

**Production code: KP9R**



**Diamond**  
catering equipment

TARGHETTA TECNICA

**MANUALE D'USO**  
**MANUEL D'INSTRUCTIONS**  
**GEBRAUCHSANWEISUNG**  
**OPERATOR'S HANDBOOK**  
**MANUAL DE EMPLEO**  
**HANDLEIDING**  
**РУКОВОДСТВО К ИСПОЛЬЗОВАНИЮ**  
**MANUAL DE USO**



3241730

**VETRINA REFRIGERATA VERTICALE**  
**VITRINE VERTICALE RÉFRIGÉRÉE**  
**VERTIKALE KÜHLVITRINEN**  
**UPRIGHT REFRIGERATED DISPLAY UNITS**  
**VITRINAS VERTICALES REFRIGERADAS**  
**VERTICALE GEKOELDE VETRINE**  
**ВЕРТИКАЛЬНАЯ ХОЛОДИЛЬНАЯ ВИТРИНА**  
**VITRINE REFRIGERADA VERTICAL**

Leggere attentamente le avvertenze contenute nel presente libretto in quanto forniscono importanti indicazioni riguardanti la sicurezza, d'uso e di manutenzione.

**Conservare con cura questo libretto per ogni ulteriore consultazione dei vari operatori.**

**IT**

**Il costruttore si riserva il diritto di apportare modifiche al presente manuale, senza preavviso e responsabilità alcuna.**

---

Lire avec attention les instructions contenues dans ce livret car elles fournissent d'importants renseignements pour ce qui concerne la sécurité, l'emploi et l'entretien.

**Garder avec soin ce livret pour des consultations ultérieures de différents opérateurs.**

**FR**

**Le constructeur se réserve le droit d'apporter des modifications à ce manuel, sans préavis ni responsabilité d'aucune sorte.**

---

Lesen Sie bitte aufmerksam diese Gebrauchsanweisung durch, die wichtige Informationen bezüglich der Sicherheit, dem Gebrauch und der Instandhaltung enthält.

**Heben Sie sorgfältig diese Gebrauchsanweisung auf, damit verschiedene Anwender sie zu Rat ziehen können.**

**DE**

**Der Hersteller behält sich das Recht, Änderungen dieser Gebrauchsanweisung ohne Ankündigung und ohne Übernahme der Verantwortung vornehmen zu können.**

---

Carefully read the instructions contained in the handbook. You may find important safety instructions and recommendations for use and maintenance.

**Please retain the handbook for future reference.**

**GB**

**The Manufacturer is not liable for any changes to this handbook, which may be altered without prior notice.**

---

Lea atentamente las advertencias contenidas en este manual pues dan importantes indicaciones concernientes la seguridad, la utilización y el mantenimiento del aparato.

**Rogamos guarde el folleto de instalación y utilización, para eventuales futuros usuarios.**

**ES**

**El constructor se reserva el derecho de hacer modificaciones al actual manual, sin dar algún preaviso y sin responsabilidad alguna.**

---

Nauwkeurig de waarschuwingen in dit boekje lezen, aangezien zij belangrijke aanwijzingen verschaffen wat betreft de veiligheid, het gebruik en het onderhoud.

**Dit boekje goed bewaren.**

**NL**

**De fabrikant behoudt zich het recht voor om veranderingen in deze handleiding aan te brengen, zonder voorafgaande waarschuwing en zonder enkele aansprakelijkheid.**

---

Внимательно читайте предупреждения, содержащиеся в настоящем руководстве, касающиеся надежности использования и обслуживания.

Бережено храните это руководство для каждой последующей консультации разных рабочих.

**RU**

**Конструктор сохраняет за собой право вносить изменения в настоящее руководство без предупреждения и любой ответственности, без,**

---

**P**

Leia com atenção as advertências contidas neste manual pois fornecem importantes indicações para a segurança, a utilização e a manutenção do aparelho.

**O construtor reserva-se o direito de modificar o manual sem dar aviso prévio e sem nenhuma responsabilidade.**

---

## INDEX

|                                                     |           |
|-----------------------------------------------------|-----------|
| <b>MACHINE DESCRIPTION</b>                          | <b>2</b>  |
| <b>IDENTIFICATION TAG</b>                           | <b>2</b>  |
| <b>GENERAL NOTES BY THE DELIVERY</b>                | <b>2</b>  |
| <b>SAFETY PRESCRIPTION</b>                          | <b>3</b>  |
| <b>INSTALLATION</b>                                 | <b>4</b>  |
| <b>TECHNICAL SPECIFICATIONS</b>                     | <b>8</b>  |
| <b>CONTROL PANNELS</b>                              | <b>9</b>  |
| <b>TEMPERATURE SETPOINT SETTING/VARIATION</b>       | <b>10</b> |
| <b>SMART FUNCTIONS – Quick-access functions</b>     | <b>10</b> |
| <b>BLOCKIEREN DER TASTATUR</b>                      | <b>10</b> |
| <b>MANUAL PROBE READING PRINTOUT</b>                | <b>11</b> |
| <b>PARAMETER CONFIGURATION</b>                      | <b>11</b> |
| <b>USER PARAMETER CONFIGURATION - PROBE READING</b> | <b>14</b> |
| <b>DEFAULT PARAMETER RECOVERY</b>                   | <b>14</b> |
| <b>ALARMS</b>                                       | <b>14</b> |
| <b>DEFROST</b>                                      | <b>16</b> |
| <b>STOPPING</b>                                     | <b>17</b> |
| <b>WORKING IRREGULARITIES</b>                       | <b>17</b> |
| <b>DAILY CLEANING</b>                               | <b>17</b> |
| <b>GENERAL CLEANING AND MAINTENANCE</b>             | <b>17</b> |
| <b>USAGE INTERRUPTIONS</b>                          | <b>18</b> |
| <b>MALFUNCTIONING</b>                               | <b>18</b> |
| <b>WASTE DISPOSAL AND DEMOLITION</b>                | <b>19</b> |
| <b>REFRIGERANT MATERIAL SAFETY DATA SHEET</b>       | <b>19</b> |

## MACHINE DESCRIPTION

This device has been designed for temporary exposition and conservation of food products. Any other use is to be considered improper.

ATTENTION: the appliances are not suitable for installation outdoors or in environments subject to the action of the elements.

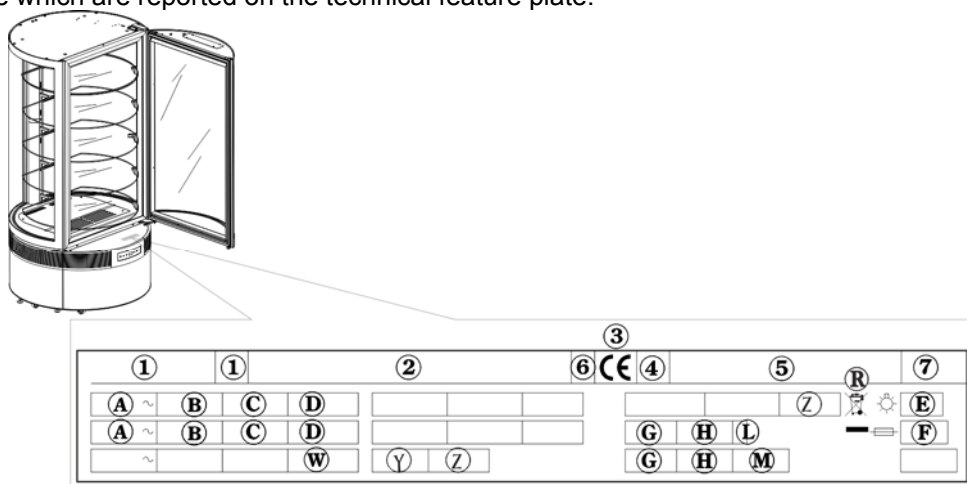
**The manufacturer cannot be held liable for improper use of its products.**

The units are equipped with a finned evaporator protected against oxidation, a hermetic compressor, a copper aluminium condenser and a digital electronic data card. The unit is equipped with removable shelves, except for the Gelateria -25°/-15° C, model in which they are fixed.

