USER MANUAL

COOLING DISPLAY CABINETS:

“MONIKA 2”

“ROTA”

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

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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

“Monika 2” is a universal cooling device used to store and display a wide assortment of grocery products in singular packages, previously cooled to storage temperature. Our display cabinets ensure universal and efficient display area for all types of commercial and gastronomic units. Guaranteed temperature inside the display cabinet equals +2°C/+8°C with ambient temperature of +15°C/+25°C and relative air humidity of up to 65%.

2.2. Description of the device

“Monika 2” display cabinet has 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. “Monika 2” display cabinet is furnished with a storage chamber. Our devices are made according to modern technologies and have all certificates required by law.

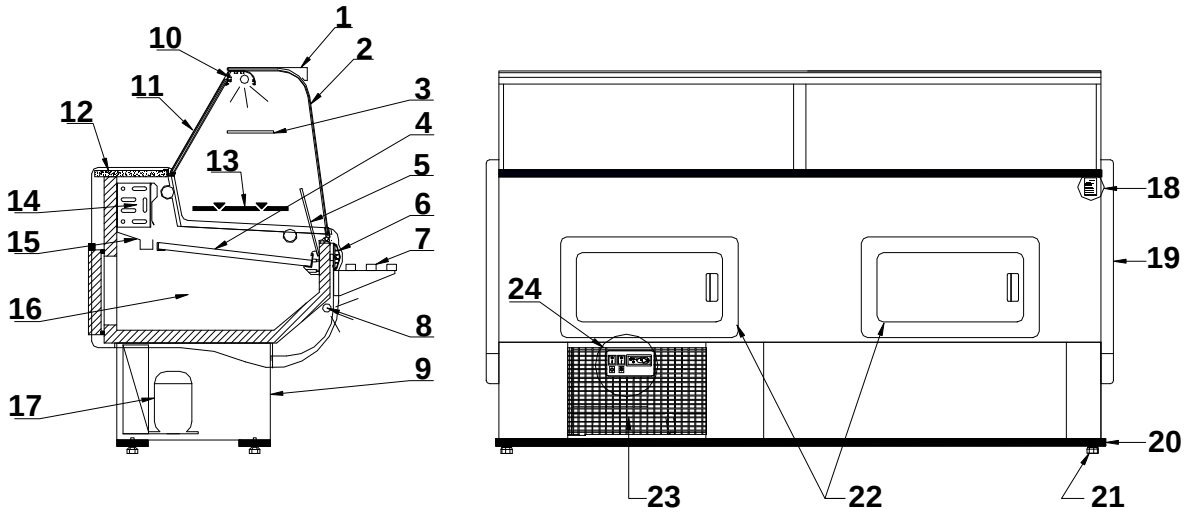

Fig.1 Construction of the device

1 – Shelf for handling goods (on the glass)
2 – Bent, front glass, lifted
3 – Glass display shelf
4 – Display shelves
5 – Front screen
6 – Front fender beam
7 – Front customer shelf
8 – Illuminated front panel
9 – Basis of the device
10 – Aluminium lamp with illumination
11 – Night screens made of plexiglas
12 – Granite working top (made of stainless steel or furniture board in “Rota”)
13 – Maximum loading line (sticker on the glass side!)
14 – Evaporator
15 – rail (condensate outflow after defrosting the evaporator)
16 – Storing chamber
17 – Cooling aggregate
18 – Data plate
19 – ABS sides
20 – Wooden platform fixed for transport of the device
21 – Device levelling feet
22 – Storage chamber doors
23 – Wind brace (when removed – access to condenser lamellas)
24 – Control panel (temperature regulator /switches)

2.3. Technical data

Table 1 Technical data

Type of the device **“MONIKA” “ROTA”**	Rated voltage [V/Hz]	Rated current [A]	Rated lighting power [W]	Electric energy consumption [kWh/24h]	Shelf load [kg/mb]	Weight of the device [kg]
1.0	230/50	1.1	18	3.6	50	110
1.3	230/50	1.2	30	3.8	50	130
1.5	230/50	1.5	36	4.9	50	150
1.7	230/50	2.0	58	6.4	50	170
2.05	230/50	2.0	58	6.4	50	190
2.5	230/50	2.4	60	7.6	50	220

In devices with illuminated front panel, the rated lighting power is twice bigger than the one stated in the table!

