

## LUZON / LUZON DEEP

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Instruction manual



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# User manual **LUZON, LUZON DEEP**

## 1. UNLOADING

The device should be transported in vertical position, and it should be properly secured and packed. The manufacturer ships the device on a special wooden platform, secured with cardboard angle sections and foil.

## 2. PROPERTIES OF THE DEVICE

### 2.1. Purpose

LUZON is a universal cooling device used to store and display a wide assortment of grocery products in singular packages, previously cooled to storage temperature. There is also a DEEP version of the case (ventilated, evaporator at the front, horizontal display shelves). Our display cabinets ensure universal and efficient display area for all types of commercial and gastronomic units. Guaranteed temperature inside the display cabinet equals  $+1^{\circ}\text{C}/+10^{\circ}\text{C}$  with ambient temperature of  $+15^{\circ}\text{C}/+25^{\circ}\text{C}$  and relative air humidity of up to 60%.

### 2.2. Description of the device

LUZON cases have static cooling, while LUZON DEEP have dynamic cooling. LUZON display cabinets have dynamic or static cooling. All types are equipped with automatic defrosting and electronic thermostat optionally cooperating with temperature recording module enabling to record and signal too low and too high temperature within the device. There is also an option with automatic condensate evaporation. Together with corned display cabinets, they may be connected in sequences. "LUZON" display cabinets may be ordered in two versions: with internal aggregate or to be connected to central aggregate (mod/C). "LUZON" display cabinets are equipped with storage chamber. "SAMOS" display cabinet is available in stationary or moving version. Our devices are made according to modern technologies and have all certificates required by law.

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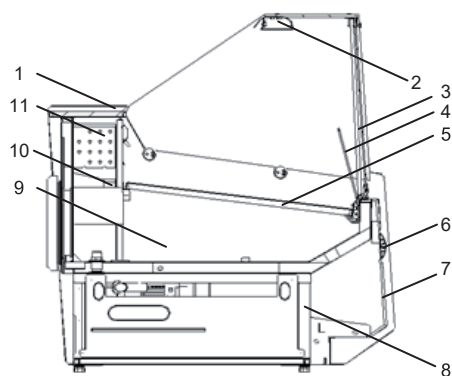
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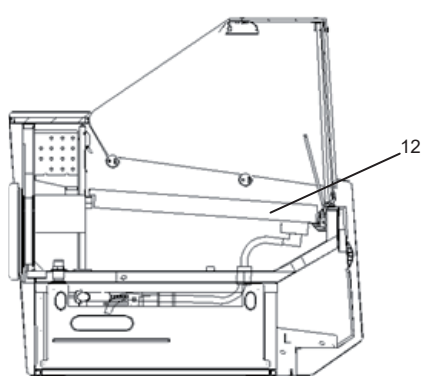


This sign signifies information of particular meaning for user security and for proper device exploitation.

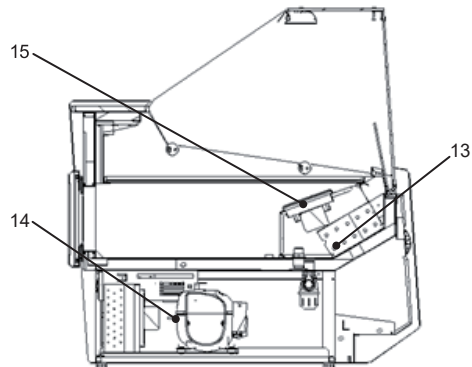
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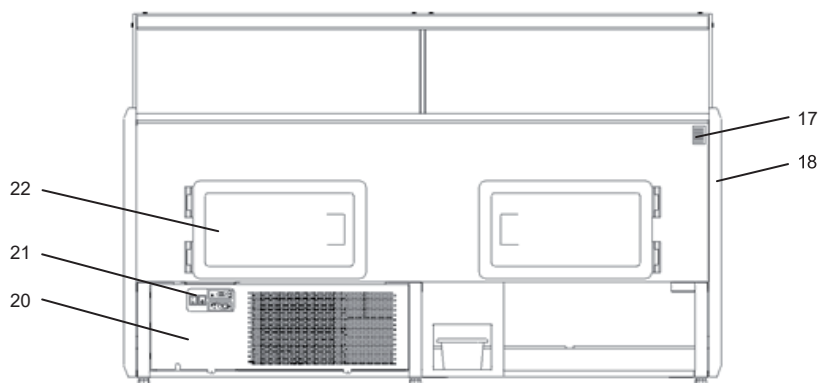
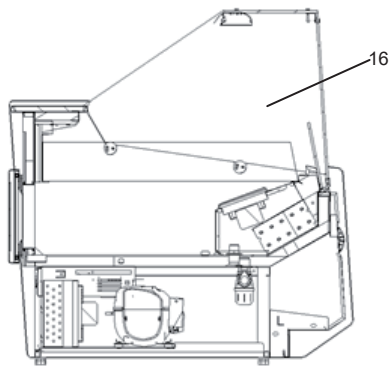
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LUZON



