



DISPLAY FREEZER

USER'S MANUAL

**For Models: MCA-166A, MCA-266A, MCA-296A, MCA-366A,
MSD-142, MSD-180, MSD-302, MSD-400, MSD-500**



Please read this user's manual thoroughly before using this product.
Keep this manual handy for further reference.

Dear Consumers:

Thank you very much for purchasing our products. In order to ensure your safety and achieve the best out of this freezer, please read this instruction carefully.

- ◆ The products are commercial display freezers. These products are intended solely for the storage and/or display of packaged products that are not potentially hazardous foods.
- ◆ This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- ◆ Children should be supervised to ensure that they do not play with the appliance.
- ◆ Cleaning and user maintenance shall not be done by children without supervision.
- ◆ Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance.
- ◆ If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or a similarly qualified person in order to avoid a hazard.
- ◆ Please according to local regulations regarding disposal of the appliance for its flammable blowing gas. Before you scrap the appliance, please take off the doors to prevent children trapped.
- ◆ WARNING – Keep ventilation openings, in the appliance enclosure or in the built-in structure, clear of obstruction.
- ◆ WARNING – Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer
- ◆ WARNING – Do not damage the refrigerant circuit.
- ◆ WARNING – Do not use electrical appliances inside the food storage compartments of the appliance, unless they are of the type recommended by the manufacturer.
- ◆ This appliance is intended to be used in commercial and similar applications such as, staff kitchen areas in shops, offices and other working environments; farm houses and by clients in hotels, motels and other residential type environments; Catering and similar non-retail applications.
- ◆ The appliance shall not be installed in public corridors or lobbies.
Please according to local regulations regarding disposal of the appliance for its flammable gas. Before you scrap the appliance, please take off the doors to prevent children trapped
- ◆ Warning: the appliance shall be installed in accordance with national wiring regulations
- ◆ The appliance is to be installed in accordance with the Safety Standard for Refrigeration Systems, ANSI/ASHRAE 15.
- ◆ Notice: Servicing shall only be performed as recommended by the equipment manufacturer. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
- ◆ Notice: Component parts shall be replaced with like components so as to minimize the risk of possible ignition due to incorrect parts.
- ◆ The appliance is to be installed in accordance with the Safety.

- ◆ **WARNING:** Do not use means to accelerate the defrosting process or to clean, other than those recommended by the manufacturer. The appliance shall be stored in a room without continuously operating ignition sources (for example: open flames, an operating gas appliance or an operating electric heater).
- ◆ Do not pierce or burn.
- ◆ Be aware that refrigerants may not contain an odor.
- ◆ **Warning:** The appliance shall be stored in a well-ventilated area where the room size corresponds to the room area as specified for operation.
- ◆ **Warning:** The appliance shall be stored in a room without continuously operating open flames (for example an operating gas appliance) and ignition sources (for example an operating electric heater).
- ◆ **Warning:** The appliance shall be stored so as to prevent mechanical damage from occurring
- ◆ Check that cabling will not be subject to wear, corrosion, excessive pressure, vibration, sharp edges, or any other adverse environmental effects. The check shall also take into account the effects of aging or continual vibration from sources such as compressors or fans.
- ◆ Before carrying out Decommissioning procedure, it is essential that the technician is completely familiar with the equipment and all its detail. It is recommended good practice that all refrigerants are recovered safely. Prior to the task being carried out, an oil and refrigerant sample shall be taken in case analysis is required prior to re-use of recovered refrigerant. It is essential that electrical power is available before the task is commenced.
- ◆ When removing refrigerant from a system, either for servicing or decommissioning, it is recommended good practice that all refrigerants are removed safely.
- ◆ The recovery equipment shall be in good working order with a set of instructions concerning the equipment that is at hand and shall be suitable for the recovery of all appropriate refrigerants including, when applicable, **FLAMMABLE REFRIGERANTS**
- ◆ The recovered refrigerant shall be returned to the refrigerant supplier in the correct recovery cylinder, and the relevant waste transfer note arranged. Do not mix refrigerants in recovery units and especially not in cylinders

Details of Product

- It uses quality, effective and hermetic compressor with broad range of starting voltage, suitable ambient temperature: not higher than 38°C/100°F, reasonable matching of the freezer system guarantees its powerful refrigerant ability and energy saving.
- A good choice for storage of your variety of frozen food products. It is easy to open the lid to get your frozen food and close the lid to seal the freezer in.

Caution for Using

1. Unpack all packages before using the freezer. Don't bend it over more than 60° while moving it.
2. The freezer should be installed in the environment of good ventilation, Cool and dry and without corrosive gas. It should not be installed close to heat sources or directly under the sunlight. The space more than 10cm between the wall of the front and the back of the freezer should be allowed. When installing, the wheels should be padded well so as to make the freezer be level and stable, or it will cause vibration and too much noise.

