



**USER MANUAL
PASTRY COUNTERS**



LCC CARINA 01
LCC CARINA 02

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1. Before start

It's extremely important to read through entire user manual before launching the cabinet. We explain here how to correctly and safely place, connect, use and service this product. Please keep this manual safe and if needed share it with other users.

Cabinet has to be installed and launched in agreement with manufacturer's directions and in agreement with any possible local laws.

In case of malfunction of cabinet or any of its components, or in case when cabinet doesn't function correctly, primarily it's important to check if it's not a threat to people or property. It's it would be necessary – turn cabinet off and please contact closest service.

Every user of cabinet has to be aware of how to use it properly!!

1.1. Proper conditions.

Environment conditions in which cabinet is to operate cannot exceed below presented values:

- **Relative humidity 60%RH**
- **Temperature : +25°C**
- **Air flow < 0,2 m/s.**

In case of cabinet in tropic version – those condition might vary.

2. Cabinet.

Refrigerated cabinet LCC Carina is prepared for display and direct sale of pastries and fruits/vegetable salads in temperature range of +3 to + 8 °C.

For chocolates it's prepared a version of cabinet equipped with hygrometer, which ensures correct level of humidity and protects from humidity spikes – however this version has higher temperature range (perfect for chocolates) which is from +14 to +18°C.

ATTENTION: hygrometer is a device which help lower the humidity inside cabinet – it doesn't increase it!!

Hygrostate is an optional fitting in which any LCC refrigerated can be fitted at the moment of assembling in production. Hygrostate will ensure correct level of humidity for chocolates by lowering it to needed level but at the same time temperature range inside cabinet will raise.

In this case it is possible to choose from 2 modes:

- **Classic refrigeration** in temperature range **+3 do +8 °C – without humidity control**
- **Cooling** to temperature minimum of **+6 do +11 °C – with protection from increase of humidity (above level set of hygrostate) – mode with hygrostate turned on.**

Temperature in display area might vary slightly depending on distance from air outlet.

Cabinet has refrigerated system which contains:

- **Condensing unit;**
- **Evaporator dosage element (capilar tube/valve);**
- **Electric heater of evaporator**

Cabinet can be prepared without internal condensing unit in which case it will be prepared for remote connections to cooling installation.

Cabinet is prepared as self-supporting construction on metal frame. Frame has adjustable feet which allow correct levelling of cabinet.

Internal elements are made from powder painted metal, inox and wooden worktop (MDF waterproof). External surfaces are made from MDF and powder painted metal.

Insulation of cabinet is ensured by polyurethane foam. In LCC display area contains bottom waterproof MDF and glass shelves. Each shelf is illuminated by warm T8 light tubes, proper display of products is ensured.

Cabinet has panoramic bended front glass (double glazed) , side glasses double glazed and also at the back – doors which are made also from double glazed glass in metal frame. Thanks this solution cabinet is greatly insulated and heat losses are minimal. Possibility of opening front glass also makes it much easier for cleaning access .

By the bottom edge of front glass – there is placed an anti-mist heater which prevent any condensation on front glass when humidity raises in the environment. In the bottom part of cabinet we can find condensing unit (behind metal cover) or

pipes for connections to remote central and control panel. We can also find here containers for water from defrosting (one of them fixed with pipes for automatic vaporisation, second one for possible overflowing of condensate – can be removed and empty manually) or there can be only pipes for connections to canalisation drains.

2.1. Limitations

Using cabinets against its purpose and use manual is forbidden. In cabinets can be stored only product which are mentioned in this guide or other confirmed documents.

Manufacturer is not responsible for effects of using cabinets against this manual or ignorance of written here rules or not obeying them in everyday usage of cabinets

Manufacturer cannot be responsible for any modifications of cabinets including bottom custom panelling – done without earlier consultancy from our end.

2.2. Packaging.

Transport and moving of cabinets to its destine place in factory packaging is always possible. Materials used for packing are recyclable.

2.3. Damages which happened in transport.

Please during loading, check carefully for any signs of damages which might have happened during shipping of cabinet. In case of notice anything out of the ordinary – please take picture and report it to your distributor or directly to ES System K (please always add serial number seen on label plate)

2.4. Installation

- Place cabinet in its destine place,
- Level cabinet using adjustable feet,
- Make sure that air exchange to condenser is not limited in any way
- Leave at least 80 cm of free space in front of and behind the cabinet

During placing the cabinet following conditions have to be met:

- Floor is flat and levelled,
- Nothing is blocking air exchange in the bottom part of the cabinet
- Cabinet is not placed near any heat sources such as: heaters, ovens, light sources
- Air coming out of Air Conditioning systems and ventilation is not directed towards cabinet
- Cabinet is not placed in the direct sunlight

Correct placement of cabinet optimizes temperature range inside and energy consumption.

After cabinet has been placed and level – it's necessary to wash it and dry it.

2.5. Cleaning before first use.

Before first use it is necessary to clean all exposition surfaces (shelves) with the usage of gentle detergent. For any inox elements please use detergents which has been prepared for contact with inox.