LUZON FISH



**Fig.1 Construction of the device**

- 1 – Granite working top
- 2 – Lamp
- 3 – Glass display shelf
- 4 – Front screen
- 5 – Display shelves (flat; two-level; three-level)
- 6 – Front bumper
- 7 – Front
- 8 – Frame
- 9 – Storage chamber
- 10 – Rail (condensate outflow after defrosting the evaporator)
- 11 – Evaporator
- 12 – Fish tank ("FISH" type)
- 13 – Evaporator in „Deep“ devices
- 14 – Cooling aggregate
- 15 – Set of ventilators „Deep“
- 16 – GN containers ("GASTRO" type)
- 17 – Nameplate
- 18 – ABS sides
- 19 – Device levelling feet
- 20 – Ventilator (after removal access to condenser fins)
- 21 – Control panel (temperature regulator /switches)
- 22 – Storage chamber doors

### 3. PREPARING THE DEVICE FOR EXPLOITATION

#### 3.1. Requirements concerning the place of installation

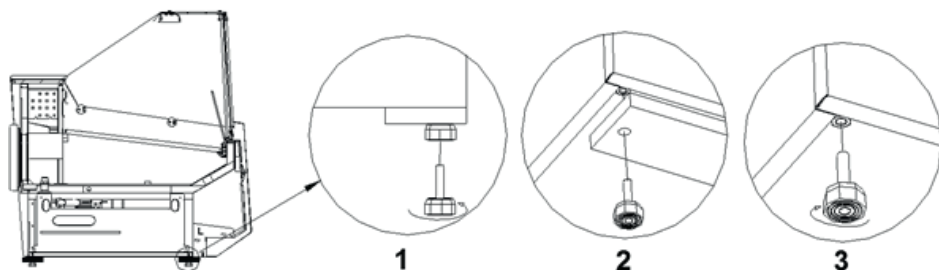
- Verify whether the cross section of feeding conduits is proper for power consumption of the installed device.
- It is forbidden to connect the device by extension rods or dividers.
- The device should be connected to the separate, properly made electric circuit with plug-in socket with protecting pin (according to PBUE /Regulations concerning Electric Equipment Construction/)



The device may be actuated solely after confirmation of the fire protection efficiency with results of measures performed according to binding regulations!

#### 3.2. Connection and actuation

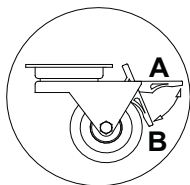
- Unpack the device and remove the wooden platform from the basis (does not concern moving devices) Fig.2



**Fig.2 Removing the wooden platform**

- 1 – Unscrew the feet from the platform
- 2 – Remove the wooden platform
- 3 – Screw the feet in nuts welded to the frame of the device

- Put the connector plug directly into the plug-in socket (it is forbidden to connect the device by extension cables or splitters!)