An HFC refrigerant fluid, approved by current legislation, is used in the refrigerating units.

## IDENTIFICATION TAG

For any communication with the manufacturer, always mention the MODEL and the SERIAL NUMBER of the appliance which are reported on the technical feature plate.



### Refrigerator rating plate containing the following ratings

- |                                |                                     |
|--------------------------------|-------------------------------------|
| 1) MODEL                       | D) RATED POWER                      |
| 2) SUPPLIER'S NAME AND ADDRESS | E) TOTAL LAMP POWER                 |
| 3) CE MARK                     | F) FAUSE CURRENT                    |
| 4) YEAR OF MAKE                | G) REFRIGERATING SYSTEM TEMPERATURE |
| 5) SERIAL NO                   | GRADE                               |
| 6) ELECTRIC INSULATING GRADE   | H) REFRIGERATING GAS QUANTITY       |
| 7) ELECTRIC PROTECTION GRADE   | L) REFRIGERATING GAS                |
| A) POWER SUPPLY VOLTAGE        | R) WEEE SYMBOL                      |
| B) ELECTRIC CURRENT RATE       | W) HEATING SECTION POWER            |
| C) POWER SUPPLY FREQUENCY      |                                     |

## GENERAL NOTES BY THE DELIVERY

At the delivery inspect that the packing is not injured and that it has not been damaged during the transport.

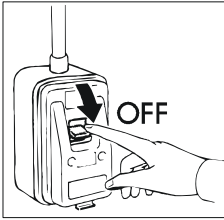
After having unpacked the unit check and verify that all of the parts and components have been included and that its characteristics and condition correspond to the specifics of the order that you made. Otherwise contact immediately the retailer.

While complementing you on your excellent choice we hope that you will be able to fully utilise our equipment following the necessary directions and precautions contained in this manual.

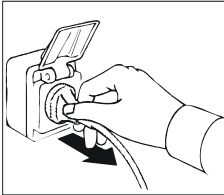
But, remember that any reproduction of this manual is forbidden and that due to a constant pursuit of innovation and technological quality, the features hereby presented could change without notice.

## SAFETY PRESCRIPTIONS

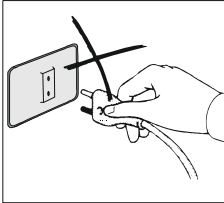
**WARNING:** before any maintenance or cleaning operation the machine must be insulated from the current:  
- witch the general cut-out in OFF position;



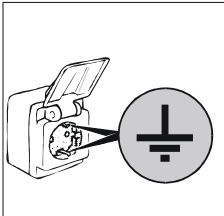
- remove the plug;



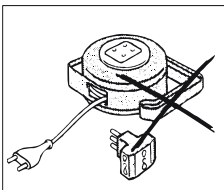
**WARNING:** do not use current taps or plugs not provided with grounding.



The socket must be provided with GROUNDING.



**WARNING:** do not use adapters or patch cords for the connection to the electric line.



**WARNING:** wait the time necessary to reach the setted temperature before to introduce the food to preserve.

**WARNING:** do not put hot foods or drinks into the unit.

**WARNING:** see to the arrangement of the food products to be conserved inside in such a manner that they do not extend beyond the shelves so as to not interrupt the flow of air inside the unit. Do not obstruct fan intake area.

**WARNING:** do not carry out cleaning activities in the area around the unit with its door open.

Do not wash the appliance by spraying high-pressure water on the machine.

**WARNING:** not use chlorine based or otherwise toxic substances (bleach, muriatic acid, etc.) for cleaning the unit or the areas directly adjacent to it.

Do not place any objects on the bottom of the unit. Use the proper shelves.

On the shelves the maximum distributed weight is not to exceed **12 kg**.

**WARNING:** glass Breaking Hazard: Close or open the door VERY GENTLY AND NEVER ABRUPTLY OR WITH VIOLENCE and do not lean on the door itself.

The cleaning and maintenance of the refrigerating engine and the compressor area needs the intervention of a skilled technician, therefore it cannot be done by other persons.

For a maintenance intervention or in case of anomaly disconnect completely the machine; ask for the TECHNICAL SERVICE to an entitled center and the use of original spare parts.  
Failure to comply with what is written above may compromise the safety of the units.

## INSTALLATION

The units are always shipped on pallets and protected by cardboard boxes.

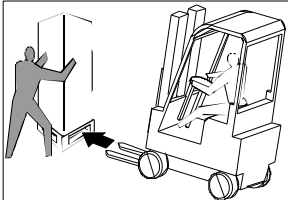
On receiving and after having unpacked in case of damages or missing pieces act as described in the chapter "GENERAL NOTES BY THE DELIVERY".

All setting up and starting operations are to be carried out by skilled staff.

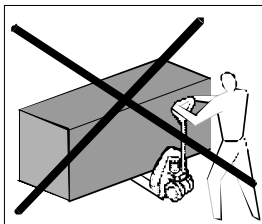
**WARNING:** package parts (plastic bags, polystyrene foam, nails and the like) are dangerous for children and must not be left within their reach.

Lift the unit with a forklift and move it to its place of installation paying close attention that the load is well balanced.

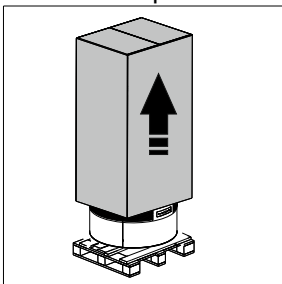
**WARNING:** overturning hazard: Never tilt the unit. During handling make sure that it is stabilised by qualified personnel.



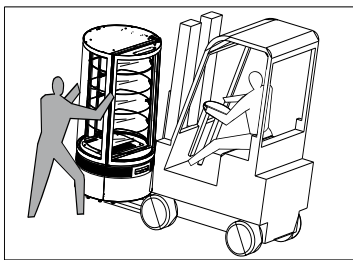
**WARNING:** never transport the unit in a horizontal position; such an operation could cause damage to the structure and or to the operational plant.



Once at the installation site, follow the instructions below.  
Remove the packing box, adhesive tape and any styrofoam pieces.  
Remove the plate behind the appliance.

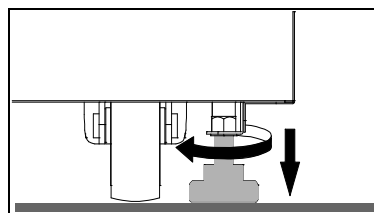
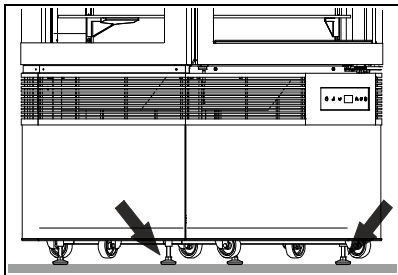
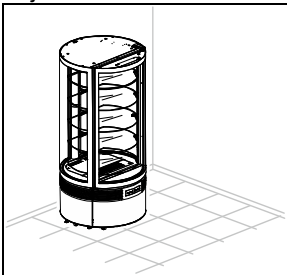


Lift the unit with a forklift and move it to its place of installation paying close attention that the load is well balanced.

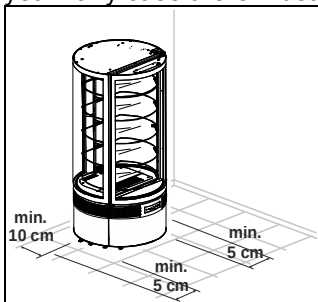


Place the unit in its permanent location.

