

# **LUZON, LUZON DEEP**

## **operating manual**

 **IGLOO**

# **Luzon, Luzon Deep operating manual**

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**TOC**

This symbol marks information of special importance for the personal safety and for the proper operation of the device.

## **1. UNLOADING**

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

## **2. PRODUCT CHARACTERISTICS**

### **2.1. Purpose**

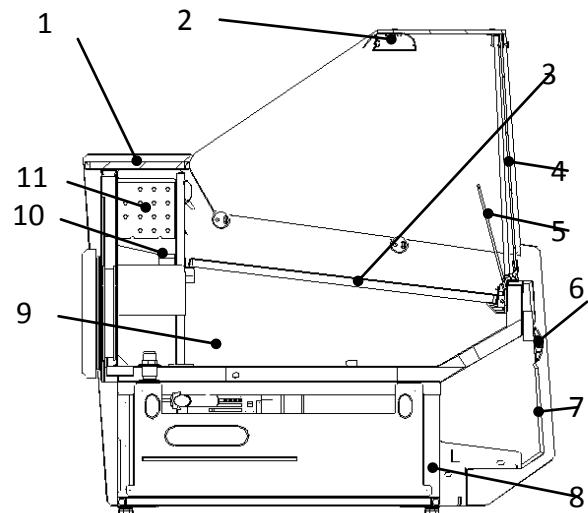
The "LUZON" display counter is a universal cooling device designed for the storage and exhibition of a wide range of unit-packaged food products, previously cooled to the storage temperature. Alongside general purpose display counters we also offer display counters designed for the storage of fish on ice ("FISH" type). Our offer also includes the DEEP version of the display counter (ventilated, evaporator on the front, flat exposition shelves) as well as fruit and vegetable salad display counters ("GASTRO" type). Our display counters provide a universal and effective display space for all types of commercial and catering facilities. Guaranteed temperature inside the counter: +1°C/+10°C at ambient temperature +15°C/+25°C and relative humidity up to 60%.

### **2.2. Description of the device**

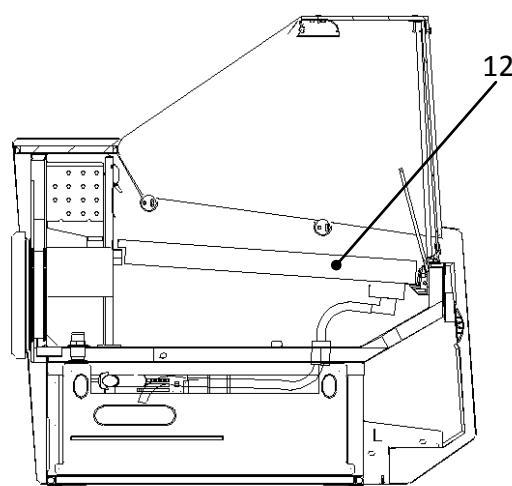
"LUZON" counters provide static cooling and the "LUZON DEEP" counters provide dynamic cooling. All types are equipped with automatic defrosting and an electric thermostat working together with a temperature-recording module, which allows for the registration of the temperature and signaling if the temperature in the device is too high or too low. As an option, the devices may be equipped with automatic condensate evaporation. Along with corner counters they are adapted to be connected together. The "LUZON" counter is available in a version with an internal cooling unit or with a central cooling unit (mod/C). The "LUZON" counters are equipped with a storage chamber. The "LUZON" counters are manufactured in a stationary and a mobile version. The device is equipped with energy-saving LED backlighting.

"IGLOO" devices are manufactured according to modern technologies and possess all the legally required certificates.