**Fig.3 Wheel system, moving system**

A – moving position  
B – blockade

- Mount display shelves or fish tanks, hanging them on aluminium angle sections Fig.5/4;5
- Mount glass sides Fig.6/2;1



**NOTE:** In case of "Gastro" display cabinets, it is necessary to pull out the universal salad tank before mounting the glass side Fig.5, in order to obtain free access to ABS side and to enable easy glass side with the help of glass holding downs Fig.6/1.

- Mount the aluminium lamp (together with lighting) on glass sides Fig.6/3
  - Mount the casing of lamp conduit Fig.6/10
  - Move the casing of lamp conduit to the back of the glass side, in order to hide the conduit coming out of the lamp in the casing and to place it on the internal part of the glass side! (This concerns only "GASTRO" display cabinet) Place universal salad tank in the display cabinet. Place cross-bars under GN containers in module tank, and then place GN containers according to Fig.2
  - Mount front screen Fig.6/8
  - Mount front glasses of the display cabinet Fig.6/5
  - Mount night screens Fig.7/1; 2
  - Place the condensate container on the basis of the device according to Fig.8/3 or Fig.9/3
- The first cleaning of the device should be provided right after unpacking, and before turning it on. The unit should be cleaned with water at a temperature not exceeding 40°C with a neutral detergent. For washing and cleaning the equipment it is prohibited to use products containing chlorine and sodium varieties, which destroy the protective layer and components of the device! Any residue of adhesives or silicone on metal elements should be removed only with extraction naphtha (not applicable to items made of plastic!). Do not use other organic solvents.

**When cleaning the unit is prohibited to use water jet. The unit should be cleaned with a wet rag.**



After installation of the device at the destination place it should be left to rest for at least 2 hours before turning it on (for devices with built-in compressor) to set the level of refrigerant in order to prevent problems with starting up the aggregate.

**WARNING: Keep out the cooling circuit from damage!**

- Place the plug of the connecting cable directly in plug-in socket (it is forbidden to connect the device by means of extension cords or dividers!)

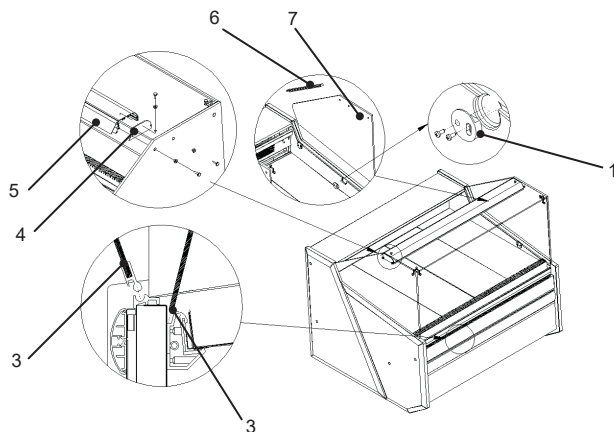


Power sockets (optional) may be used to power cash register, weight, and similar receivers with power not exceeding 500W!

- Turn on the main switch Fig.10/1, which activates the temperature regulator, and then aggregate of the device

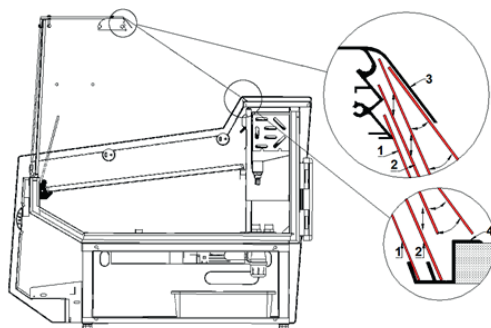


**NOTE:** If the thermostat display (for „Igloo“ thermostat) Fig.6/3 only shows two dots at the bottom instead of the temperature, this means that no unit is attached (cooling function disabled). In this case, switch the cooling on/off button on the thermostat panel - see Fig.11/1!