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 *Fig.2 (p.7)*
- Place the device on an even and on a sufficiently hard base, and then level it with the help of levelling feet.
- Remove the protection foil from the elements of the device (f. ex. from the inside of the device, display shelves and front fender beam)

- If the user shall obtain a device partially disassembled to secure it during transportation, perform the following operations:
  1. Mount display shelves *Fig.3/1 (p.7)*
  2. Mount glass sides *Fig.4/2;1 (p.8)*
  3. Mount the aluminium lamp (together with lighting) on glass sides *Fig.4/3 (p. 8)*
  4. Mount the casing of lamp conduit *Fig.4/10 (p.8)*
     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!
  5. Mount front screen *Fig.4/8 (p.8)*
  6. Mount front glasses of the display cabinet *Fig.4/5 (p.8)*
  7. Mount night screens *Fig.5/1;2 (p.9)*
  8. Place the condensate container according to *Fig.6/2 (p.9)* (does not concern devices with evaporator!)
- Clean the whole device with water, of temperature not exceeding 40°C with addition of washing liquid. **Do not use surface scratching agents, caustic agents or agents containing chlorine and/or soda!**

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

After installing the device in the final location it should be left to rest for at least 2 hours before the actuation, to allow the cooling agent level to settle, which will prevent from problems with actuating the cooling aggregate!
WARNING: Protect the cooling circuit against 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.7/1 (p.9)*, which activates the temperature regulator, and then aggregate of the device
- Set the temperature on thermostat control panel *Fig.7/3(p.9)* (service details on *p.18 or 19*)
- Turn on the lighting switch *Fig.7/2 (p.9)*

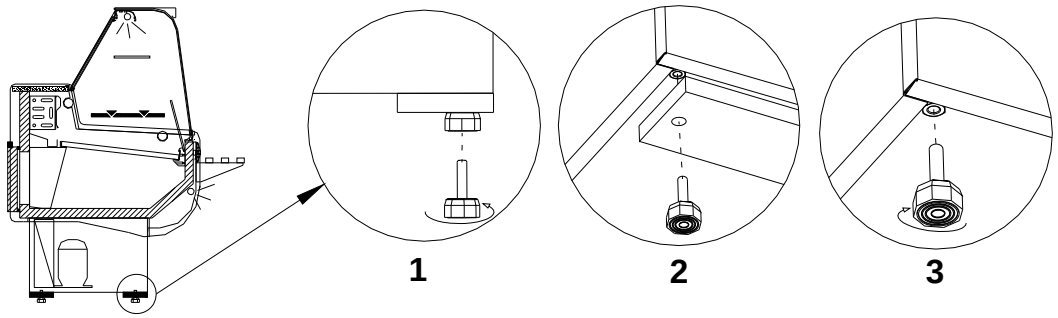

Fig.2 Removing the wooden platform

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

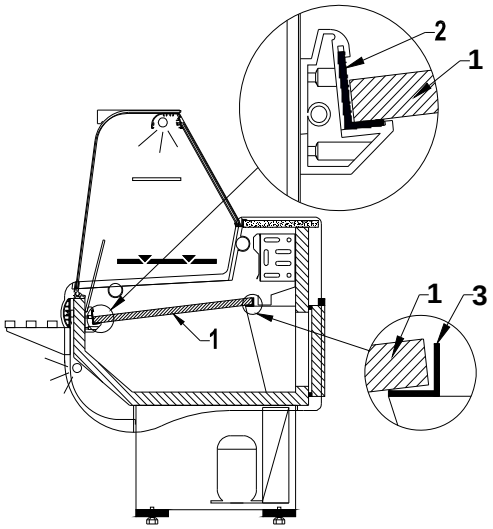

Fig.3 Assembly of display shelves

1 – Display shelf
2 – Front aluminium angle section
3 – Back aluminium angle section