ATTENTION: Make you that used detergent are not active or aggressive towards materials from which cabinets has been manufactured.

After cleaning please dry all the surfaces and empty removable drain container in the bottom.

3. Electric connections

Before first turn ON of cabinet please make sure that power rating in site and needed electric protection (fuse) are in agreement with cabinet's data presented on label data plate. **Cabinet is prepared to be powered by 230 V, 50 HZ by cable with plug.**

ATTENTION: Plug can be connected only to sockets with grounding bolt!! Socket need to have grounding bolt or be secured with proper fuse.

No other cabinet can be connected to the same fuse. Cabinet should not cover the socket to which it is connected.

ATTENTION: Any interference in electric system can be made only by qualified staff and to be done only in agreement with all of the local and EU regulations – ignoring that might be a cause of injuries and even death.



ATTENTION: "light" mark inside yellow triangle placed on cover means that inside is a 230V voltage.

Only trained and qualified staff can access those places where there is 230V voltage.

4. How It works

Cooling (reaching set temperature) is done by evaporator through which air is blown with the assist of fans. Evaporator is installed to the bottom of insulated mould, below bottom shelf. Cooled air which comes out of evaporator is constantly distributed through air outlet in bottom shelf (by the back doors) to all levels of exposition area (shelves and bottom shelf). Next it is sucked through air inlet on bottom shelf (next to front glass) and directed to evaporator. The cycle repeats.

Cabinet is equipped with electric controller which is placed on control panel which can control various parameters (temperature, defrosts, alarms and many more).

4.1. Turning ON

- Connect the plug to electric socket
- Put all the switches from control panel to “I” position. Condensing unit, fans, light and anti-mist heaters will start.

ATTENTION: Turning ON hygrostate (if installed) is should be done only to dry the air inside display area and to maintain certain level of humidity in exposition.

- After that please wait 90 minutes before cabinet reaches its set temperature. Only now cabinet is ready to be loaded with products.

4.2. Loading with products

- Place gently products on exposition are in cabinets
- Do not exceed limit of loading. For glass shelves it is a maximum of **25 kg/m²**
- Do not let products stick away from glass shelves – otherwise airflow might be disturbed
- Make sure there are at least 10 mm distances between products on exposition shelves. Products mustn't cover air inlet or outlet. If products will be loaded incorrectly – this will disturb airflow and in effect cause increase of temperature inside.
- Do not cover perforation on metal frame covers around condensing unit.

ATTENTION: Cabinet is not prepared for refrigerating products but only display them for sale purposes. Products with higher temperature than set on cabinet should not be placed inside. For instance, if in cabinets there is a temperature of +3 °C then products which are to be displayed should also have temperature of +3 °C or less.

To ensure correct temperature of products and reducing overall costs of using the cabinet – keep back doors closed at all times when no sale takes place.

4.3. Controller display

Used controller makes defrosting process automatic with the use of additional probe in the evaporator.

4.3.1. Display alerts.

In standard mode of work, on display you can see current temperature inside cabinet along with information about working condensing unit.

Additionally on display you can see:

- Defrost alert,
- Alerts in case of malfunction of a probe
- Alerts in case of cabinet malfunction

4.3.2. Setting the temperature

In order to set or adjust the temperature inside display area – please proceed as described in added manual of controller. Temperatures can be only changed to the ranges presented by manufacturer.

4.4. Automatic defrost.

Controller which is in standard fitted in cabinet also controls automatic defrost process. Water which comes from defrosting is directed through drain in the bottom of mould and a pipe to the container in the bottom of frame or directly to canalisation drains.

It is necessary to control if drain is clear and if water can run smoothly through plastic tube. If necessary remove any dirt which can block the flow of the water.

In cases where cabinet runs in higher humidity environment and higher temperature it is important to add another defrost even multiple, refer to controller manual for more information.

It is absolutely necessary to obey the rule of a one per week full cabinet defrost and cleaning. To do so turn OFF cabinet for one day clean it, let it fully defrost – this way you will make sure it will work perfectly for next week.

During defrost temperature inside cabinet always increases by few or more degrees. This process is very short and will not affect products.

5. Cleaning during usage.

At least **two times per year** it is necessary to the following things:

1. Turn OFF every switch on control panel by setting them in position “0”
2. Unplug cabinet from the socket
3. Remove all products from display area
4. Wait until cabinet reaches temperature of surrounding
5. Clean interior from any possible remains and leftovers of products
6. Control water drains and if necessary remove any dirt which might be found there
7. Wash every exposition surface with the use of gentle detergent (non-toxic and non-active), and in case of inox surfaces – a special detergent for this kind of metal. After washing, dry it surfaces with soft towel.
8. Wash internal surfaces of front glass while opening it to the front. Opening the glass (tilting) must be done very carefully. While washing internal parts of glass, support it from other side with your free hand.
9. After cabinet is completely clean, it can now be turned ON as described in description in 4.1

It is also necessary to check on regular basis if:

- **Level of noise is normal**
- **Inlet and outlet of air are not blocked or covered**
- **Evaporator is clean**

5.1. Cleaning of condenser.

One of the most common cause of refrigerated cabinet’s malfunctions and breaking down is dirt and disturbed heat exchange in condenser.