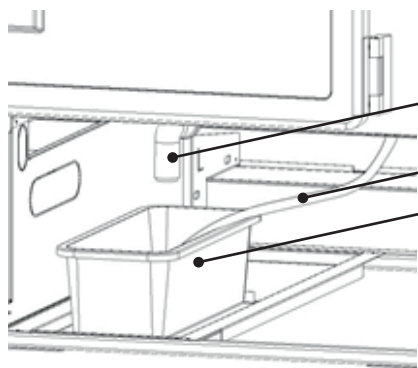
**Fig. 4. Installation of glass components and aluminum lamp**

- 1 – Glass clamp (glass side).
- 2 – Front screen, glass.
- 3 – Front glass.
- 4 – Aluminum lamp cap.
- 5 – Aluminum lamp.
- 6 – Lamp cable shield.
- 7 – Glass side.



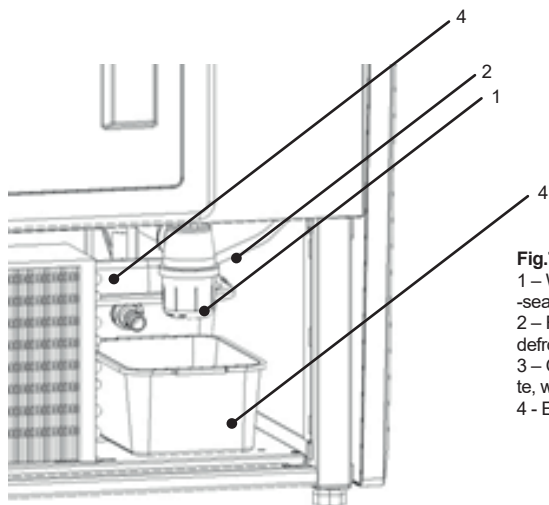
**Fig. 5. Assembly/disassembly of night shutters**

- 1 – Bottom night shutter (short) – first to be installed
- 2 – Top night shutter (long) – second to be installed
- 3 – „Blade“ of the aluminum lamp (masks and protects the night shutters before falling out)
- 4 – Guide for night shutters (aluminum profile)



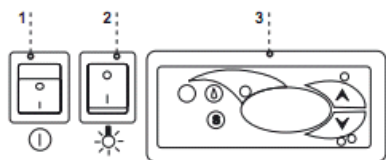
**Fig.6 Condensate container (version without evaporator)**

- 1 – Water outlet from the body of the device (water-sealed)
- 2 – Rail water outlet hose (condensate outflow after defrosting the evaporator)
- 3 - Condensate container (empty the condensate!!!)



**Fig.7 Overflow (version with evaporator)**

- 1 – Water outlet from the body of the device (water-sealed)
- 2 – Rail water outlet hose (condensate outflow after defrosting the evaporator)
- 3 – Overflow (it is necessary to empty the condensate, when water overflows the evaporator container!)
- 4 - Evaporator



**Fig.8 Control panel of the device**

- 1 - Main switch (turns on/off the aggregate of the device)
- 2 – Lighting switch
- 3 - Thermostat (temperature regulator) panel



## 4. EXPLOITATION

Temperature of the cooled space and aggregate operating cycle may fluctuate. It depends on numerous factors, such as amount and temperature of products placed in the device and temperature of the surroundings.

The device should be placed in a dry and well-ventilated place, ensuring proper air exchange (distance between the wall and the device – min. 10 cm), out of sunlight, kept far from heat sources and devices enforcing air flow (ceiling and portable ventilators, blow-in heaters). The device functions properly in a room, where temperature falls within appropriate climatic class stated on the data plate. The operation of the device may worsen when it shall operate in temperature lower or higher than the stated temperature range.