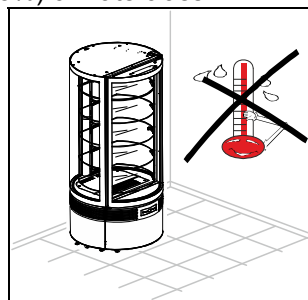
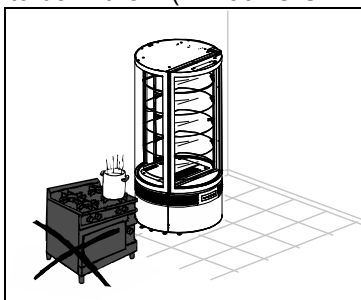
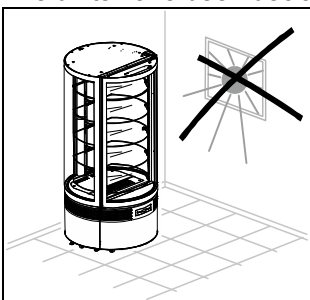
Adjust the leveller feet found under the unit so that it does not shift or rock.



**WARNING:** Position the unit at least 10 cm away from the rear wall. It is possible to place units side by side, yet in any case there must be at least 5 cm space between one unit and another.



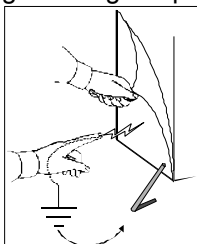
**WARNING:** Make sure that the unit is not exposed to direct sunlight, or any other sources of heat nor placed in environments with high temperatures; any of these would cause the unit to wear more quickly and perform poorly. The units have been declared to be in the 4 ( $T = 30^{\circ}\text{C}$  U.R. = 55%) climate class.



Remove protective film from product.

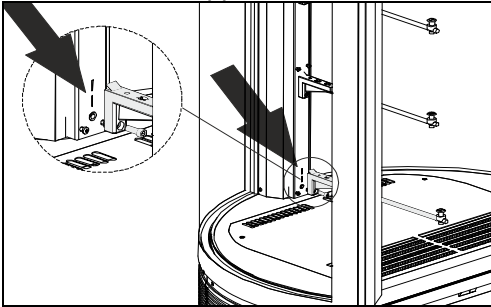
This may cause unpleasant static electricity discharge which, however, is not dangerous.

The inconvenience is reduced or prevented by continuously holding the refrigerator with one hand or grounding the package.

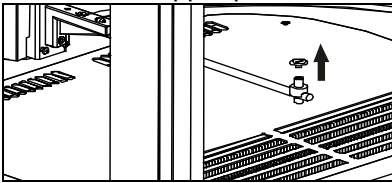


Gently remove the shelves paying great attention to not damage them.

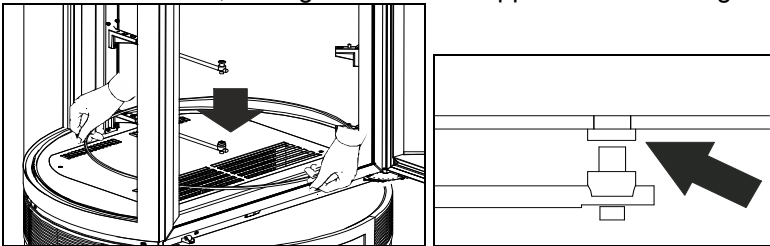
Mount the rear support included in the lower part, locking it in place with the hex screw. The other rear supports and all the front ones are already pre-mounted.



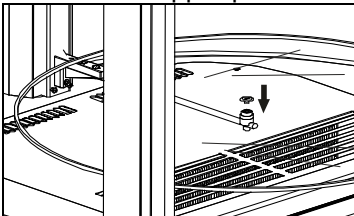
Unscrew the upper part of the rear support bush.



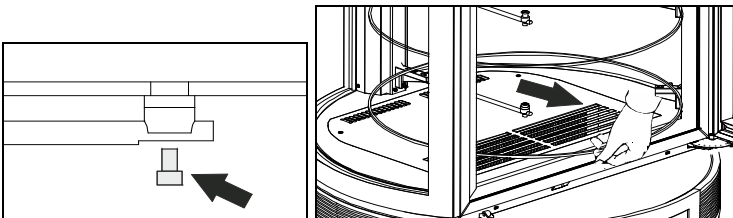
Mount the shelves, resting them on the supports and inserting them in the rear support bush.



Screw in the upper part of the bush to lock the shelf in place.



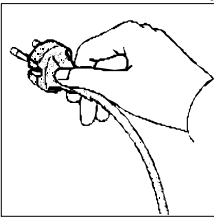
Adjust the rotation of the shelf by undoing the hex screw under the support bush.  
Pull the shelf toward the front until it comes into contact with the pins on the front supports.  
Check that the shelf rotates easily.  
Tighten the hex screw to lock the shelf in place.



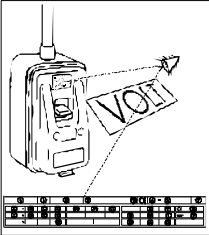
Clean the unit and the shelves as described in the Chapter "CLEANING". After having cleaned it, leave the door open at least 72 hours before putting the unit into operation.

The refrigerator is supplied with an electric plug, SHUKO type. Make sure it complies with EN60320 and national regulations. Otherwise, replace with a complying one.

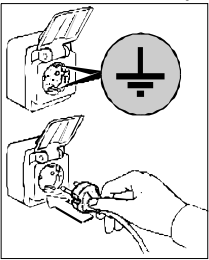
**WARNING:** The operation must be carried out by a skilled technician.



Check and verify that the line voltage corresponds to that found on the technical specifications plaque on the unit.



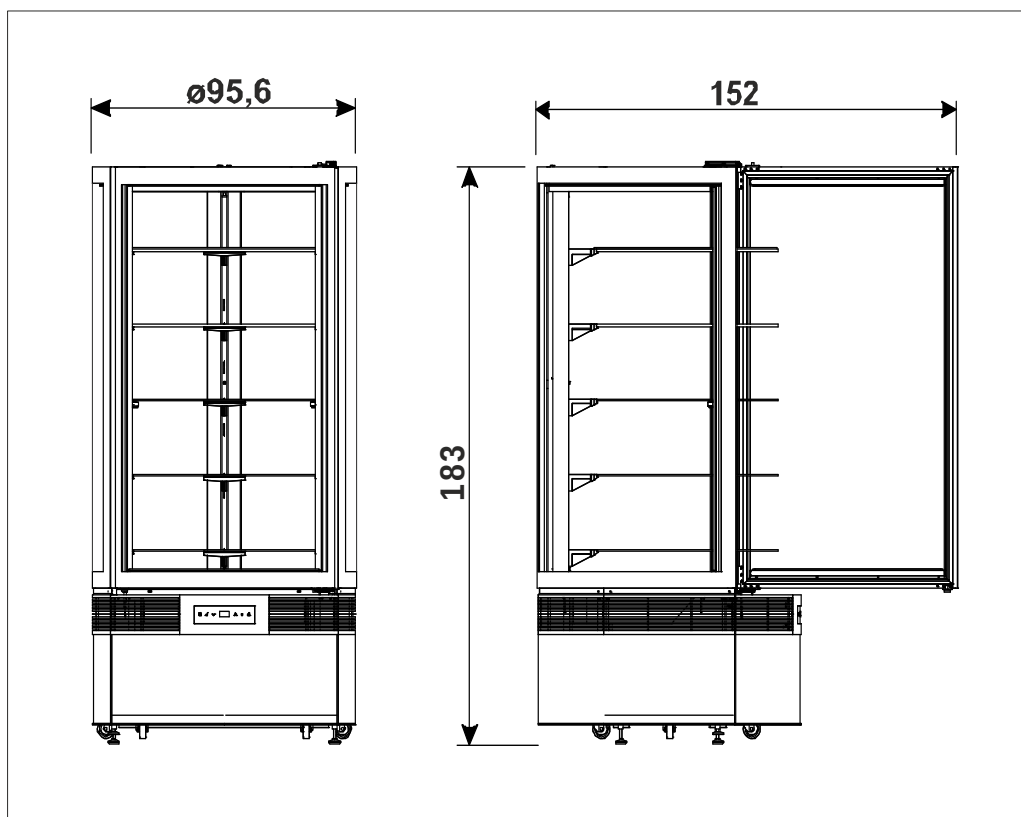
Then insert the plug into the current tap.



Now the installation has come to end.