3. If power is cut off, wait at least 5 minutes before turning it on again to avoid damage to the compressor.
4. To save energy, the door should not be frequently opened for a long time.
5. The surface and the inside of the freezer should be dry and clean. Long term moisture will cause the freezer rust slowly. (There will be some stains on the surface.)
6. Periodical cleaning is suggested for your reference. Generally, 30-45 days once is best. When cleaning, it is best to wipe the inside and the surface of the showcase with the soft cloth with neutral soap or detergent.



Refrigerant class A3 per ANSI/ASHRAE 34

The maximum loading of each type of basket is 12kg.

The ambient temperature and humidity conditions of the show case climate class following the tab below

Test room climate class	Dry bulb temperature °C	Relative humidity %	Dew point °C	Water vapour mass in dry air g/kg
0	20	50	9.3	7.3
1	16	80	12.6	9.1
8	23.9	55	14.3	10.2
2	22	65	15.2	10.8
3	25	60	16.7	12.0
4	30	55	20.0	14.8
6	27	70	21.1	15.8
5	40	40	23.9	18.8
7	35	75	30.0	27.3

NOTE the water vapor mass dry air is one of the main points influencing the performance and the energy consumption of the cabinets. Therefore, the order of the climate class in the table is based on the water vapor mass column. See also Annex B to compare lab and store conditions.

Attention: To ensure safety, the power plug must be pulled out before cleaning. All safety precautions must be followed. Dispose of properly in accordance with Federal or local regulations. Risk of fire or explosion due to puncture of refrigerant tubing. Follow handling instructions carefully.

DANGER: Risk of fire or explosion. Flammable refrigerant R290/R600a used. To be repaired only by trained service personnel. Do not use mechanical devices to defrost refrigerator. Do not puncture refrigerant tubing.

ATTENTION: pour assurer la sécurité, la fiche d'alimentation doit être retirée avant le nettoyage. Toutes les précautions de sécurité doivent être respectées. Disposer correctement conformément aux réglementations fédérales ou locales. Risque d'incendie ou d'explosion dû à la perforation du tube réfrigérant. Suivre la manutention instructions soigneusement.

Danger: risque d'incendie ou d'explosion. Réfrigérant inflammable R290/R600a utilisé. Être réparé uniquement par un technicien qualifié. N'utilisez pas de dispositifs mécaniques pour dégivrer le réfrigérateur. Ne pas perforer le tube réfrigérant.

How to Use

Allow to stand for a minimum of 4 hours before plugging in to the mains.

The temperature is controlled by the temperature control knob located on the front face, at the bottom right hand side. Rotate the control knob left or right to regulate the temperature inside the freezer.

1. When initial operation, the freezer should run empty about one hour before storing food in it.
2. The thermostat could adjust the temperature inside the freezer. When you turn the knob in clockwise. The bigger the figure, the lower the temperature. Generally, the position of '4' is suitable, around 0° F. At "Max/7/Hi" position, the compressor will run constantly to reach the coldest temperature as quickly as possible without stop (no cycle). Turn the temperature control to the "4" or "5" when temperature inside is stable for ice cream and similar products.

Indicator lights

"Power" indicates the freezer is switched on.

"Run" indicates the compressor is working.

Food Storage

- Do not fill the freezer full of products. You should leave space between items and the inner surface of the cabinet, so as to keep good ventilation of cold air and freeze evenly. Do not put in any bottled or canned beverage with freezing point above the temperature in the cabinet when it is below zero.

- For foods that should be moisture-free or lose water easily, wrap them up with hermetical food bags or fresh films before putting in the cabinet for the sake of avoiding smell-mixing and reducing frosting.
- Storage of volatile and combustible gases, liquids such as strong alkalies, strong acids, petrol ,etc. is forbidden.
- Never put hot food directly in the freezer. Food should be cold or frozen before placing it inside.
- The cabinet is intended exclusively for the storage and/or display of packaged foods only.