### Remarks and indications



- It is necessary to properly level the display cabinet, which will prevent loud operation of the device and shall ensure proper water (condensate) outflow during defrosting.
- After transporting the device, wait about 2 hours before its actuation.
- The first filling of cooling space should be performed after its previous cooling to working temperature. This principle should also be observed after longer pause in exploitation.
- Do not block any ventilation holes, which would hamper circulation of the cooled air. It is also necessary to ensure proper airflow around the device (aggregate ventilation holes cannot be covered).
- Ensure even load on shelves, do not exceed their maximal load and do not exceed maximal loading.
- Keep the condenser clean. Impurities may lead to overheating of the compressor and as a consequence may result in damage of the device, which is not covered by warranty.
- Do not use electric devices inside grocery product storing chamber.
- After closing the door of the device, it is not recommended to open it with force. Negative pressure created inside the device is levelled within 1-2 minutes, which allows easy opening of the door.
- Avoid unnecessary opening of doors and leaving them open for a longer period of time.

### 4.1. Temperature regulation



Service of “Igloo” and “Carel” thermostat (temperature regulators) is described in chapter 7

The basic aim of a thermostat is to control the cooling aggregate to obtain the set temperature within the device and maintain it within the determined temperature ranges. The producer enters all settings of temperature regulator required for normal functioning of the device. Before primary actuation the user should control and possibly set the required temperature inside the device on the control panel.

**Digital display** – displays the current temperature inside the device.



It is forbidden to interfere with systemic parameters of the thermostat, as this can lead to serious consequences, including the damage of the cooling device!

## 5. MAINTENANCE

### 5.1. Cleaning and maintenance



All maintenance services need to be performed after disconnecting the device from power supply!



Protect electric installation against any damage or water spillage



Do not use water stream to clean the device, only a wet cloth



Do not use any sharp objects to remove dirt!



Devices with wheels cannot be used on uneven surfaces!



During cleaning the inside of the device do not leave the front glass freely lifted in the aluminium profile. This may cause the damage of the glass and is not covered by warranty. Please remove the glass with profile for the time of cleaning Fig. 11 .



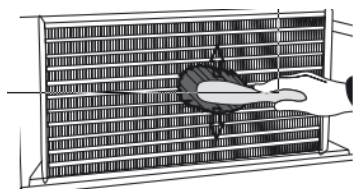
When using the display cabinet, as well as during maintenance works, pay attention not to destroy the temperature sensor in the evaporator screen!

**It is recommended to make a break in the exploitation of the device once a month in order to clean its interior, naturally defrost the evaporator, clean the condenser and verify the condition of door seals.**

If the device is not equipped with automatic condensate evaporation, it is essential to remove the condensate from the container when filling the container Fig.4. The number (frequency) of condensate removal depends on device exploitation conditions (f. ex. air humidity, door opening frequency, the amount and temperature of products entered for storage).



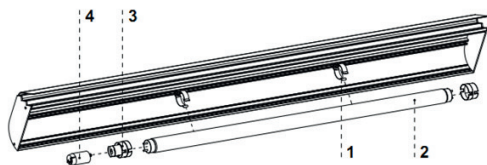
Do not use mechanical agents in order to fasten the defrosting process!



**Fig.9 Cleaning the condenser**



The producer shall not be held responsible for damages of the condenser aggregate resulting from non- observance of condenser cleanliness!



**Fig.10 Changing the fluorescent lamp**

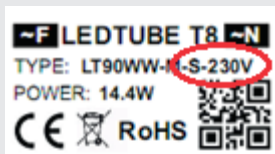
- 1– Fluorescent lamp handle
- 2 – Fluorescent lamp
- 3 – Casing of fluorescent lamp and starting switch
- 4 – Starting switch of fluorescent lamp

**It is essential to keep the condenser of the device clean.** Dirt may hinder the heat exchange, causing mainly increase in electric energy consumption and may cause damage of aggregate compressor.

In order to clean the condenser it is necessary to unscrew the fixing sheet metal screws and pull the wind brace out. Clean condenser lamellas with help of soft brush or paint brush. If the condenser is extremely dirty (blocked lamellas) it is indicated to use vacuum cleaner or compressed nitrogen to suck / blow the dirt from between lamellas.