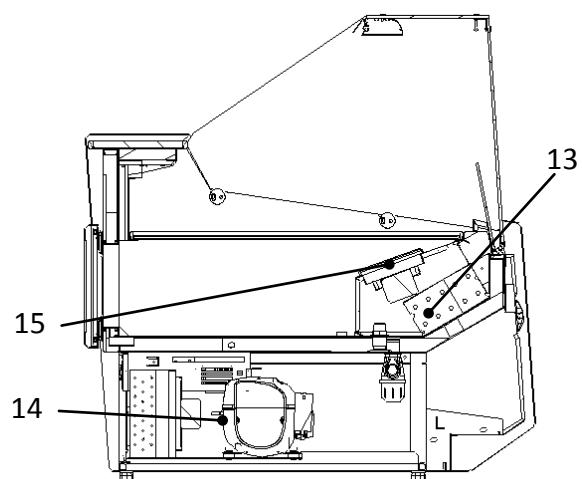
LUZON



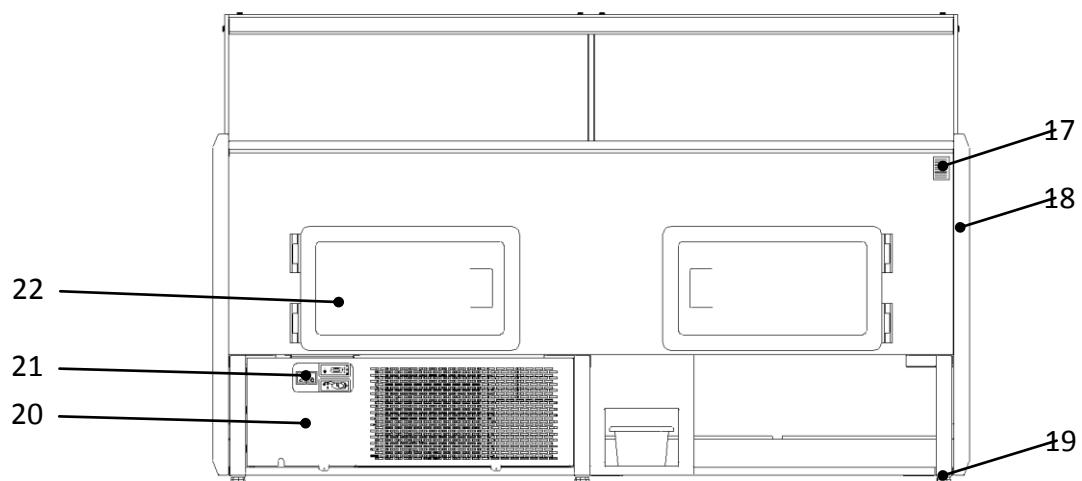
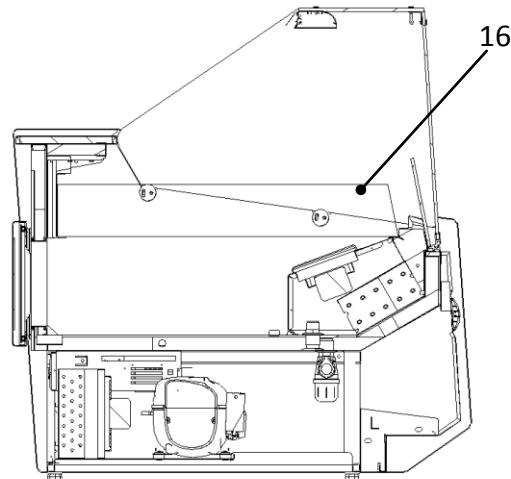
LUZON FISH



LUZON DEEP



LUZON DEEP GASTRO



### Fig.1 Construction of the device

- 1 - Granite worktop (stainless steel)
- 2 – Aluminum Lamp
- 3 – Exposition shelves (flat; 2 steps; 3 steps)
- 4 - Front glass
- 5 - Front screen
- 6 - Front bumper rail
- 7 - Front panel
- 8 - Base of the device
- 9 – Storage chamber
- 10 – Gutter (draining of the condensate from the defrosting of the evaporator)
- 11 - Evaporator
- 12 - Fish case ('FISH' type)
- 13 – Evaporator in the Deep devices
- 14 - Refrigerating unit
- 15 - Fan unit (Deep)
- 16 – GN containers („GASTRO” type)
- 17 - Nameplate
- 18 - ABS sides
- 19 - Feet used for leveling the equipment
- 20 - Ventilator (after removal access to condenser fins)
- 21 – Control Panel (temperature controller/switches)
- 22- Storage chamber doors

## 3. PREPARATION OF THE DEVICE FOR OPERATION

### 3.1. Requirements concerning the installation site

- Make sure the power cable cross-section is adequate for the power consumption of the installed device.
- Do not connect the device through extension cables or splitters.
- The device must be connected to a separate, properly made electric circuit with a plug socket with a protective pin (in accordance with the Provisions on the Construction of Electrical Equipment)



The device may only be started after the electric shock protection has been proven effective by the results of measurements carried out in accordance with applicable regulations!

### 3.2. Connection and start-up

- Unpack the device and remove the wooden platform from the base (does not apply to mobile devices) *Fig.2 (p.6)*.

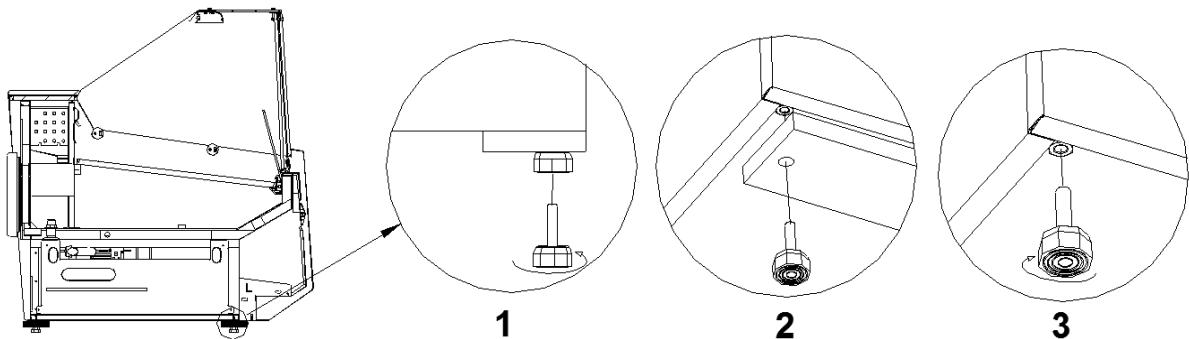


Fig.2 Removal of the wooden platform

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

- Place the device on an even and sufficiently firm surface, then level it using the leveling feet. In the case of mobile devices caster locks should be used in order to prevent movement during operation [Fig.3 \(p.6\)](#).