ATTENTION: At least one a month, or if necessary even more frequent check if condenser is clean.

If it’s necessary please do the follow described below steps:

- Turn OFF the cabinet by putting main switch in “0” position and unplug the cabinet from electricity
- Remove rear metal cover (to gain access to condenser)
- Clean with the use of soft brush or vacuum cleaner (low power), clean condenser and check if there is airflow through condenser and dirt is not blocking spaces between plates of condenser

It is necessary to check on regular basis if:

- **Noise level is normal**
- **Condenser is clean**
- **Air flow through condenser is sufficient**

If cause of disturbed functioning of cabinet is dirty condenser it is necessary to check if after following above described steps cabinet will function properly. If not – please contact nearest service.

6. Power shortage.

After a power shortage or unplugging and plugging again, cabinet will turn ON automatically. During power shortage it might happened that container for water will overflow.

After electric power is restored please check if cabinet is working properly. If not please contact closest service.

7. Detecting and removing malfunctions

If cabinet or any of its components will malfunction or cabinet doesn't work properly, please check if it is not dangerous to people or property.

If it is necessary please contact nearest service.

Before calling service it is necessary to check if:

- Plug has not been removed from the socket and if electric supply is ensured.
- Fuse of cabinet is not burned
- Cabinet is levelled properly
- Condenser is not covered or blocked
- Products are correctly placed inside cabinet
- Air flow in cabinet is not disturbed
- Defrosting cycle is not in progress. When it is – temperature display on controller is blocked during defrost and a little after. Wait another 1-1,5 hour and then check temperature – if showed temperature will still be too high - it might suggest malfunction.

If cause of malfunction cannot be found – please turn OFF the cabinet from electricity and call service.

8. Service and spare parts.

Cabinet characteristics are written on label plate. When contacting service it is necessary to always have prepared serial number and type of cabinet. If more technical data would be necessary – please contact nearest service or your distributor.

ATTENTION: Only qualified staff can perform any service duties of cabinet and its electric and mechanic parts. Also evaporator should only be cleaned by authorised service. It is strongly suggested to use manufacturers spare parts only.

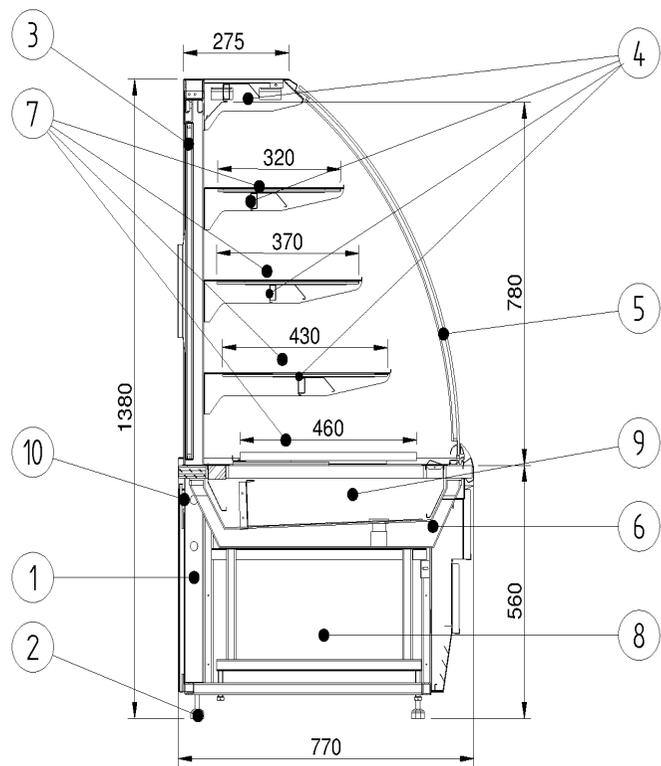
8.1. Changing light tube.

1. Turn OFF light in cabinet. For safety reasons please turn OFF entire cabinet on main switch and by removing plug from the electric socket.
2. Remove cover of light tube (if present)
3. Remove light tube from brackets by turning it around its axis
4. Remove protective cover tube (if present)
5. Place new light tube in the cover (if present) and install it in the brackets by turning it around its axis
6. Place cover of the tube (if present)
7. Turn ON the cabinet and Turn ON light.

9. Recycling

After reaching the end of service period cabinet has to be utilised in agreement with local laws. It's necessary to get a professional opinion about dumping which can hurt the environment and materials which can be recycled.

Manufacturer withholds the right to make changes in construction of cabinet.



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|--------------------|-------------------------|
| 1. Frame | 6. Insulation |
| 2. Adjustable feet | 7. Shelves |
| 3. Back doors | 8. Exposition shelves |
| 4. light | 9. Condensing unit |
| 5. Front glass | 10. Fans and evaporator |

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