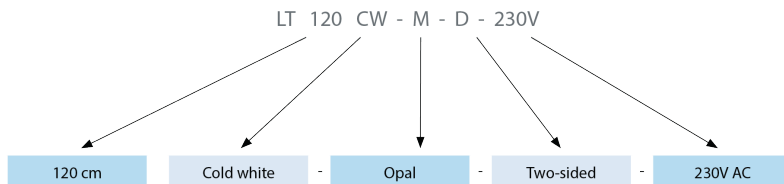
(For LT LED lighting) With the one-way lamp power supply, make sure that the power cord is attached to the adequate side of the lamp. The power supply connecting point is marked with a nameplate. Below is a sample nameplate. Particular attention should be paid to the last two positions in the code: type of power supply and voltage.



### LED tubesS LT SERIES ENCODING

LT	X	Y	-	Z	-	L	-	V
	LENGTH	COLOUR		DIFFUSER TYPE		POWER TYPE		VOLTAGE
	44 cm	CW - cold white		T - transparent		S - one-sided		230V AC
	60 cm	NW - natural white		M - opal		D - two-sided		115V AC
	90 cm	WW - warm white		G - glass				24V DC
	120 cm	MW - meat white		NM - meat				12V DC
	150 cm							

#### Exapmle



Door seal should be cleaned solely with clean water without any cleansing agents and it should be thoroughly dried. **The seal cannot get into contact with oily substances or grease!** Control whether door close properly during maintenance procedures.  
**Test:** place a sheet of paper between the seal and the casing and close the door. The paper should pose a tangible resistance during an attempt to pull it out.



**Elements of device can corrode when improper used and maintenance. To avoid that please follow the rules:**

- Do not allow contact of the surface of the device with substances containing chlorine and / or baking soda in different varieties, which destroy the protective layer and components of the device (also includes various stainless steel)



During maintenance services it is necessary to pay attention not to damage the data place of the device Fig.11, which contains significant information for servicing organs and waste removal companies.

## 6.SERVICE

### 6.1.Fault identification and repair

In case of any difficulties during actuation of the device or during its exploitation, please return to these chapters in this manual, which explain the performed operation. This aims to ensure that the device is properly operated. If you still experience difficulties, the following hints will help you solve the problem.

#### **The device is not working... – Make sure that:**

- The device is connected to the supply network

#### **Voltage and frequency in the network are compliant with those recommended by the producer 230V/50Hz**

- The main switch is on
- Thermostat is on (This concerns the Igloo thermostat – If only two spots are visible on the display – turn on the thermostat)

#### **Water leakage from below the device or into the inside of the chamber:**

- Check whether the device is properly levelled
- Check the patency of outflow pipes
- Empty the condenser tray or container
- Check whether there is not too much ice in the rail and on the condenser – defrost when necessary

#### **The device is operating, but the lighting is off...– Make sure that:**

- Lighting switch is turned on
- Fluorescent lamp or starting switch of the device are not burnt

#### **The device does not reach the proper temperature, the lighting is on...– Make sure that:**

- Lighting switch is turned on
- Temperature setting on the thermostat is properly set
- Thermostat works properly
- The condenser is clean, if necessary – clean the condenser
- Ambient temperature does not exceed 25°C
- Enough time has passed for products to be cooled
- Ventilation holes of the device are not blocked

**(This concerns the “IGLOO” thermostat) thermostat displays C0 or C1 or C2 instead of displaying temperature: This situation shall occur, when one of temperature regulation sensors has been destroyed.**

#### **The following messages may be displayed in such case:**

- C0 – temperature sensors inside the chamber are damaged – call authorized service
- C1 – failure of evaporator sensor - call authorized service
- C2 – failure of condenser alarm sensors (or failure of second evaporator sensor) – call authorized service

**(This concerns the “CAREL” thermostat) Thermostat displays E0 or E1 or L0 or Hl or EE or Ed or DF instead of temperature:**