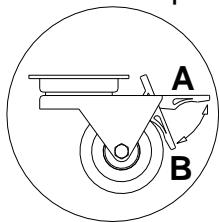


Fig.3 Caster unit

- A - mobile position
- B - blocked position

- Remove protective film from the elements of the display counter (i.a. from the interior of the device, the exposition shelves, the front bumper rail).
- If the device is received by the user partially disassembled for protection during transportation, the following steps should be completed:

1. Install the exposition shelves or fish case, by placing them on the aluminum brackets.
2. Install the glass sides [Fig. 4 \(p.8\)](#).

**NOTE:** In the case of "Gastro" type counters prior to the installation of the glass side it is necessary to remove the universal salad container from the counter, in order to gain free access to the ABS sides and to be able to freely screw the glass side using the glass clamps.

3. Install the aluminum lamp (along with the luminaire) on the glass sides [Fig. 4 \(p.8\)](#).
4. Install the lamp cord cover.

The cover of the cord should be placed on the back of the glass side so that the cord coming out of the lamp is hidden in the cover and is located on the internal side of the glass side!

5. (Applies to "GASTRO" counters) Place the universal salad container in the counter. In a module container, install the crossbars for the GN containers and then install the GN containers.

6. Install the front screen.
7. Install the front glasses of the counter.
8. Install the night blinds *Fig. 5 (p.8)*
9. Place the condensate container on the base of the device, according to *Fig. 6 (p. 9)* or *Fig. 7 (p. 9)*

- The first washing of the device should be carried out after unpacking and before starting it. The device should be cleaned with water at a temperature not exceeding 40°C with the use of neutral cleaners. **When washing and cleaning the device, it is prohibited to use agents containing chlorine and sodium of different varieties as they destroy the protective layer and the components of the device!** Any possible residues of glue or silicone on the metal components of the device should be removed using a petroleum cleaner (does not apply to items made of plastic!). Do not use other organic solvents.



It is forbidden to use a water jet when washing the device. The device should be cleaned with a damp cloth



When the installation of the device in the destination is completed, the counter should be left to rest for at least 2 hours before activation in order for the oil level to settle, which will prevent problems with the start-up of the cooling unit! (applies to devices with an internal cooling unit)

**WARNING: Protect the refrigerant circuit against damage!**

- Plug the connection cable directly into the socket (it is forbidden to connect the device via extension cables or splitters!)



Power sockets (optional) can be used to power the cash register, scale and other devices with a power output not exceeding 500W!

- Switch the main switch on *Fig. 8 (p.9)*, which will start the thermostat and then the cooling unit.



**NOTE:** If the thermostat screen (applies to the "Igloc" thermostat) displays only two dots on its bottom part instead of the temperature it means that the cooling unit is not operating (cooling function switched off). In that case press the Turn refrigeration on/off button – see *Fig.14 (p.18)*!

- Set the temperature on the thermostat panel *Fig. 8(p.9)* (detailed description on *p.18 or 19*)
- Switch the lighting button on *Fig. 8 (p.9)*

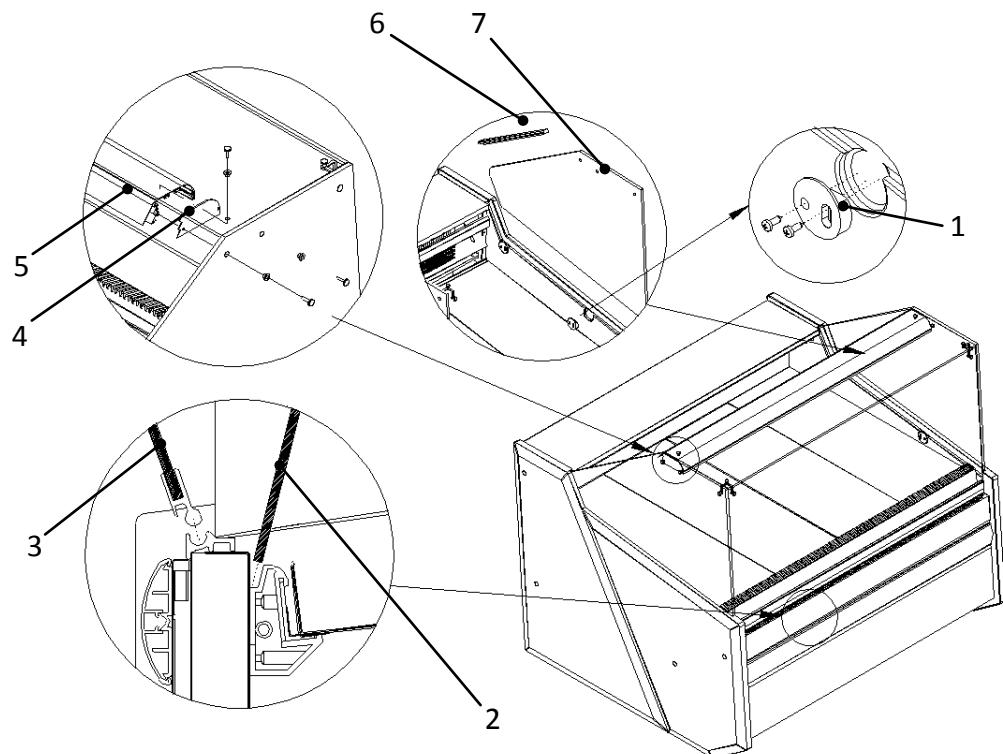


Fig. 4 Assembly of the glass elements and the aluminum lamp

- 1 – Glass clamp (glass side clamp).
- 2 - Front screen, glass
- 3 - Front glass
- 4 – Aluminum Lamp blind
- 5 – Aluminum Lamp
- 6 - Lamp cord cover.
- 7 - Glass side