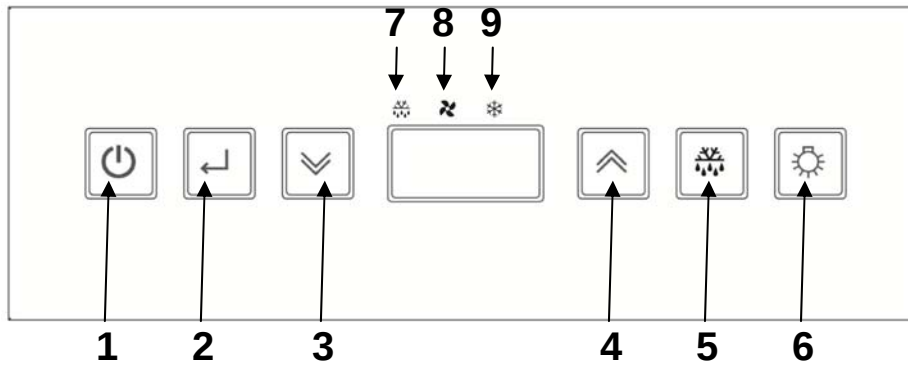
## TECHNICAL SPECIFICATIONS

The dimensions of the units are found below.



## CONTROL PANNELS

All of the units have the following control panel installed:



| POS | DESCRIPTION     |
|-----|-----------------|
| 1   | ON/SBY key      |
| 2   | ENTER key       |
| 3   | DOWN key        |
| 4   | UP key          |
| 5   | DEFROST key     |
| 6   | LIGHT key       |
| 7   | DEFROST ICON    |
| 8   | FAN ICON        |
| 9   | COMPRESSOR ICON |

|  |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|--|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p><b><u>ON/SBY key</u></b><br/>Press this key for 3 seconds and release it as the display shows the [Sby] to set the appliance to the stand-by mode (Backlighting activated).</p> <p>When holding device in stand-by pressed [the display shows Sby], the controller turns on (Backlighting deactivated).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|  | <p><b><u>ENTER key</u></b><br/>Press and release this key to check/change the appliance temperature setpoint; during operations the above mentioned backlighting is flashing.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|  | <p><b><u>UP and DOWN keys</u></b><br/>These keys allow to increase or decrease the value of the parameter to be changed (the backlighting is flashing during these operations).</p> <p>Pressed and released enable the visualisation of the minimum and maximum temperatures recorded (if available) and any active alarms (the backlighting is flashing during these operations)</p> <p>The  button, held down for a period exceeding 3 seconds, allows the modification of the chamber humidity settings (backlighting flashing).</p> <p>Pressed at the same time for a time greater than 3 seconds enables the selection of the keyboard lock or entry into parameter configuration by way of the confirmation with the  button.</p> |
|  | <p><b><u>DEFROST key</u></b><br/>Pressed for a time greater than 3 seconds activates / deactivates the manual defrost (the backlighting is activated during these operations)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|  | <p><b><u>LIGHT key</u></b><br/>Pushed and released allows the activation or the deactivation of the unit's interior illumination (backlighting ON with light ON, backlighting OFF with light OFF), independent of the status in which the  button might be.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|  | <p><b><u>DEFROST ICON</u></b><br/><i>Led on:</i> defrost in progress<br/><i>Led blinking:</i> defrost activation delay or dripping in progress<br/><i>Led blinking at high frequency:</i> alarm memorized</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|  | <p><b><u>FAN ICON</u></b><br/><i>Led on:</i> room fans activated<br/><i>Flashing LED:</i> ventilator activation delay</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|  | <p><b><u>COMPRESSOR ICON</u></b><br/><i>Led on:</i> compressor activated<br/><i>Led blinking:</i> compressor activation delay</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## **TEMPERATURE SETPOINT SETTING/VARIATION**

|                                                                                   |                                                                                                                                                                                                                                                |
|-----------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Press and release the key <u>enter</u> : the current setpoint blinks on the display for 5 seconds.<br>After 5 seconds, the displays shows the room temperature again                                                                           |
|  | While the display is blinking, use the <u>up</u> and <u>down</u> keys to increase or decrease the temperature setpoint                                                                                                                         |
|  | Press the <u>enter</u> button again to confirm the new set point: the acquisition of the new value is signalled by an acoustic emission of 3 short consecutive beeps.<br>The display returns to the indication of the temperature in the cell. |

## **SMART FUNCTIONS – Quick-access functions**

### **FORCED MANUAL DEFROST**

|                                                                                   |                                                                                                                                                                                                                     |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Push the <u>defrost</u> button for more than 3 seconds to access the manual defrost functions.<br>With the defrost in progress press the button again for a period greater than 3 seconds to end the defrost phase. |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### **CHANGE IN RELATIVE HUMIDITY**

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Push the <u>down</u> button, hold down for more than 3 seconds to modify the percentage of relative humidity in the chamber.<br><br>The temporary flashing confirmation label [F_C] corresponds to a too low relative humidity (fans in parallel with the compressor).<br>The flashing temporary confirmation label [F_] corresponds to a too high relative humidity (fans independent).<br>The relative humidity that blinks on the temporary label [FtE] is programmed by the manufacturer. |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

## **BLOCKIEREN DER TASTATUR**

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Push the <u>up</u> and <u>down</u> buttons simultaneously and hold down for more than 3 seconds.<br><br>The label [Loc] is visualised.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|  | Push the <u>enter</u> to confirm the choice and activate the function.<br>After 30 seconds if not confirmed the program exits the function.<br>To unlock the keyboard it is necessary to press the   buttons simultaneously for more than 3 seconds: in confirmation of the operation on the display the message [UnL] appears, flashing, accompanied by 3 short beeps of the buzzer.<br>Immediately afterwards, the display returns to the indication of the temperature in the cell.<br><br>With the keyboard locked, pressing any button, the instrument emits a long beep indicating the [Loc] message on the display. |

## PROBE READING MANUAL PRINTING: Coupled with the TSP print terminal

|                                                                                                                                                                     |                                                                                                                                                                 |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>Push the <u>up</u> and <u>down</u> buttons simultaneously and hold down for more than 3 seconds.</p> <p>The label [<b>Loc</b>] is visualised.</p>            |
|   | <p>Use the <u>up</u> and <u>down</u> buttons to visualise the [<b>Prt</b>] function.</p>                                                                        |
|                                                                                    | <p>Push the <u>enter</u> to confirm the choice and activate the function.</p> <p><i>After 30 seconds, if not confirmed, the program exits the function.</i></p> |

## PARAMETER CONFIGUTATION

|                                                                                                                                                                         |                                                                                                                                                                                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <p>Push the <u>up</u> and <u>down</u> buttons simultaneously and hold down for more than 3 seconds.</p> <p>The label [<b>Loc</b>] is visualised.</p>                                                                                                                  |
|       | <p>Use the <u>up</u> and <u>down</u> keys to display the function [<b>Par</b>].</p>                                                                                                                                                                                   |
|                                                                                       | <p>Press the <u>enter</u> key to enter the parameter configuration mode.</p> <p><i>After 30 seconds if not confirmed the program exits the function.</i></p> <p>Enter the password to gain access.</p> <p>The display shows the password setting mode [<b>00</b>]</p> |
|   | <p>Use the <u>up</u> and <u>down</u> keys to select the password “<b>65</b>”</p>                                                                                                                                                                                      |
|                                                                                      | <p>Press the <u>enter</u> key to confirm your selection.</p> <p>If the password is correct, the display shows the first parameter in the configuration list.</p>                                                                                                      |
|   | <p>Use the <u>up</u> and <u>down</u> keys to scroll the controller parameters</p>                                                                                                                                                                                     |
|                                                                                      | <p>Press the <u>enter</u> key to confirm your selection.</p> <p>The current value of the parameter selected in flashing mode is visualised.</p>                                                                                                                       |
|   | <p>Use the keys <u>up</u> and <u>down</u> to select the new value</p>                                                                                                                                                                                                 |
|                                                                                      | <p>Press the <u>enter</u> key to confirm your selection.</p>                                                                                                                                                                                                          |