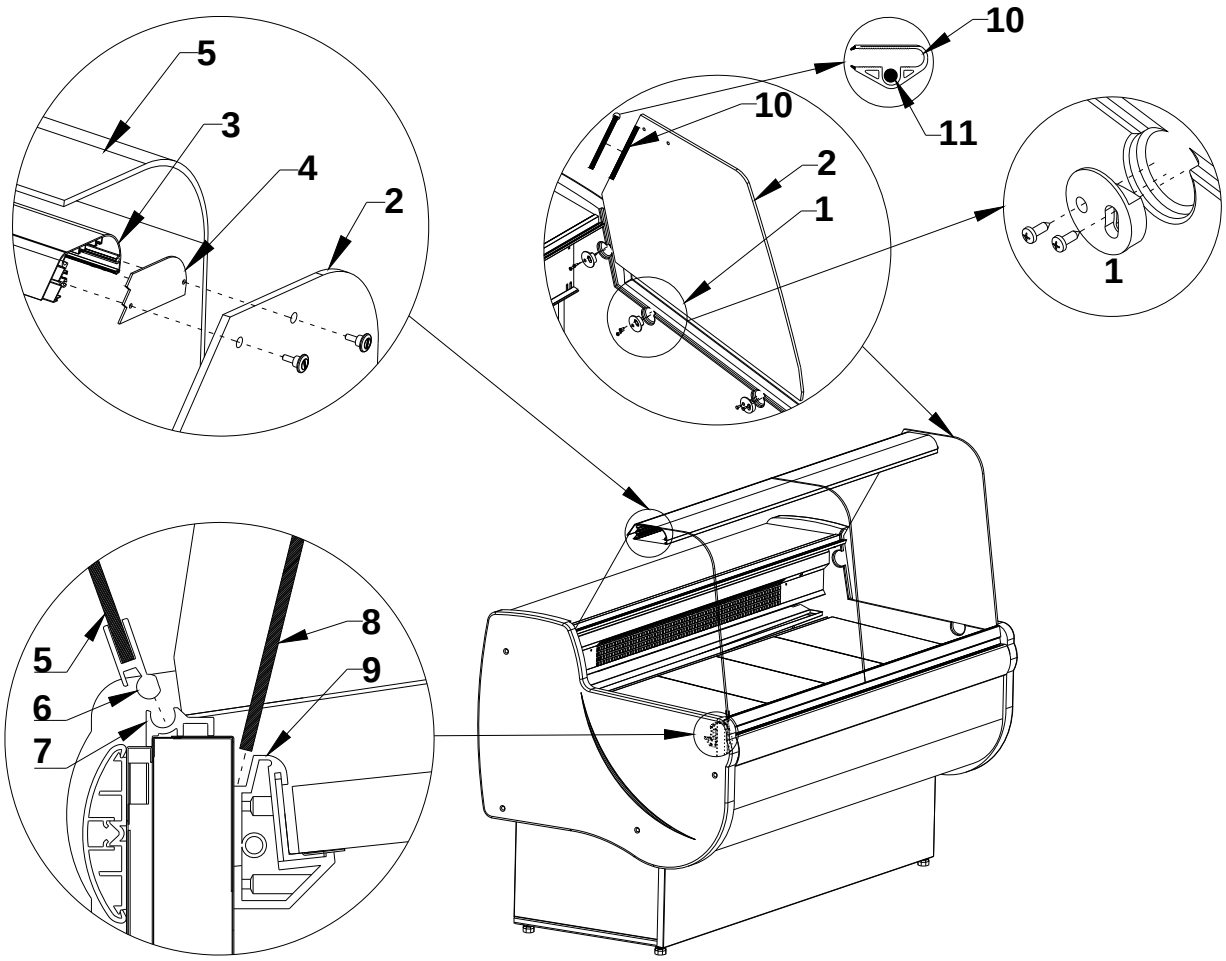

Fig.4 Assembly of glass elements and aluminium lamp

1 – Pressure of the glass (glass side)
2 – Glass side
3 – Aluminium lamp
4 – Aluminium lamp hole plug
5 – Bent front glass, lifted
6 – Upper aluminium profile (lifted guide) of the glass
7 – Lower aluminium profile (glass catch)
8 – Front screen, made of glass
9 – Front bracket
10 – Lamp conduit protection
11 – Lamp conduit