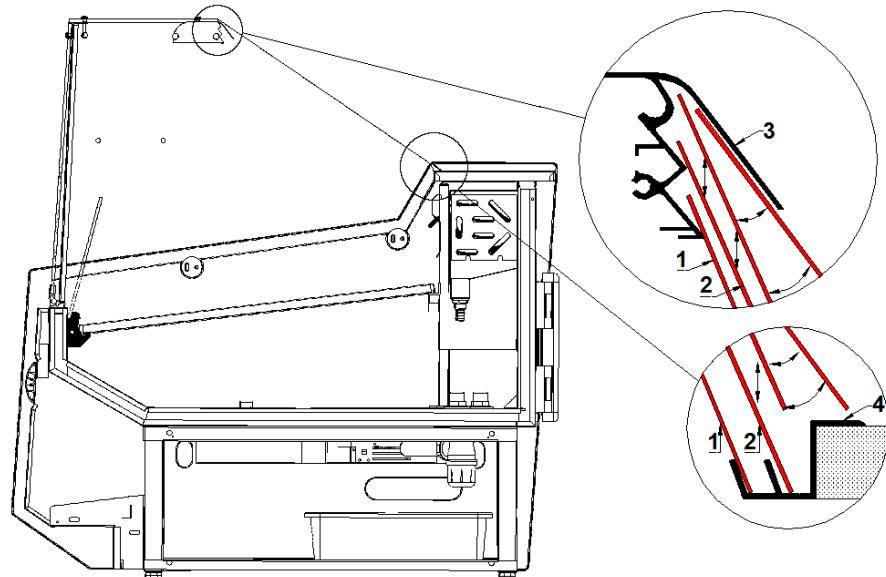


Fig. 5 Assembly / disassembly of the night blinds

- 1 – Lower night blind (shorter) – installed first
- 2 – Upper night blind (longer) – installed as the second one
- 3 - Aluminum lamp cover (masks and protects the night blinds from falling)
- 4 – Guide rail for night blinds (aluminum profile)

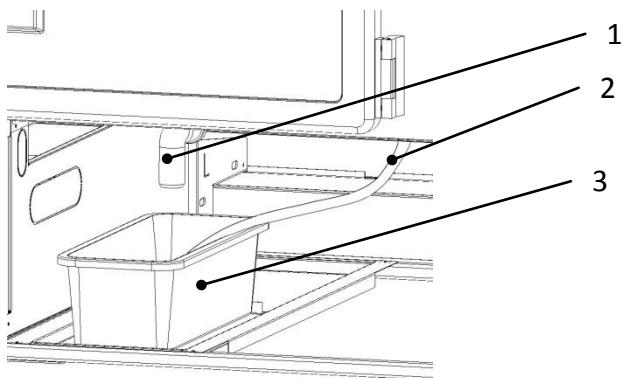


Fig. 6 Condensate container (version without an evaporator)

- 1 Drain of water from the body of the device (siphoned) - applies to devices with and without an evaporator
- 2 Hose draining the water from the gutter (drain of the condensate from the defrosting of the evaporator)
- 3 Condensate container (**the condensate must be drained!!!**)

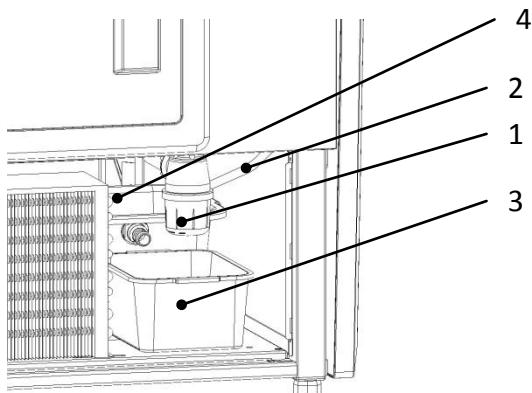


Fig. 7 Overflow (version with an evaporator)

- 1 Drain of water from the body of the device (siphoned) - applies to devices with and without an evaporator
- 2 Hose draining the water from the gutter (drain of the condensate from the defrosting of the evaporator)
- 3 Overflow (**the condensate must be drained if the water from the evaporator container overflows!**)
- 4 Evaporator