## PARAMETERS OF CONFIGURATION

**“UNITS +2°C/+10°C”**

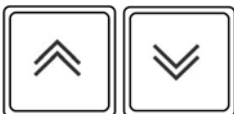
| Parameter                        | Description                                                                                                | Default | min | MAX |
|----------------------------------|------------------------------------------------------------------------------------------------------------|---------|-----|-----|
| <b>MEASUREMENT INPUTS</b>        |                                                                                                            |         |     |     |
| /1                               | Room probe calibration (the parameter is expressed in eighths of degree)                                   | -24°C   | -40 | +99 |
| /3                               | condenser probe activation (0=off; 1=on)                                                                   | 1       | 0   | 1   |
| /6                               | digital input configuration (0 = open contact, 1 = closed contact)                                         | 1       | 0   | 1   |
| /7                               | door open alarm delay time (0 = excluded)                                                                  | 120 sec | 0   | 255 |
| Pr                               | room probe reading                                                                                         | - °C    | -   | -   |
| Pc                               | condenser probe reading                                                                                    | - °C    | -   | -   |
| <b>COMPRESSOR ADJUSTMENT</b>     |                                                                                                            |         |     |     |
| r0                               | adjuster hysteresis (differential)                                                                         | +3°C    | 1   | 15  |
| r1                               | min. operating setpoint selectable                                                                         | +2°C    | -40 | r2  |
| r2                               | max. operating setpoint selectable                                                                         | +10°C   | r1  | +99 |
| <b>COMPRESSOR PROTECTION</b>     |                                                                                                            |         |     |     |
| C0                               | compressor activation delay from device start                                                              | 1 min   | 0   | 240 |
| C2                               | min. delay between compr. stop and subsequent start                                                        | 3 min   | 0   | 240 |
| C5                               | compressor start cycle time in the event of room probe alarm                                               | 10 min  | 1   | 240 |
| C6                               | C5 % where compr. starts in the event of room probe alarm                                                  | 50 %    | 0   | 100 |
| <b>DEFROST</b>                   |                                                                                                            |         |     |     |
| d0                               | defrost interval (0= excluded)                                                                             | 6 hours | 0   | 99  |
| d3                               | max. defrost duration (0= defrost never activated)                                                         | 20 min  | 0   | 99  |
| d6                               | defrosting display (0=actual cell temperature, 1=stopped cell temperature, 2=dEF label)                    | 1       | 0   | 2   |
| dE                               | defrost interval count:<br>0= actual hours; 1=hours comp. ON; 2= autodeterm.                               | 0       | 0   | 1   |
| <b>ALARMS</b>                    |                                                                                                            |         |     |     |
| A0                               | alarm hysteresis (differential)                                                                            | +2 °C   | 1   | 15  |
| A1                               | min. operating setpoint alarm (0= excluded)                                                                | -2 °C   | -40 | 0   |
| A2                               | max. operating setpoint alarm (0= excluded)                                                                | +15 °C  | 0   | +99 |
| A3                               | alarm exclusion from device start                                                                          | 120 min | 0   | 240 |
| A4                               | buzzer activation mode for alarm : 0= always; 1= timer-controlled                                          | 1       | 0   | 1   |
| A5                               | time limit for buzzer acoustic signal (only if A4 = 1)                                                     | 1 min   | 0   | 240 |
| A6                               | temperature alarm exclusion time (only if A1 and/or A2 ≠0)                                                 | 15 min  | 0   | 240 |
| <b>EVAPORATOR FAN ADJUSTMENT</b> |                                                                                                            |         |     |     |
| F3                               | evaporator fan func. during regular operation (0=OFF; 1=ON; 2=parallel with compressor)                    | 1       | 0   | 2   |
| F6                               | temperature below which the condenser fan turns off                                                        | 20°C    | -40 | +99 |
| F7                               | condenser fan differential (relating to F6)                                                                | +3°C    | 1   | 25  |
| F8                               | condenser fan func. during regular operation (0=parallel with compr.; 1=ON); also refer to F6 and F7       | 0       | 0   | 1   |
| F9                               | condenser fan func. during defrost and dripping (0=OFF; 1=ON, 2=ON if Tc≥26°C and OFF if Tc<25°C)          | 2       | 0   | 2   |
| FA                               | critical temperature for signalling high condensation temperature                                          | 41°C    | -40 | +99 |
| Fb                               | critical temperature for high pressure alarm                                                               | 44°C    | -40 | +99 |
| <b>PRINT</b>                     |                                                                                                            |         |     |     |
| P0                               | Configuration parameters printing enable (0 = disabled)                                                    | 1       | 0   | 1   |
| P1                               | Sampling time (see also parameter P6)                                                                      | 60 min  | 1   | 60  |
| P2                               | Selection of temperature probe to be printed (0 = none, 1=chamber probe, 2 = chamber and evaporator probe) | 1       | 0   | 2   |
| P3                               | Payslip heading selection (0 =excluded, 1 = BTV Display Case, 2 = BTS Display Case)                        | 1       | 0   | 2   |
| P4                               | Equipment identification number printing enable (0 = no, 1= yes)                                           | 1       | 0   | 1   |
| P5                               | Selection of language for payslip heading (1=Italian, 2=English, 3=French, 4=Spanish, 5=German)            | 1       | -1  | 5   |
| P6                               | Selection of unit of measure for sampling time (1 = minutes, 2 =hours)                                     | 1       | 1   | 2   |
| <b>COMMUNICATIONS MANAGEMENT</b> |                                                                                                            |         |     |     |
| L1                               | Instrument address (date detected in printing phase if P4 = 1)                                             | 1       | 0   | 255 |
| L2                               | Serial port management (o = not utilised, 1 = print)                                                       | 1       | 0   | 1   |
| L3                               | Baud Rate data transmiss. (1=2400, 2=4800, 3=9600, 4=18200)                                                | 3       | 1   | 4   |
| L4                               | Transmission control mode (0 = no parity, 1 = odd, 2 = even)                                               | 0       | 0   | 2   |

**“UNITS -20°C/+5°C”**

| Parameter                 | Description                                                              | Default | min | MAX |
|---------------------------|--------------------------------------------------------------------------|---------|-----|-----|
| <b>MEASUREMENT INPUTS</b> |                                                                          |         |     |     |
| /1                        | Room probe calibration (the parameter is expressed in eighths of degree) | +16°C   | -40 | +99 |
| /2                        | evaporator probe activation (0=off;1=on)                                 | 1       | 0   | 1   |
| /3                        | condenser probe activation (0=off; 1=on)                                 | 1       | 0   | 1   |
| /6                        | digital input configuration (0 = open contact, 1 = closed contact)       | 1       | 0   | 1   |
| /7                        | door open alarm delay time (0 = excluded)                                | 120 sec | 0   | 255 |

