Diamond

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EN

HORECA MODELS (EN)

Operating and Maintenance Manual
"Original instructions"

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1. GENERAL INFORMATION

1.1. GENERAL CONDITIONS

For your safety and the proper use of the equipment, please read these instructions carefully and comply with the warnings and recommendations contained therein before installing the equipment for the first time.

You should keep these instructions in a safe and dry place and always accessible to the user as they contain important information on equipment installation, operation, and maintenance. Keep all documentation for your own use or for another person who may come to own this equipment in the future.

Proper installation and rational use, in accordance with these instructions, will enable a better performance of the equipment.

1.2. RESTRICTIONS OF USAGE AND MAINTENANCE

The models ID70/R9H and ID140/R9H are designed for the chilling and preservation of fresh produce and beverages.

The models IE70/R9H and IE140/R9H (and their variants) are designed for the preservation of frozen products.

The models ID70/R9H; ID140/R9h; IE70/R9H and IE140/R9H, are vertical frozen storage equipment for professional use.

2. SAFETY INSTRUCTIONS

2.1. GENERAL SAFETY

This equipment can be used by children aged 8 years and older and by persons with reduced physical, sensory or mental capabilities or limited experience and knowledge, provided they are supervised or given instructions concerning the safe use of the appliance and understand the hazards involved.

Children should not play with the equipment.

Cleaning and maintenance of the equipment should not be carried out by children without supervision.

⚠ Keep the packaging and all its components out of the reach of children.

Choking hazard! The package may contain cartons or films.

Before connecting the equipment, check if the cable and power cord have been damaged during transport. In the event of damage, it must be replaced immediately by the manufacturer or its authorized dealer in order to avoid risk of electrocution.

The maximum load per shelf is 40 kg/m².

Explosive substances, such as aerosol cans with flammable propellant, should not be stored inside the appliance.

⚠ DANGER! Keep all ventilation openings in the appliance cabinet or built-in structure free of obstructions.

⚠ DANGER! Do not use mechanical mechanisms or other means to accelerate the defrosting process or other methods not recommended by the manufacturer.

DANGER! Do not damage the refrigerant circuit.

DANGER! Never use electrical appliances inside the food compartment (e.g., heaters, electric ice cream makers, etc.) unless they are of the type recommended by the manufacturer. Danger of explosion!

2.2. TECHNICAL SAFETY

This equipment has a small amount of refrigerant (R600a or R290, depending on the model) which, while not non-polluting, is flammable.

To reduce flammability hazards, installation of this device should only be carried out by a suitably qualified person.

Care should be taken to ensure that the refrigerant tube is not damaged during transportation or assembly. The refrigerant may cause damage to the eyes or ignite when released.

<u>In case of damage:</u>

- Keep the equipment away from naked flames or ignition sources;
- Air out the cabinet well for a few minutes;
- Disconnect the plug from the mains;
- Contact the technical service.

The compartment where the equipment is installed should be as big as necessary for the refrigerant in the appliance. In very small spaces and in the event of a leak, a flammable gas/air mixture may form.

The compartment should be at least 1m^3 for every 8 gr of refrigerant.

The amount of refrigerant in the appliance is indicated on the rating plate inside the same appliance.

The appliance must be disconnected from the power source during cleaning or maintenance and during parts replacement.

Replacement of the electrical cable and other repairs may only be carried out by qualified service personnel in order to prevent dangerous situations. Improper installation and repairs can result in a number of hazards to the user.

2.3. USAGE RECOMMENDATIONS

The operating conditions of the equipment are shown on the nameplate inside the equipment, by means of the climate class indicator. The equipment can be classified according to the classes below:

Climate Class	Max. Environment Temperature	Max. Relative Humidity
3	25 °C	60%
4	30 °C	55%
5	40 °C	40%

The minimum operating temperature is 10 °C.

- Do not touch the appliance with wet or damp hands and feet;
- Disconnect the equipment from the socket by pulling on the plug, not the power cord;
- Never use electrical appliances inside the equipment (e.g. heaters, electric ice cream makers, etc.) Risk of explosion!
- Do not store flammable products in the appliance (e.g. spray cans) and explosive products. Risk of explosion!
- Keep alcoholic liquids with a high alcohol content in a hermetically sealed container and in a vertical position;
- To defrost and clean, you must unplug the power cord;
- Never use mechanical devices or other means to speed up the defrosting process other than those recommended by the manufacturer (e.g. defrosting or cleaning the appliance with a steam cleaner! The steam can reach the electrical components and cause a short circuit. Electrical shock hazard!
- Do not use any pointy objects or with sharp edges to remove single or layered ice. This may damage the tubing where the refrigerant circulates, and this may freeze, ignite, or cause injury to the eyes! Do not damage the refrigerant circuit;
- In the case of lockable appliances, keep the key out of the reach of children!