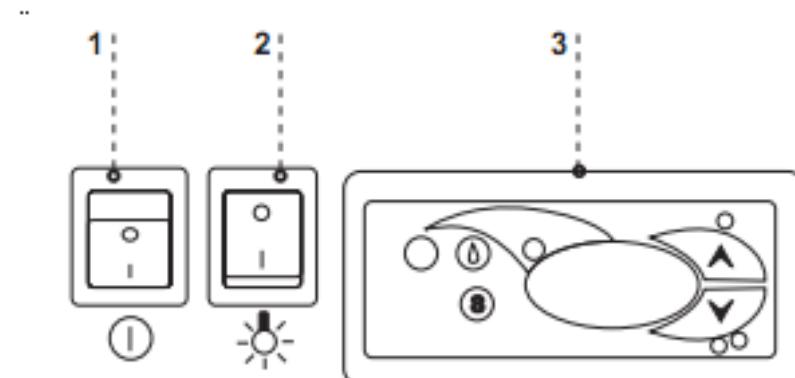


Fig. 8 Device control panel

- 1 – Main switch (enables/disables the cooling unit)

2 – Light switch

3 – Thermostat panel (temperature controller) ([details of operation in Section no. 7 p.17 or 18](#))

## 4. OPERATION

The temperature of the refrigerated space and the cycle of the unit's operation may be subject to fluctuation. They depend on a number of factors, e.g. the quantity and temperature of items placed inside as well as the ambient temperature.

The device should be placed in a dry and well-ventilated location with a good air exchange (at least 10cm gap between the wall and the device), away from direct sunlight, sources of heat and devices forcing airflow (air conditioners, ceiling and portable fans, forced air heaters – may not blow air inside or extract air from the refrigerating device). The device functions properly in an environment where the temperature is consistent with the climate class indicated on the nameplate. The functioning of the device may deteriorate in the event of prolonged operation in temperatures higher or lower than the specified range



### Notes and guidelines

- The counter should be properly leveled, which will prevent noisy operation and ensure the proper drainage of water (condensate) during defrosting
- Following transport wait about 2 hours prior to starting the device
- The first filling of the cooling space should be done after it has cooled down to its operating temperature. This principle should also be observed after a longer break in operation
- Do not block any ventilation holes, which could impede the circulation of the cooled air. Proper air circulation around the device must be ensured (Do not cover the ventilation holes of the cooling unit!)
- Ensure even load of the shelves, do not exceed their maximum load and the maximum load of the device.
- The condenser must be kept clean. Contamination of the condenser may cause the overheating of the compressor and lead to its damage, which is not covered by the warranty.
- Do not use electrical appliances inside the food storage chamber.
- Once the doors of the device are closed do not try to open them by force. The negative pressure created inside the device is equalized within 1-2 minutes, which allows for opening the doors freely
- Avoid unnecessary opening of doors and leaving them open for longer periods of time.

### 4.1. Temperature regulation



The operation of the „Igloo” and „Carel” thermostats (temperature controllers) is described in section 7 ([p. 17 and 18](#))

The primary purpose of a thermostat is to control the cooling unit in order to achieve the desired temperature inside the device and keep it within a certain range. All setpoints of the temperature controller required for normal operation of the device are programmed by the manufacturer. The user should check and set the desired temperature inside the device on the control panel prior to the first start-up.

Digital display – displays the current temperature inside the device



Any interference in the factory setting of the thermostat will invalidate the warranty!

## 5. MAINTENANCE

### 5.1. Cleaning and maintenance



All maintenance should be carried out after the device is disconnected from the power supply!



Protect the electrical installation against damage or flooding



It is forbidden to use a water jet when washing the device. The device should be cleaned with a damp cloth.



Do not use sharp objects in order to remove contamination!



Devices equipped with casters cannot be used on uneven surfaces!



While cleaning the inside of the device, do not leave the front glass freely tilted in the aluminum profile. This may damage the glass and is not covered under the warranty. For the time of the maintenance the glass should be removed along with the profile *Fig. 9 (p.11)*.