|                                  |                                                                                                                                                         |              |     |     |
|----------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------|--------------|-----|-----|
| /A                               | setpoint attivazione resistenza porta (solo se /9 = 0)                                                                                                  | -2°C         | -40 | +99 |
| /b                               | door resist. activation adjustment hysteresis (only if /9 =0)                                                                                           | 2°C          | 1   | 15  |
| /E                               | Sensor probe visualisation management (0 = normal, 1 = limited from above r0)                                                                           | 1            | 0   | 1   |
| Pr                               | room probe reading                                                                                                                                      | - °C         | -   | -   |
| Pd                               | defrost/evaporator probe reading                                                                                                                        | - °C         | -   | -   |
| Pc                               | condenser probe reading                                                                                                                                 | - °C         | -   | -   |
| <b>COMPRESSOR ADJUSTMENT</b>     |                                                                                                                                                         |              |     |     |
| r0                               | adjuster hysteresis (differential)                                                                                                                      | +3°C         | 1   | 15  |
| r1                               | min. operating setpoint selectable                                                                                                                      | -20°C        | -40 | r2  |
| r2                               | max. operating setpoint selectable                                                                                                                      | +5°C         | r1  | +99 |
| <b>COMPRESSOR PROTECTION</b>     |                                                                                                                                                         |              |     |     |
| C0                               | compressor activation delay from device start                                                                                                           | 1 min        | 0   | 240 |
| C2                               | min. delay between compr. stop and subsequent start                                                                                                     | 3 min        | 0   | 240 |
| C5                               | compressor start cycle time in the event of room probe alarm                                                                                            | 10 min       | 1   | 240 |
| C6                               | C5 % where compr. starts in the event of room probe alarm                                                                                               | 70 %         | 0   | 100 |
| <b>DEFROST</b>                   |                                                                                                                                                         |              |     |     |
| d0                               | defrost interval (0= excluded)                                                                                                                          | 6 ore        | 0   | 99  |
| d1                               | defrost type (0= resistance, 1= hot-gas)                                                                                                                | 1            | 0   | 1   |
| d2                               | end-of-defrost temp. (relating to evaporator temper.)                                                                                                   | +8 °C        | -40 | +99 |
| d3                               | max. defrost duration (0 = the defrosting function will not start; 255 = the defrosting function will go on continuously)                               | 20 min       | 0   | 255 |
| d6                               | defrosting display (0=actual cell temperature, 1=stopped cell temperature, 2=DEF label)                                                                 | 1            | 0   | 2   |
| d7                               | dripping time                                                                                                                                           | 4 min        | 0   | 15  |
| dE                               | defrost interval count: 0= actual hours; 1=hours comp. ON; 2= autodeterm.                                                                               | 1            | 0   | 1   |
| <b>ALARMS</b>                    |                                                                                                                                                         |              |     |     |
| A0                               | alarm hysteresis (differential)                                                                                                                         | +2 °C        | 1   | 15  |
| A1                               | min. operating setpoint alarm (0= excluded)                                                                                                             | -2 °C        | -40 | 0   |
| A2                               | max. operating setpoint alarm (0= excluded)                                                                                                             | +15 °C       | 0   | +99 |
| A3                               | alarm exclusion from device start                                                                                                                       | 120 min      | 0   | 240 |
| A4                               | buzzer activation mode for alarm : 0= always; 1= timer-controlled                                                                                       | 1            | 0   | 1   |
| A5                               | time limit for buzzer acoustic signal (only if A4 = 1)                                                                                                  | 1 min        | 0   | 240 |
| A6                               | temperature alarm exclusion time (only if A1 and/or A2 ≠0)                                                                                              | 15 min       | 0   | 240 |
| A7                               | temp. alarm exclusion time after evap. stop (for A1 and/or A2 ≠0)                                                                                       | 60 min       | 0   | 240 |
| <b>EVAPORATOR FAN ADJUSTMENT</b> |                                                                                                                                                         |              |     |     |
| F1                               | temper. above which the evap. fan stops ( only if /A = 1 and F7 = 3 or 4)                                                                               | -1°C         | -55 | +99 |
| F2                               | fan differential (relating to F1, only if /A = 1 and F7 = 3 or 4)                                                                                       | +2°C         | 1   | 15  |
| F3                               | evaporator fan func. during regular operation (0=OFF; 1=ON; 2=parallel with compressor; 3=determined by F1 and F2 with comp. ON and OFF with comp. OFF) | 4            | 0   | 4   |
| F4                               | evap. vent. operation during defrost and dripping (0= OFF, 1= ON, 2= determ. with F7)                                                                   | 0            | 0   | 2   |
| F5                               | evaporator fan stop after dripping                                                                                                                      | 3 min        | 0   | 15  |
| F6                               | temperature below which the condenser fan turns off                                                                                                     | 20°C         | -40 | +99 |
| F7                               | condenser fan differential (relating to F6)                                                                                                             | +3°C         | 1   | 25  |
| F8                               | condenser fan func. during regular operation (0=parallel with compr.; 1=ON); also refer to F6 and F7                                                    | 0            | 0   | 1   |
| F9                               | condenser fan func. during defrost and dripping (0=OFF; 1=ON, 2=ON if Tc≥26°C and OFF if Tc<25°C)                                                       | 2            | 0   | 2   |
| FA                               | critical temperature for signalling high condensation temperature                                                                                       | 43°C         | -40 | +99 |
| Fb                               | critical temperature for high pressure alarm                                                                                                            | 46°C         | -40 | +99 |
| <b>PRINT</b>                     |                                                                                                                                                         |              |     |     |
| P0                               | Configuration parameters printing enable (0 = disabled)                                                                                                 | 1            | 0   | 1   |
| P1                               | Sampling time (see also parameter P6)                                                                                                                   | 60 min/hours | 1   | 60  |
| P2                               | Selection of temperature probe to be printed (0 = none, 1=chamber probe, 2 = chamber and evaporator probe)                                              | 1            | 0   | 2   |
| P3                               | Payslip heading selection (0 =excluded, 1 = BTV Display Case, 2 = BTS Display Case)                                                                     | 1            | 0   | 2   |
| P4                               | Equipment identification number printing enable (0 = no, 1= yes)                                                                                        | 1            | 0   | 1   |
| P5                               | Selection of language for payslip heading (1=Italian, 2=English, 3=French, 4=Spanish, 5=German)                                                         | 1            | -1  | 5   |
| P6                               | Selection of unit of measure for sampling time (1 = minutes, 2 =hours)                                                                                  | 1            | 1   | 2   |
| <b>COMMUNICATIONS MANAGEMENT</b> |                                                                                                                                                         |              |     |     |
| L1                               | Instrument address (date detected in printing phase if P4 = 1)                                                                                          | 1            | 0   | 255 |
| L2                               | Serial port management (0 = not utilised, 1 = print)                                                                                                    | 1            | 0   | 1   |
| L3                               | Baud Rate data transmiss. (1=2400, 2=4800, 3=9600, 4=18200)                                                                                             | 3            | 1   | 4   |
| L4                               | Transmission control mode (0 = no parity, 1 = odd, 2 = even)                                                                                            | 0            | 0   | 2   |

## USER PARAMETER CONFIGURATION - PROBE READING

|                                                                                   |                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>Push the <u>up</u> and <u>down</u> buttons simultaneously and hold down for more than 3 seconds.</p> <p>The label [<b>Loc</b>] is visualised.</p>                                                                                                                                                                                                                                                                      |
|  | <p>Utilise the <u>up</u> and <u>down</u> buttons to scroll the sensor probe readings and the user parameters.</p>                                                                                                                                                                                                                                                                                                         |
|  | <p>Press the <u>enter</u> key to confirm your selection and enter the mode for reading probes or changing parameters.</p> <p>The current value blinks on the display.</p> <p>Use the keys   to select the new value, applicable to parameters only.</p> |
|  | <p>Press the <u>enter</u> key to exit or confirm the selection of the parameter new value; the setting stops blinking.</p>                                                                                                                                                                                                                                                                                                |

## DEFAULT PARAMETER RECOVERY

*Information accessible to qualified staff only.*

|                                                                                     |                                                                                                                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | <p>On starting the appliance, a "LAMPTEST" phase will start.<br/>If you press the <u>enter</u> key 3 times consecutively during this phase, all default parameters will be reset.</p> <p>The display shows [<b>rLd</b>] indicating the reset of the values pre-set by the manufacturer.</p> |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

**ATTENTION:** the default values in memory refer to the configurations (**tn**, **bts**, **btv**, **PrA**) exclusively.

## ALARMS

### UNIT WITH BROKEN SENSOR PROBES DURING CONSERVATION

#### **Room probe error**

If the room probe is broken or the relevant connection interrupted, the display shows the label [**E0**].

The appliance keeps operating in storing according to the values given to parameters **C5** and **C6**.

The inner fan keeps operating according to the value given to "**F3**".

#### **Evaporator fan error (only on -20°C / +5°C units)**

If the room probe is broken or the relevant connection interrupted, the display shows the label [**E1**].

The inner fan operates according to the value given to parameter "**F3**".

*If the three probes are broken or disconnected, **E0**, **E1**, and **E2** alternate on the display.*

#### **Condenser probe error**

If the condenser probe is broken or the relevant connection interrupted, the display shows the label [**E2**].