Please pay attention to the shelves. They are coated to prevent electrostatic discharge. When the protective layer begins to deteriorate, they must be replaced immediately.

3. INSTALLATION

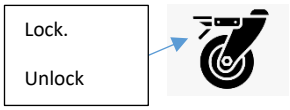
3.1. UNPACKING THE EQUIPMENT

Unpack the cabinet by removing the packaging as well as its protections and pallets, taking care of your safety and of the surrounding goods. Choose the storage place for the removed products carefully, keeping them out of the reach of the children, trying whenever possible to leave them in a place where they can be recycled.

3.2. TRANSPORT AND HANDLING OF EQUIPMENT

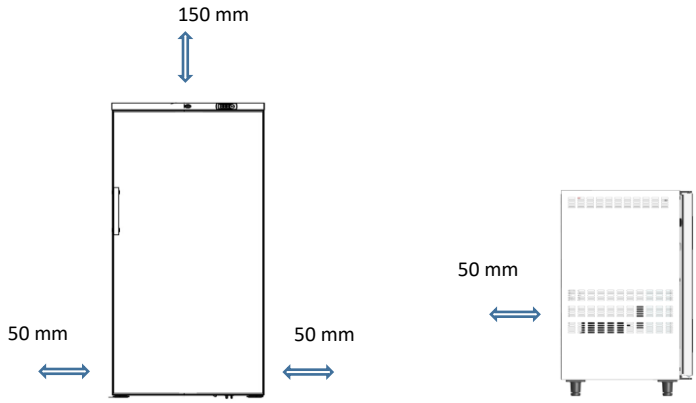
Make sure the equipment has not been damaged during transportation. If you find any damage, you must notify the carrier and mention it on the delivery note.

If the equipment is moved horizontally during transportation, it must remain vertically for a period of not less than six hours before being connected to the mains.
Lifting, moving, and transporting the appliance without proper equipment can cause personal injury or damages. Use proper lifting means to load, unload, and move equipment whenever necessary.
Never move the equipment with products inside. Before moving the equipment, unplug the equipment from the socket and remove the products from inside, storing them away.
After proper storage, check that the power cord is not damaged. A damaged power cord may cause electric shock or fire. If the power cord is damaged, it must be replaced by the manufacturer, authorized dealer, or qualified personnel in order to prevent accidents.
When applicable: pay maximum attention during handling and when opening the door with the equipment unlocked.



3.3. POSITIONING OF THE EQUIPMENT

The equipment must be installed in a dry and ventilated area, on a levelled floor with the capacity to support its weight, including its maximum load. It must be positioned so that the plug is accessible.
Install the equipment leaving a space of 50 mm on the sides between the device and any other furniture or wall, and at least 150 mm between the equipment and the ceiling or cover, thus allowing natural air circulation.



In order to reduce energy consumption, the equipment should be kept away from any source of heat and out of direct sunlight.
Do not obstruct the lower and/or upper fan grills to allow for ventilation and maintenance.

3.4. APPLICATION OF ACCESSORIES

Where applicable, the following accessories must be installed:
- Apply the two levelers underneath the equipment, at the front, by simply screwing them into the two existing holes;
- Install the feet or castors using the supplied screws, inserting them into the holes located on the underside of the equipment, with the help of a size 10 wrench not supplied;
- Install the plastic spacer on the back and the handle on the equipment door using the pre-assembled screws, tightening them;
- Before placing the shelves, first install the supports supplied inside the equipment in their respective rails.

3.5. BEFORE SWITCHING ON

Before you start the appliance for the first time, you should clean it inside with a non-alkaline, ammonia cleaning solution (do not use corrosive products) and then dry thoroughly. The equipment must be disconnected from the mains while this is done.

3.6. CONNECT TO THE MAINS

Before connecting the equipment to the mains, check that the voltage and frequency are in accordance with the specifications on the rating plate. The appliance must be connected to an earthed socket; ensure that the connecting cable does not become entangled.
If the length of the cable is not enough, it should be replaced by a qualified person. Do not use an extension cord.