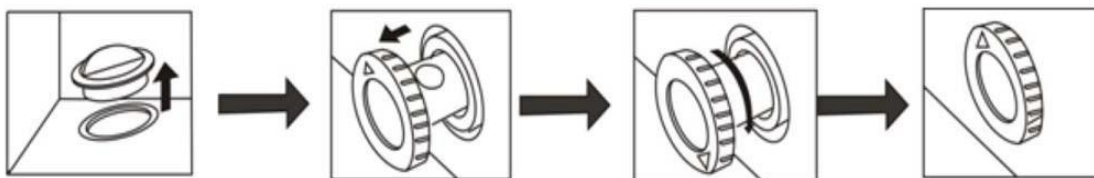
Maintenance

- The freezer should be cleaned regularly. When cleaning, turn off the power, take out the foods in the cabinet, clean the inside using water or a little neutral detergent.
- Do not use boiling water, acid, chemical diluent, petrol and oil, or dirt-removing powder.
- Dry it after cleaning.
- Use light soap water when cleaning the door seal, apply a little of talcum powder on it after natural drying to extend its service life.
- Use soft cloth with water or a little detergent to clean the out surface. Note, keeping the power supply and lower part of connect wires away from water to avoid electricity leakage.
- Except common breakdowns, those who are not service technician should not take apart and repair the freezer on their own so as to avoid worsening the trouble. Unauthorized repair of electrical part such as compressor, temperature controller is forbidden.
- All maintenance staff and others working in the local area shall be instructed on the nature of work being carried out. Work in confined spaces shall be avoided.
- If any hot work is to be conducted on the refrigerating equipment or any associated parts, appropriate fire extinguishing equipment shall be available on hand. A dry chemical or CO2 fire extinguisher should be adjacent to the charging area.
- Notice: Any person who is involved with working on or breaking into a refrigerant circuit should hold a current valid certificate from an industry-accredited assessment authority, which authorizes their competence to handle refrigerants safely in accordance with an industry recognized assessment specification.
- Notice: Servicing shall only be performed as recommended by the equipment manufacturer. Maintenance and repair requiring the assistance of other skilled personnel shall be carried out under the supervision of the person competent in the use of flammable refrigerants.
- No person carrying out work in relation to a REFRIGERATING SYSTEM which involves exposing any pipe work shall use any sources of ignition in such a manner that it may lead to the risk of fire or explosion. All possible ignition sources, including cigarette smoking, should be kept sufficiently far away from the site of installation, repairing, removing and disposal, during which refrigerant can possibly be released to the surrounding space. Prior to work taking place, the area around the equipment shall be surveyed to make sure that there are no flammable hazards or ignition risks. "No Smoking" signs shall be displayed.

- Checking for presence of refrigerant, the area shall be checked with an appropriate refrigerant detector prior to and during work, to ensure the technician is aware of potentially toxic or flammable atmospheres. Ensure that the leak detection equipment being used is suitable for use with all applicable refrigerants, i.e., non-sparking, adequately sealed, or intrinsically safe.
- Ensure that the area is in the open or that it is adequately ventilated before breaking into the system or conducting any hot work. A degree of ventilation shall continue during the period that the work is carried out. The ventilation should safely disperse any released refrigerant and preferably expel it externally into the atmosphere.
- Where electrical components are being changed, they shall be fit for the purpose and to the correct specification. At all times, the manufacturer's maintenance and service guidelines shall be followed. If in doubt, consult the manufacturer's technical department for assistance.
- Detection of flammable refrigerants: Under no circumstances shall potential sources of ignition be used in the searching for or detection of refrigerant leaks. A halide torch (or any other detector using a naked flame) shall not be used.

Defrosting

- Defrost for better freezing efficiency when the frost film in the cabinet is 5mm/1/5" thick.
- When defrosting, turn off the power, take out the frozen foods, open the door for warming and melting. Use soft cloth to absorb water and clean it up.
- Extract the water conduit and put in a water container
- Do not use sharp metal tools such as steel brush to clean the frost film when defrosting so as to avoid evaporator damage.
- Never use hairdryers, electrical heaters or other such electrical appliances for defrosting.
- When defrosting has finished drain the water in the bottom of the freezer by removing the cap, as illustrated below.



- There is a water conduit at the bottom of the freezer, when defrosting, extract the rubber cover, the defrosted water will drip into the hole and flow out.

NOTES: PLEASE KEEP THE RUBBER COVER SAFE DURING THE DEFROSTING AND PUT IT BACK AFTER THE DEFROSTING IS COMPLETE

Trouble Shooting

Breakdown	Case	Removal method
The indicator is not on. The compressor does not start.	The plug isn't connected to the socket really.	Replug it.
	no power	Connect the socket with power.
The indicator is on, but the compressor doesn't work and buzzes only	The power voltage is $< 98V$.	Put a power-regulator more than 1000W power together.
The compressor stops a minute after start, and restart after a few minutes, and so repeatedly.	The power voltage is $> 132V$.	
The compressor works normally, but the temperature in the cabinet lowers too slowly.	The door is opened too frequently.	Reduce open times.
	The food in the cabinet is too much, and placed improperly.	Place foods properly keep place between them for ventilation of cold air.
	The frost film is too thick.	Take out foods and defrost.
	The surface of the condenser is too dirty.	Stop and clean the condenser.
	The door seals badly.	Adjust the door seal.
The noise is too loud	The freezer is placed unstably.	Place it stably.
	The fixing of the freezer is loose.	Tighten the fixing.
	there's contact between pipes.	Separate them.

The following are not faults:

- When the freezer is working or after stopping for a while, the refrigerant in the pipes is cycling and gives out " running water " sounds.
- The surface temperature of the compressor may be up $70\sim 80^{\circ}C/158 \sim 176^{\circ}F$ when it is working.
- The back side of freezer gives out heat.
- In rainy season, the outer surface of the cabinet may have dew, which makes no defects on normal use. Just dry it with a piece of cloth.
- The protective film on the inner tank is to avoid damage during production purpose. Don't worry about peeling it off. It's okay to tear it off when you use it.