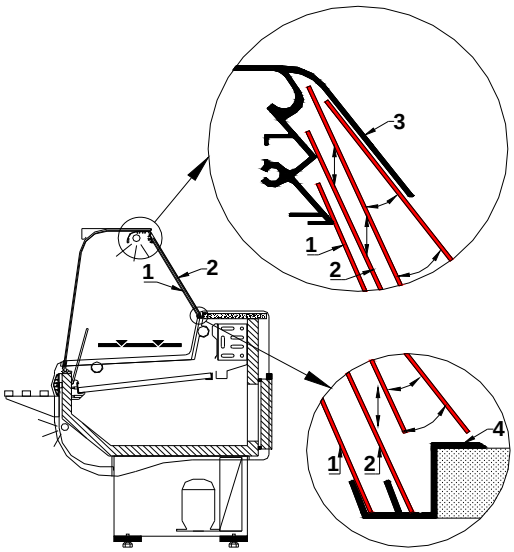

Fig.5 Assembly/disassembly of night screens

1 – Lower night screen (shorter one) – mounted as the first one
2 – Upper night screen (longer one) – mounted as the second one
3 – “Leaf” of the aluminium lamp (hides and secures the night screens before falling out)
4 – Night screen guide (aluminium profile)

Fig.6 Condensate container

1 – Rail water outlet hose (condensate outflow after condenser evaporation)
2 – Condensate container **(empty the condensate!!!)**

Fig.7 Control panel

1 – Main switch (turns on/off the aggregate of the device)
2 – Lighting switch
3 – Thermostat (temperature regulator) panel (*service details in Chapter No.7 p.18 and 19*)

4. EXPLOITATION

Temperature of the cooled space and aggregate operating cycle may fluctuate. They depend 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 (p.* ***Błąd! Nie zdefiniowano zakładki.*** *and 19)*

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 regulators 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 filth!

Devices equipped 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.8 (p.12)*.

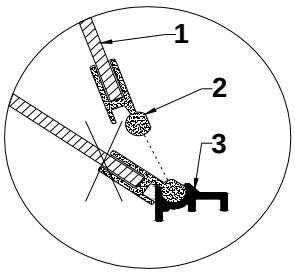

Fig.8 Front glass disassembly

1- Front glass
2- Upper aluminium profile (lifted guide) of the glass
3- Lower aluminium profile (catch) of the glass

First cleaning of the device should be performed after unpacking and before actuating the device. The device should be cleaned with water and neutral cleaning agents. **Do not use surface scratching agents, caustic agents or agents containing chlorine and/or soda.** Possible glue or silicone residues on metal elements should be removed solely with extraction naphtha (**does not concern elements made of plastic!**). Do not use other organic solvents.

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.6 (p.9)*. The number (frequency) of condensate removal depends on device exploitation conditions (f. ex. air humidity, door opening frequency, the amount and temperature of products placed for storage).

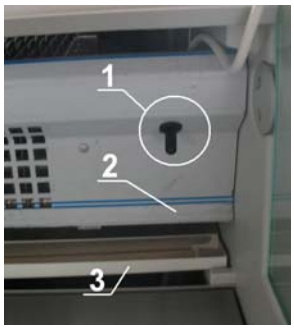

Fig.9 Temperature sensor inside the device

1 – Temperature sensor
2 – Evaporator screen
3 – Evaporator drip rail

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

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

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 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.