The condenser fan keeps operating according to the value given to parameter "**F8**".

*If the three probes are broken or disconnected, **E0**, **E1**, and **E2** alternate on the display.*

## **UNIT WITH BROKEN SENSOR PROBES DURING DEFROST**

### **Room probe error**

In the event that the chamber sensor probe is broken or the respective connection has been interrupted during the defrost phase the function will be completed normally.

The string set with the parameter “**d6**” and the label **[E0]** will be visualised alternatively on the display.

### **Condenser probe error**

If the condenser probe is broken or the relevant connection interrupted, the display shows the label **[E2]**.

The condenser fan keeps operating according to the value given to parameter “**F8**”.

*If the three probes are broken or disconnected, **E0**, **E1**, and **E2** alternate on the display.*

## **HIGH TEMPERATURE ALARM**

|                                                                                   |                                                                                                                                                                                                          |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | If the room temperature exceeds the setpoint, the label <b>[AH]</b> and the temperature reached alternate on the display.<br><br>Press <u>up</u> to display the duration of the event causing the alarm. |
|-----------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The buzzer may be silenced by pressing the button 

The visual alarm signal stays on until the temperature returns within the normal range.

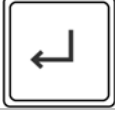
## **LOW TEMPERATURE ALARM**

|                                                                                    |                                                                                                                                                                                                                                |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | If the room temperature is below the setpoint, the label <b>[AL]</b> and the temperature reached alternate on the display. The buzzer sounds.<br><br>Press <u>down</u> to display the duration of the event causing the alarm. |
|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The buzzer may be silenced by pressing the button 

The visual alarm signal stays on until the temperature returns within the normal range.

## **HIGH AND LOW TEMPERATURE ALARMS MEMORIZED**

|                                                                                     |                                                                                                                                                                 |
|-------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | The defrost led blinking at high frequency indicates high or low temperature alarm.                                                                             |
|  | Pushing the <u>enter</u> button the type of alarm recorded will be visualised on the flashing display.                                                          |
|  | Pushing the <u>enter</u> button the critical temperature recorded will be visualised on the flashing display.                                                   |
|  | Pushing the <u>enter</u> button the time duration of alarm event, expressed in minutes, will be visualised on the flashing display.                             |
|  | Pushing the <u>enter</u> button the operation of the defrost LED will be reset to its normal state.<br>The display shows <b>[rES]</b> after the abnormal event. |

*In the event that another alarm event were to occur, for high or low temperature, if the information relative to the preceding anomaly hasn't been visualised by the operator, this latter will be overwritten by the more recent data.*

*If the high temperature alarm is on, the compressor keeps working; if the low temperature alarm is on, the compressor stops.*

***! If the card is set to the stand-by mode, the min. / max. temperature memorized and any alarms will not be saved.***

### **BLACKOUT ALARM**

|                                                                                   |                                                                                                                                   |
|-----------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
|  | The defrost led blinking at high frequency indicates a blackout                                                                   |
|  | Pushing the <u>enter</u> button the [bLO] label will be visualised on the display.                                                |
|  | Pushing the <u>enter</u> button the maximum temperature recorded in the chamber will be visualised on the display.                |
|  | Pushing the <u>enter</u> button the defrost led is reset to standard operation. The display shows [rES] after the abnormal event. |

### **OPEN DOOR ALARM**

*In case of door open the display visualises the message [dA] alternating with the current visualisation whilst the buzzer sounds the event with a beep of five seconds repeated every 10.*

*The alarm will reset upon the closure of the door and is registered in memory (high frequency flashing defrost LED).*

### **HIGH CONDENSATION TEMPERATURE ALARM**

If the condensation temperature is too high, due to dirty condenser, the label [HtC] and the room temperature alternate on the display.  
The buzzer sounds.

*The buzzer can be turned off by pressing the key*



*The visual warning signal stays on until the condensation temperature returns to normal range.*

### **HIGH PRESSURE ALARM**

If the refrigerating appliance pressure is above the specified limit, the label [HP] and the room temperature alternate on the display.  
The buzzer sounds.

*The buzzer can be turned off by pressing the key*



*The visual warning signal stays on until the card is set to stand-by.*

***! If the problem causing the alarm reoccurs on restarting the system, the signal [HP] will be displayed again.***

*In this case, all the relay outputs are de-activated except the condenser fan output.*

## **DEFROSTING**

Defrost may be either **manual** type or **automatic** type.

### **Manual defrost**

|                                                                                     |                                                                                                                                                                                             |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Push the button <u>defrost</u> for 4 sec seconds to immediately activate the defrost cycle.<br>Just before the defrosting process begins, the temperature of the blocked cell is displayed. |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

*The defrosting process can be stopped manually by pressing the  key again for 4 seconds. When the process is stopped, a signal blinks on the label display [ndF].*

## **Automatic defrost**

**Automatic defrost** is started during the conservation phase and is regulated by the card set-up.

*The defrost operation can be manually interrupted by pressing the up button for 4 seconds: the deactivation of the function will be indicated by the [ndF] label flashing on the display.*

## **STOPPING**

Press this key  for 3 seconds and release it as the display shows the [Sby] to set the appliance to the stand-by mode.

**WARNING:** the main switch  DOES NOT insulate the machine from the electric current.

Set the general cut-out in OFF position.

To isolate the unit from electrical tension disconnect its plug from the outlet.

## **WORKING IRREGULARITIES**

In case of working irregularities, before to call the technical service in zone verify that:

- the main switch  is lighting and the current is present;
- the regulated temperature is the wished one;
- that the door is perfectly closed;
- the machine is not near heat sources;
- the condenser is clean and the fan works regularly;
- an excess of hoarfrost does not cover the evaporating pannel.

In case of negative result, contact the nearest service centre indicating the model and the serial number shown on the rating placed on the appliance instrument panel.

## **DAILY CLEANING**

To guarantee perfect hygiene and conservation of the unit it is well to carry out regular and/or daily cleaning operations.

**Avoid using abrasive creams or stainless steel wool pads, acetone, chlorylene or ammonia.**

**Use only a solution of water and bicarbonate.**

Any food stains or residue on the outside surface should be removed with water before they harden.

If residues are already hardened used a sponge soaked in a solution of water and bicarbonate.

Daily cleaning of all inside surfaces of the appliance is recommended.

Clean the shelves and the interior of the unit with a lightly dampened cloth.

The space around and under the refrigerator must also be cleaned and held in perfect hygiene.

Clean using water and neutral soap or detergent.

## **GENERAL CLEANING AND MAINTENANCE**

For regular and constant service of the unit it would be well to regularly carry out general cleaning and maintenance operations.

**WARNING:** The cleaning and mantainance of the refrigerating engine and the compressor area needs the intervention of a skilled technician, therefore it cannot be done by other persons.

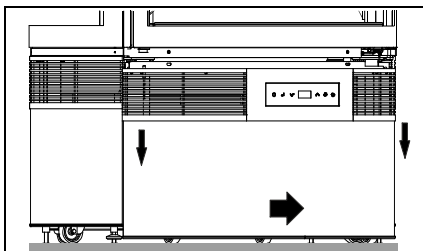
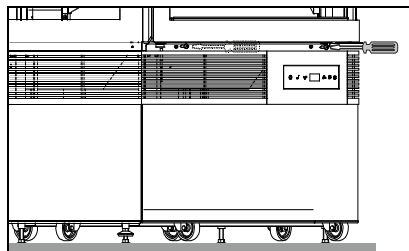
Clean the exterior and interior surfaces with soap or a neutral detergent and water: a little vinegar added to the water will eliminate any eventual foul odours.

Before to begin with the operations proceed as following:

- set the general cut-out in OFF position;
- remove the plug from the socket and wait till the complete entfrothing of the unit.

To access the condenser it is necessary to remove the front dashboard:

1. Remove the two upper screws
2. Unhook the dashboard pushing it in a downward direction



**WARNING:** to assure a regular use of the machine it is necessari to clean the copper-alluminium condensator at least every 30 days.