- E0 – temperature sensor inside the chamber is damaged – call authorized service
- E1 – failure of evaporator sensor - call authorized service
- L0 – low temperature alarm (lower than temperature range set within the device – call authorized service
- Hl – high temperature alarm – call authorized service
- EE – internal defect of the regulator – call authorized service
- Ed – max. defrosting time exceeded
- DF – defrosting in progress (this is not an alarm signal)

**(This concerns the “IGLOO” thermostat) The device is working, sound signalling is activated...– Make sure that:**

- The condenser is clean, if necessary – clean the condenser
- Condenser ventilator is working properly
- Ambient temperature does not exceed 25°C

#### **The device is working too loud...– Make sure that:**

- The device is standing stably
- Furniture adjoining the device do not vibrate when the cooling aggregate compressor is working



- L0 i Hl – Wyświetlanie tych alarmów może być spowodowane nieprawidłowymi parametrami zasilania sieci elektrycznej. Alarm można zresetować wyłączając urządzenie wyłącznikiem głównym. Po chwili załączyć urządzenie ponownie. W przypadku powtórzenia problemu (wyświetlenie alarmu ponownie) wezwać autoryzowany serwis!)



Noises made by the operating device are a normal phenomenon. The devices are equipped with ventilators, engines and compressors, which turn on and off automatically. **Each compressor makes certain noises when operating. These sounds are made by the aggregate engine and by cooling agent flowing through the circuit. This phenomenon constitutes a technical feature of cooling devices and it does not signify their faulty work.**



**Steam precipitation on glasses of the device is a normal phenomenon in case of high relative air humidity exceeding 60% and does not require calling the service!**



In the case of environmental conditions exceeding normal levels in accordance with refrigerator class three (relative humidity above 60%), the phenomenon of water pouring from the system with automatic condensate evaporation (evaporators) may occur. This is not a malfunction and does not require a service call.

## 6.2. SERVICE

If after checking points described in chapter 6.1 „Fault identification and repair” the device still does not work properly, please contact Technical Service of the Igloo company, stating the data from the data plate Fig.10:



- Serial number (NS)
- Production date
- Type (name of the device) and
- Date when the device was purchased
- Description of the problem
- Your exact address and telephone number (with the code number)

Data plate is placed at the back of the device, in the right upper corner below the top Fig.1/18

Fig.11 Data plate

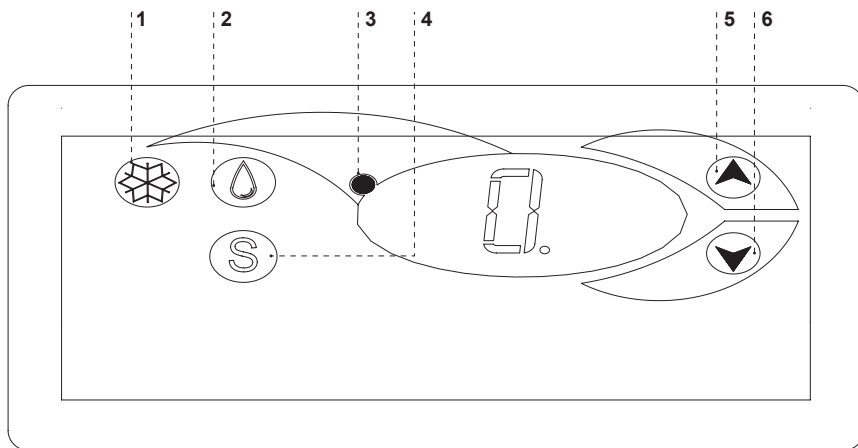


The above figure shows a demonstrative data plate and the data stated on the plate are exemplary data, which are not related with „Luzon” device!

## 7. THERMOSTAT SERVICE

### 7.1. „IGLOO” thermostat

Fig.11 „Igloo” thermostat control panel



- 1 – Cooling on/off switch
- 2 – Manual defrosting switch
- 3 – Aggregate and defrosting operating control diode
- 4 – Temperature monitoring switch on defrosting sensor
- 5 – Temperature regulation switch (increase)
- 6 – Temperature regulation switch (decrease)

Verification of adjusted temperature (inside the device) – By pressing “▲” or “▼” switch once we can verify the adjusted temperature. The adjusted temperature shall be shown on the display with a visible red blinking spot (diode). The preview shall finish automatically after about 3 seconds.