Fig.10 Cleaning the condenser

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

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.

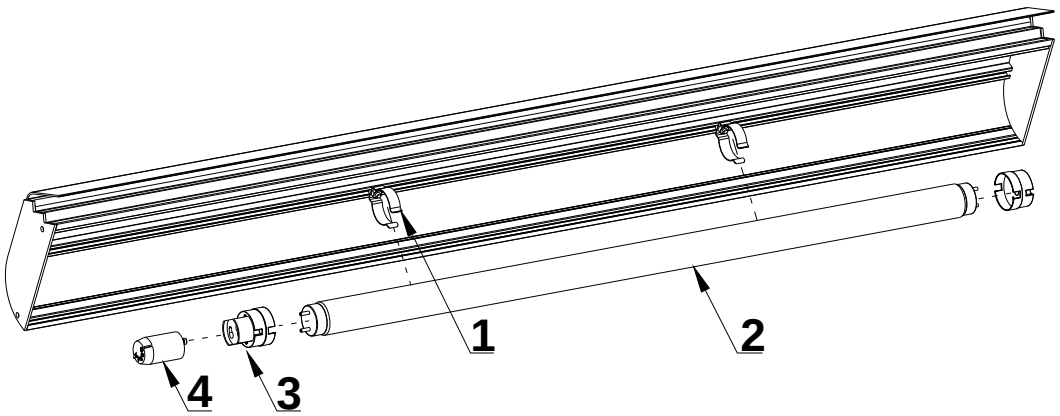

Fig.11 Changing the fluorescent lamp

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

During maintenance services it is necessary to pay attention not to damage the data place of the device *Fig.12 (p.17)*, 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 turned on
- Thermostat is turned on *(This concerns the Igloo thermostat – If only two spots are visible on the display – turn on the thermostat)*

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

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

- The main switch is 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 HI or EE or Ed or DF instead of temperature:

- E0 – failure of temperature sensor inside the chamber – *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*
- HI – 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

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!

6.2. Service

IGLOO service telephone number: +48 (014) 662 19 56 or +48 605 606 071

e-mail: serwis@igloo.com.pl

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.12 (p.17):*

- **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)**

The data plate is located at the back of the device, in the upper right corner, below the top *Fig.1/ 18 (p.4)*

Fig.12 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 “Monika 2” device!

7. THERMOSTAT SERVICE

7.1. "IGLOO" thermostat

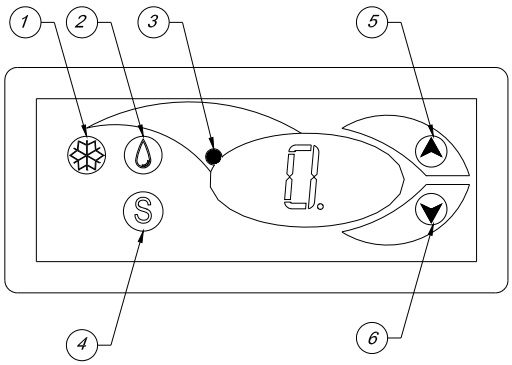

Fig.13 "Igloo" thermostat control panel

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. Bu pressing the “▼” switch we decrease the temperature to the desired value. The function shall end 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!

*** Read more on: www.igloo.pl**

7.2. "CAREL" thermostat

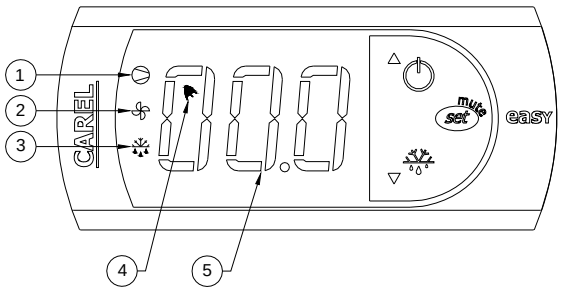

Fig.14 "Carel" thermostat control panel

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 defrosting 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 mute set *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 mute set *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**

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!!!

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