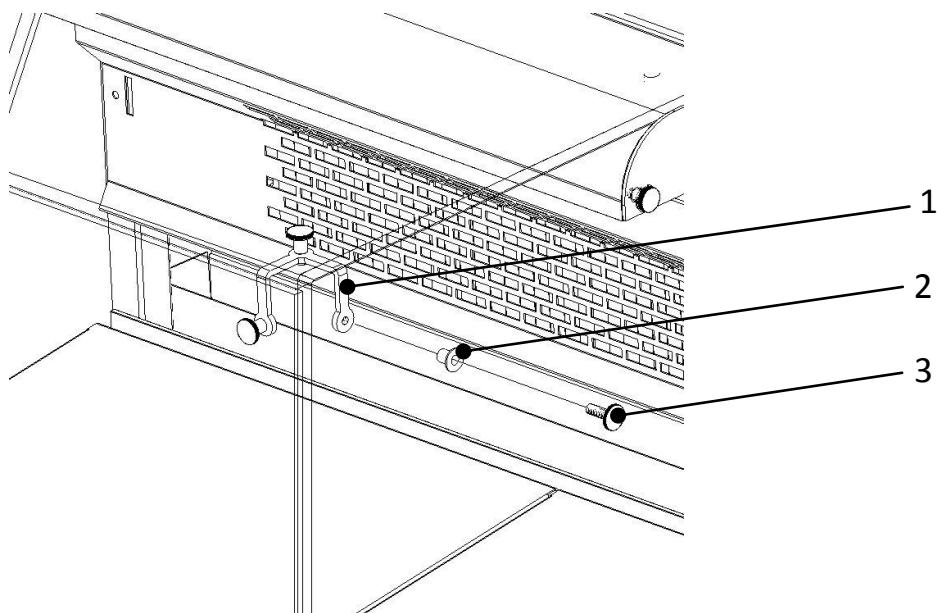


Fig. 9 Fastening of the glass elements

- 1 Glass holder - corner
- 2 Glass holder - bushing
- 3 M5x16 screw

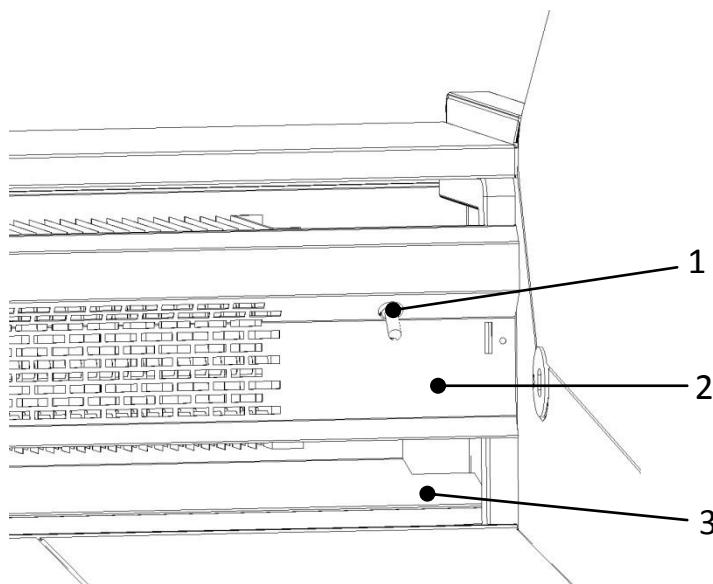


Fig.10 Sensor of the temperature inside the device

- 1 Temperature sensor
- 2 Evaporator blind
- 3 Evaporator drip gutter



Be careful not to damage the temperature sensor located in the evaporator blind both during the operation of the counter as well as during maintenance work!

**Once a month** it is recommended to turn the device off in order to clean the interior, naturally defrost the evaporator, clean the condenser and inspect the condition of the door seals.

If the device isn't equipped with automatic condensate evaporation, the condensate must be drained from the container if it is full *Fig. 6 (p.9)*. The amount (frequency) of condensate removal depends on the device operation conditions (i.a. air humidity, frequency of opening of the doors, the amount and temperature of the inserted products).



Do not use mechanical means to accelerate the defrosting process!

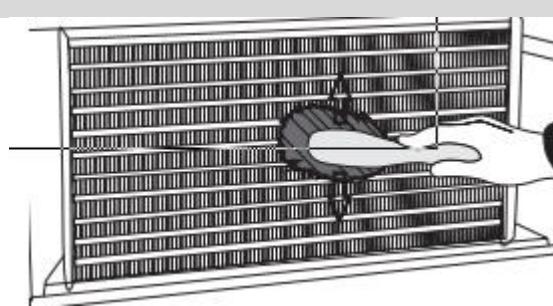


Fig.11 Cleaning of the condenser

**The condenser of the device** must be kept clean. Contamination impedes heat exchange, resulting in i.a. increased electricity consumption and may cause the damage of the compressor. In order to clean the condenser, unscrew the tapping screws and remove the ventilator. The condenser fins should be cleaned using a

soft brush or a paintbrush. In the case of severe soiling (clogging of the fins) of the condenser, it is advised to use a vacuum cleaner or compressed nitrogen to suck/blow the dirt located between the fins.

**!** The manufacturer assumes no responsibility for the damage of the condensing unit resulting from a failure to maintain the cleanliness of the condenser!

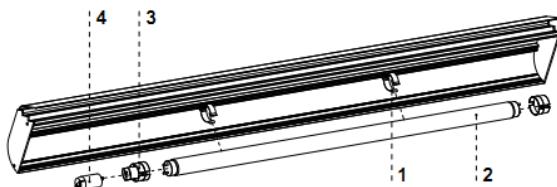


Fig.12 Replacement of the luminaire in the lamp

- 1 – Luminaire holder
- 2 – Luminaire (traditional/LED luminaire)
- 3 - Luminaire and igniter fitting / (LED) luminaire fitting
- 4 – Luminaire igniter / (does not apply to LED lighting)

**!** (Applies to LED lighting) In one-sided power supply of the luminaire, check whether the power cord is plugged on the right side of the luminaires. The power supply connection point is marked with a rating sticker. A sample sticker is shown below. Particular attention should be paid to the two last items: type of power supply and supply

**LEDTUBE T8 FN**  
TYPE: LT90WW-K-S-230V  
POWER: 14.4W  
CE RoHS

voltage.

SPOSÓB KODOWANIA ŚWIETLÓWEK LT					
LT	X	Y	Z	L	V
	DŁUGOŚĆ	BARWA	RODZAJ KLOSZA	RODZAJ ZASILANIA	NAPIĘCIE ZASILAJĄCE
	44 cm	CW - biały zimny	T - transparentny	S - jednostronne	230V AC
	60 cm	NW - biały naturalny	M - mleczny	D - dwustronne	115V AC
	90 cm	WW - biały ciepły	G - szklisty		24V DC
	120 cm	MW - biały mięsny	NM - mięsny		12V DC
	150 cm				

**Przykład**

LT 120 CW - M - D - 230V

120 cm      biały zimny - mleczny - dwustronne - 230V AC

**!** The door seals should only be cleaned with clean water without the addition of cleaning agents and should be thoroughly dried. **The seal cannot come into contact with greasy substances and oils**

During maintenance procedures ensure that the doors close properly.