Lowering (or increasing) the temperature – press “▼” (or “▲”) switch and the adjusted temperature shall be visible on control panel. By pressing the “▼” switch we decrease the temperature to the desired value. The preview shall finish automatically after about 3 seconds.

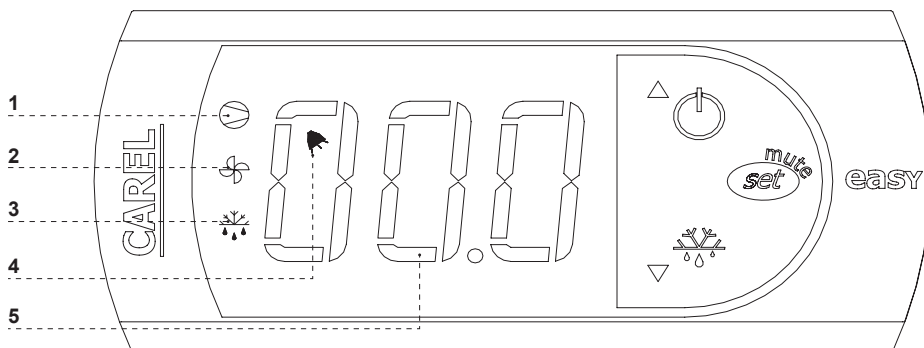
Manual defrosting – switch No. 2 enables to initiate the defrosting cycle at any moment when the device is working (regardless of the automatic defrosting function); the switch shall not operate when the temperature is higher than the final defrosting temperature.



The user should switch on/ switch off the aggregate only by means of the main switch of the device, and not by means of the direct switch on thermostat control panel. Switching on the main switch shall automatically initiate the thermostat!

## 7.2. Termostat „CAREL”

Rys. 15. Panel termostatu "Carel"



### WHAT DO DIODES ON CONTROL PANEL SIGNIFY

**Diode 1 is on - Compressor:** the symbol is visible when the compressor is working. It is blinking when compressor actuation is delayed by security procedure. It blinks in the following cycle: two blinks – pause, when the constant working mode is activated.





**Diode 2 is on - Ventilator:** the symbol is visible when evaporator ventilators are turned on. It blinks when the actuation of the ventilators is delayed by external disengagement or when another procedure is in progress.

**Diode 3 is on - Defrosting:** the symbol is visible when the defrosting function is activated. It blinks when the actuation is delayed by external disengagement or when another procedure is in progress.


**Diode 4 is on - Alarm:** the symbol is visible when the alarm is activated.

**5** – current temperature inside the device is displayed (decimal places displayed after the comma)

### SETTING THE DESIRED TEMPERATURE

- press for 1 second  leading value shall be displayed on the screen;
- increase or decrease the leading value by means of  and , switches, until the desired value shall be obtained;
- press  once again in order to confirm the new value of the setting point;

### MANUAL INPUT OF THE DEFROSTING CYCLE

Defrosting shall be realised in an automatic mode. It is possible to force defrosting at any moment by pressing and holding the  switch for minimum 5 seconds. Diode No. 1 shall blink during manual defrosting.

\* Read more on [www.alfaco.pl](http://www.alfaco.pl)

**NOTE:** IN CASE OF NOT OBSERVING THE PRINCIPLES ON CONNECTING AND USING THE DEVICE INCLUDED IN THIS MANUAL, THE PRODUCER SHALL RESERVE THE RIGHT TO RECEDE FROM OBLIGATIONS OF THE GUARANTOR!!!

Information included in this document may be altered by "IGLOO" without noticing the user.

Copying the present manual without the consent of the producer is forbidden.

Images and drawings are of demonstrative character and may differ from the purchased device.



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