Accurately clean the condenser in the refrigerating unit and the inner evaporator with either a vacuum cleaner, a bristle brush or a non-wire brush after removing the protections.

The cleaning and mantainance operations have now come to end.

## USAGE INTERRUPTIONS

In case of longer inactivity of the refrigerator and for maintaining it in the best state act as following:

- set the general cut-out in OFF position.
- remove the plug from the socket.
- empty the refrigerator and clean it as described In the chapter "CLEANING".
- let the door open to avoid the forming of bad smell.

## MALFUNCTIONING

Malfunctioning during operation is often due to banal causes , witch may nearly all be resolved without the help of a specialised technician. Consequently, before getting in touch with a service centre, check the following:

| PROBLEM                                        | POSSIBLE CAUSES                                                                           |
|------------------------------------------------|-------------------------------------------------------------------------------------------|
| The appliance does not start                   | Check that the plug is properly inserted into the socket.                                 |
|                                                | Check that there is voltage at the socket                                                 |
| The internal temperature is too high           | Check the electronic card adjustment                                                      |
|                                                | Check for a heat source in the vicinity                                                   |
|                                                | Check that the door closes properly                                                       |
| The appliance is excessively noisy             | Check that the appliance is standing level. A lopsided appliance could set off vibrations |
|                                                | Check that the appliance is not touching other appliances or parts which could resonate   |
| Some condensation is produced on the appliance | Room humidity is very high                                                                |
|                                                | The door is not closed properly                                                           |

Upon completion of the above checks, if the fault persists, contact an authorised service centre. Always indicate:

- the nature of the fault
- the model and the serial number of the unit can be found on the electrical specifications plaque, located on the unit's instrument panel.

## WASTE DISPOSAL AND DEMOLITION

### WASTE STORAGE

At the end of the product life, avoid release to the environment. The doors should be removed before disposal.

Temporary storage of special waste is permitted while waiting for disposal by treatment and/or final collection. Dispose of special waste in accordance with the laws in force with regard to protection of the environment in the country of the user.

### PROCEDURE FOR ROUGH DISMANTLING THE APPLIANCE

All countries have different legislation; provision laid down by the laws and the authorised bodies of the countries where the demolition takes place are therefore to be observed.

A general rule is to deliver the appliance to specialised collection and demolition centres. Dismantle the refrigerator grouping together the components according to their chemical nature. The compressor contains lubricating oil and refrigerant, which may be recycled. The refrigerator components are considered special waste, which can be assimilated with domestic waste.

Make the appliance totally unusable by removing the power cable and any door locking mechanisms in order to avoid the risk of anyone being trapped inside.

**DISMANTLING OPERATIONS SHOULD BE CARRIED OUT BY QUALIFIED PERSONNEL.**

### THE SAFE DISPOSAL OF WASTE FROM ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE DIRECTIVE 2002/96/EC)

**Do not dump pollutant material in the environment. Dispose of it in compliance with the relevant laws.**

Under the WEEE (Waste Electrical and Electronic Equipment) Directive 2002/96/EC, when scrapping equipment the user must dispose of it at the specific authorised disposal centres, or reassign it, still installed, to the original seller on purchase of new equipment.

All equipment which must be disposed of in accordance with the WEEE Directive 2002/96/EC is marked with

a special symbol .

**The improper disposal of Waste Electrical and Electronic Equipment is liable to punishment under the relevant laws in the countries where the offence is committed.**

**Waste electrical and Electronic Equipment may contain hazardous substances with potential harmful effects on the environment and human health. You are urged to dispose of them properly.**

## REFRIGERANT MATERIAL SAFETY DATA SHEET

### 1) R404a: fluid components

- |                     |            |     |
|---------------------|------------|-----|
| • trifluoroethane   | (HFC 143a) | 52% |
| • pentafluoroethane | (HFC 125)  | 44% |
| • tetrafluoroethane | (HFC 134a) | 4%  |

GWP = 3750

ODP = 0

### 2) Hazard identification

Overexposure through inhalation may cause anaesthetic effects. Acute overexposure may cause cardiac rhythm disorders and sudden death. Product mists or sprays may cause ice burns of eyes and skin.

### 3) First aid procedures

#### • Inhalation:

keep injured person away from exposure, warm and relaxed. Use oxygen, if necessary. Give artificial respiration if respiration has stopped or is about to stop. In case of cardiac arrest give external cardiac massage. Seek immediate medical attention.

#### • Skin:

use water to remove ice from affected areas. Remove contaminated clothes.

CAUTION: clothes may adhere to skin in case of ice burns.

In case of contact with skin, wash with copious quantities of lukewarm water. In case of symptoms (irritation or blisters) seek medical attention.

- **Eyes:**  
immediately wash with ocular solution or fresh water, keeping eyelids open for at least 10 minutes. Seek medical attention.
- **Ingestion:**  
it can cause vomit.. If conscious, rinse mouth with water and drink 200-300 ml of water. Seek medical attention.
- **Other medical treatment:**  
symptomatic treatment and support therapy when indicated. Do not administer adrenaline or sympatheticomimetic drugs after exposure, due to the risk of arrhythmia and possible cardiac arrest.

#### 4) Environmental data

##### Persistence and degradation

- **HFC 143a:**  
slow decomposition in lower atmosphere (troposphere). Duration in atmosphere is 55 years.
- **HFC 125:**  
slow decomposition in lower atmosphere (troposphere). Duration in atmosphere is 40 years.
- **HFC 134a:**  
relatively rapid decomposition in lower atmosphere (troposphere). Duration in atmosphere is 15.6 years.
- **HFC 143a, 125, 134a:**  
does not affect photochemical smog (not included in volatile organic components – VOC – as established in the UNECE agreement). Does not cause ozone rarefaction.  
Product exhausts released in the atmosphere do not cause long-term water contamination.

**The instruction handbook contains a wiring diagram on the last page**

| Pos        | DESCRIPTION                                   | Pos         | DESCRIPTION                                 |
|------------|-----------------------------------------------|-------------|---------------------------------------------|
| <b>1</b>   | COMPRESSOR                                    | <b>44</b>   | RELAY COMPRESSOR                            |
| <b>2</b>   | COMPRESSOR FAN                                | <b>69</b>   | GROUNDING TERMINAL                          |
| <b>3</b>   | GENERAL TERMINAL BOARD                        | <b>70</b>   | COLD DELIVERY SOLENOID VALVE                |
| <b>8</b>   | PLUG                                          | <b>70A</b>  | WARM DELIVERY SOLENOID VALVE                |
| <b>9</b>   | EVAPORATOR FUN                                | <b>76</b>   | MAGNETIC MICRO-SVWITCH                      |
| <b>12</b>  | SOLENOID VALVE DEFROSTING                     | <b>103</b>  | HUMIDITY SENSOR                             |
| <b>20</b>  | DOOR ANTICONDENSING RESISTOR                  | <b>119</b>  | TN DISPLAY CASE ELECTRONIC DATA CARD        |
| <b>20A</b> | SIDE GLASS ANTICONDENSATION RESISTANCE HEATER | <b>120</b>  | BT DISPLAY CASE ELECTRONIC DATA CARD        |
| <b>20B</b> | SIDE GLASS ANTICONDENSATION RESISTANCE HEATER | <b>121</b>  | LED SWITCHING POWER SUPPLY                  |
| <b>20C</b> | REAR GLASS ANTICONDENSATION RESISTANCE HEATER | <b>122</b>  | LED LAMPS                                   |
| <b>20D</b> | SECTION ANTICONDENSATION RESISTANCE HEATER    | <b>122A</b> | TOP LED LAMPS                               |
| <b>22</b>  | RESISTANCE FOUND BASIN                        | <b>125</b>  | ELECTRONIC DATA CARD PRALINERY DISPLAY CASE |
| <b>22A</b> | RESISTANCE HEATER EXHAUST PIPE                | <b>126</b>  | CAPACITIVE BUTTONS DISPLAY BOARD            |