**To test the doors, place a piece of paper between the seal and the casing and then close the door. There should be resistance when trying to pull the paper out.**

 The components of the device may corrode when used or maintained improperly. Please follow these rules:

Avoid contact between the surface of the device and agents containing chlorine and/or variants of sodium, which compromise the protective layer and the components of the device (also applies to various grades of stainless steel)

 During maintenance, be careful not to damage the device's nameplate *Fig.13 (p.17)*, as it contains important information for maintenance technicians and waste disposal companies.

 In case of exceeding the ambient conditions according to the third climate class (relative air humidity above 60%) the phenomenon of water overflowing from the system with automatic condensate evaporation (evaporators) may occur. **This does not indicate a malfunction and does not require calling the service**

## 6. SERVICE

### 6.1. Identification and repair of faults

in the event of any problems during the commissioning or operation of the device, please return to the sections of the manual that explain the performed operations. This is to ensure whether the device is handled properly. If the problem persists, the following tips will help in its removal

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

- The unit is connected to the mains
- The voltage and frequency in the mains are consistent with the recommendations of the manufacturer (see nameplate)
- The main switch is on
- The thermostat is on (applies to *Igloo thermostat* – *If the screen only displays two dots - turn the thermostat on*)

#### **Water is leaking from under the device or into the chamber**

- Check the correct leveling of the device
- Check if the drainage pipes are unobstructed
- Empty the condensate container or tray
- Check if there is a buildup of ice in the gutter and the evaporator - if necessary defrost

#### **The device is working, but the lights are off...- Make sure that:**

- The light switch is in the ON position
- The lamp or the igniter in the unit have not burned out
- (Applies to LED lighting) Check whether the power supply plugs of the LED are properly tightened.

In one-sided power supply of the LED tube, check whether the power cord is plugged on the right side of the tube. The power supply connection point is marked with a rating sticker.

#### **The device does not reach the proper temperature, the lights are on...- Make sure that:**

- The main switch is in the ON position
- The temperature set point is properly set on the thermostat
- The thermostat is working properly
- The condenser is not contaminated, clean if necessary
- The ambient temperature does not exceed 25°C
- Enough time has passed for the products to cool
- The vents of the device are not obstructed

#### **(Applies to the "IGLOO" thermostat) The thermostat displays C0 or C1 or C2 instead of the temperature**

This situation occurs when one of the sensors of the temperature controller has been damaged. The following error messages may be displayed:

- C0 – temperature sensor inside the compartment damaged - contact the authorized service

- C1 – evaporator sensor damaged - contact the authorized service
- C2 – condenser alarm sensor damaged (or second evaporator sensor damaged)
  - contact the authorized service

**(Applies to the "CAREL" thermostat) The thermostat displays E0 or E1 or L0 or HI or EE or Ed or DF instead of the temperature:**

- E0 - sensor of the temperature inside the chamber damaged - contact the authorized service
- E1 - evaporator sensor damaged - contact the authorized service
- EE - internal error of the controller - contact the authorized service
- Ed – maximum defrosting time exceeded
- DF – Defrosting in progress (this is not an alarm signal)
- L0 – low temperature alert (lower than the set range inside the device) - contact the authorized service
- HI - high temperature alert - contact the authorized service

 **L0 and HI** – the display of these alarms may be caused by the incorrect parameters of the mains power supply. The alarm can be reset by switching the device off with the main switch. After a moment turn the device on again. In case the problem persists (the alarm is displayed again) please contact the authorized service!

**(Applies to the "IGLOO" thermostat) The device is working, sound signaling activated ... -Make sure that**

- The condenser is not contaminated, clean if necessary
- The condenser fan is working
- Ambient temperature does not exceed 25°C

**The device is too noisy...- Make sure that:**

- The device is stable
- The furniture adjoining the device does not vibrate during the operation of the compressor

 Noises made by operating devices are normal. The device includes fans, motors and compressors which turn on and off automatically. **Every compressor produces noise during operation. These sounds are generated by the motor of the cooling unit and by the refrigerant flowing in the circuit. This phenomenon is a technical feature of refrigeration equipment and does not indicate its faulty operation**

 **The deposition of water vapor on the windows of the device in high relative humidity, that is, above 60% is a natural phenomenon and does not require calling the service!**

 In case of exceeding the ambient conditions according to the third climate class (relative air humidity above 60%) the phenomenon of water overflowing from the system with automatic condensate evaporation (evaporators) may occur. **This does not indicate a malfunction and does not require calling the service**

## 6.2. Service

Telephone to the IGLOO service: +48 (14) 662 19 56 or +48 605 606 071

e-mail: [serwis@igloo.pl](mailto:serwis@igloo.pl)

If the device still isn't working properly after checking the points described in Section 6.1 „Identification and repair of faults”, please contact the Igloo Technical Service, giving the information from the nameplate *Fig.13 (p.17)*:

- Serial number (SN)
- Date of manufacture
- Type (Name of the device)

and

- Date of purchase of the device
- Description of the problem
- The exact address and phone number including the area code

The nameplate is located on the back of the device, in the right upper corner below the worktop.



Fig.13 Nameplate



The above figure shows an example of a nameplate and the data contained therein are sample data that do not necessarily refer to „Basia 2”!

## 7. THERMOSTAT USE

### 7.1. „IGLOO” Thermostat

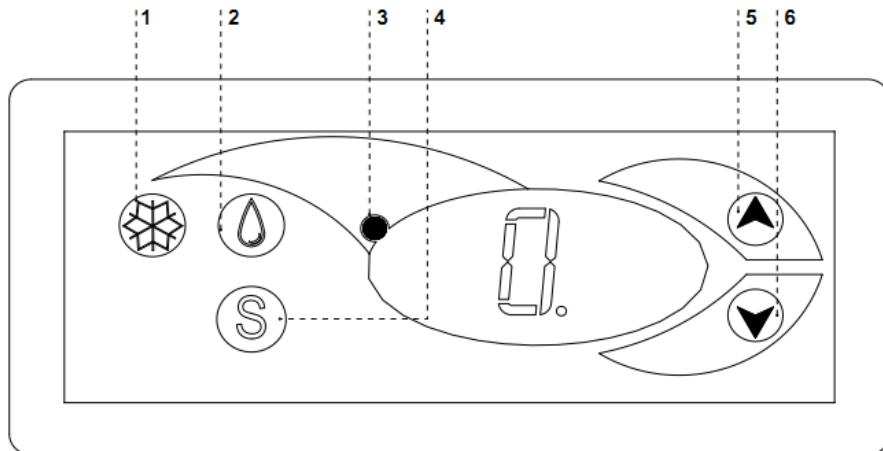


Fig.14 "Igloo" thermostat panel

- 1 – Turn on / off refrigeration button
- 2 – Manual defrosting button
- 3 – Cooling unit and defrosting operation control diode
- 4 – Defrosting sensor temperature monitoring button
- 5 – Temperature regulation button (increase)
- 6 – Temperature regulation button (decrease)

**Checking the setpoint temperature (inside the device)** – we can check the preset temperature by pressing „▲” or „▼” once. The screen will display the set temperature with a blinking red dot (diode) next to it. The preview will end automatically after about 3 seconds

Decreasing or increasing) the temperature – press „▼” (or „▲”) and the set temperature will be displayed on the panel. By pressing „▼”, we will reduce the temperature to the desired value. The function is exited automatically after about 3 seconds.

**Manual defrosting** – button **no. 2** allows for the activation of the defrosting cycle at any time during the device operation (regardless of the automatic defrosting function); the button doesn't work when the temperature is higher than the final defrosting temperature

**!** It is recommended to turn the cooling unit on/off using only the main switch, and not the button on the thermostat panel. Switching the main switch on automatically switches the thermostat on!

**!** Changing the parameters in the internal memory of the controller (of the thermostat) without authorization is prohibited!!!

\*More on the [www.igloo.pl](http://www.igloo.pl) website

## 7.2. „CAREL” thermostat

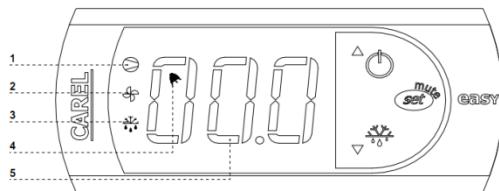


Fig.15 "Carel" thermostat panel

#### **THE MEANING OF THE LEDs ON THE DISPLAY**

**LED 1 is lit - Compressor:** this symbol is visible when the compressor is working. It flashes when the activation of the compressor is delayed by a safety procedure. It flashes in a cycle: two flashes - pause, when the continuous operation mode is activated

**LED 2 is lit - Ventilation fan:** the symbol is visible when the evaporator ventilators are turned on. It flashes when the activation of the ventilators is delayed by external shut-off or when another procedure is in progress.

**LED 3 is lit - Defrosting:** the symbol is visible when the defrosting function is turned on. It flashes when the activation of the defrosting is delayed by external shut-off or when another procedure is in progress.

**LED 4 is lit - Alarm:** the symbol is visible when the alarm is active.

**5** – displays the current temperature inside the device (decimal values shown following a comma)

#### **SETTING THE DESIRED TEMPERATURE**

- press  for 1 second: the set value will appear on the screen;
- increase or decrease the set value using the  and  buttons, until the desired value is reached
- press  again to confirm the new settings;

#### **MANUAL FORCING OF THE DEFROSTING**

Defrosting is carried out automatically. However, it can be forced at any time by pressing the  button and holding for at least 5 seconds. LED 1 flashes during the manual defrosting.

**!** Changing the parameters in the internal memory of the controller (of the thermostat) without authorization is prohibited!!!

\*More on the [www.alfaco.pl](http://www.alfaco.pl) website

**NOTE: IN CASE OF FAILURE TO COMPLY WITH THE THE RULES CONTAINED IN THIS MANUAL CONCERNING THE CONNECTION AND OPERATION OF THE DEVICE, THE MANUFACTURER RESERVES THE RIGHT TO WITHDRAW FROM THE OBLIGATIONS OF THE GUARANTOR!!!**

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