4. OPERATION

4.1. DIGITAL THERMOSTAT MODELS EVCO EVJ

SET POINT – Minimum programmed temperature in °C that the unit must reach.
DIFFERENTIAL – Temperature range in °C within which the unit operates.

The operation of the equipment is totally controlled by the digital thermostat, which allows for the selection of temperature and controls the operation of the lighting using the button (models with with lighting) or when the user open the door.

Connect the equipment to the mains. If ". ." appears in the digital display, press the button for 2 seconds. To switch off the equipment, press the for 3 seconds.

It is necessary to wait approximately 3 minutes for the compressor to start after switching on the cabinet.
The factory setpoint for positive-temperature refrigeration equipment is +2,5°C, and it can be adjusted on the thermostat between -2°C and +8°C on solid-door models, and between +1°C and +8°C on glass-door models.
For negative-temperature models, the factory setpoint is -20°C, and it can be adjusted on the thermostat between -25°C and -15°C on solid-door models, and between -20°C and -15°C on glass-door models.
The thermostat is locked at the factory, to prevent unauthorized access, while still allowing adjustment of the desired temperature (setpoint), switching the light on or off, and accessing operating information.

To change the setpoint, proceed as follows:

- Check whether the keypad is locked (“Loc”) by pressing any key. If it is locked, press any key until the message “unL” appears to unlock it.
- Press the SET; the current setpoint value will appear. To select the desired value, use the “V” “∧” buttons. To save the value, do not touch the keypad for 15 seconds, or press the SET (the value will be saved and the display will return to the temperature menu). To exit without saving, press the .

The temperature shown on the display is the equipment's internal temperature.

The equipment's noise level is less than 70dB.

Note: The temperature differential of the equipment (difference between maximum and minimum operating temperature) is factory-set to 4°C on positive-temperature models and 3°C on negative-temperature models.

When fully charging the cabinet or turning it on for the first time, it is possible that the alarm will start to sound after 2 hours, if it has not reached the programmed temperature, with “AH” visible on the display and an audible alarm. Press a key to turn off the audible alarm and wait 12 hours for the temperature to stabilize. If the programmed temperature has not been reached within this period of time, contact our technical services.

The following messages may appear on the thermostat:

Operation Messages	
Message	**Description**
Pr1	Cabinet probe fault
Pr2	Evaporator Probe (Defrost Probe) Alarm
Pr3	Condenser Probe Alarm (dirty condenser)
rtc	Clock alarm
AL	Low temperature alarm
AH	Hight temperature alarm
id	Open door
dFd	Defrost
PF	Energy Fault
COH	High Condensation Temperature Alarm
CSD	High Condensation Alarm

After unlocking the keypad, press and hold the “V” key for 1 second to view the following information:

rcH + Set: Clean compressor ON time, with key **Λ** put 199 and press SET;

cH1+ Set: Compressor operating hours;

rH + Set = rhL (not active);

Pb3 + Set: Condensation temperature (only negative-temperature cooling models);

Pb2 + Set: Probe 2 temperature (evaporator);

Pb1 + Set: Probe 1 – internal cabinet temperature.

Use the “V” and “ʌ” buttons for 15 seconds to select a label, and press SET to view or exit the label value.

Press ⏻ to left or don’t press any key

4.2. PRODUCT LOADING

Load the product into the equipment in such a way that it is properly arranged, preventing accidents during handling.

Some equipment may have a load limit and are marked with a special sticker if this is the case. Do not place products above this limit otherwise it will affect the normal operation of the unit. The maximum permissible load per shelf is 40 kg/m.

On digital thermostats, when the equipment is fully loaded, it is possible for the alarm to go off after 2 hours if it has not yet reached the set temperature. Press the "mute" button to turn the alarm off and wait for 12 hours for the temperature to stabilize. If the set temperature has not been reached within that time, please contact our technical services or our dealers.

4.3. DEFROSTING

Defrosting is automatic and controlled by the thermostat itself. The cycle is pre-set at the factory to run every 6 hours, lasting up to a maximum of 30 minutes. On positive models, when the defrost start, the compressor Stop. On negative the defrost it’s by hot gas, and the compressor continues to operate.

4.3.1. PROVIDE A DEFROST

Unlock the keyboard. Press the symbol for 3 seconds; if the required conditions are met, the equipment will perform an automatic defrost. At the end of the defrost cycle, the equipment returns to normal operation and the defrost symbol switches off.

Do not use sharp objects to remove ice (risk of damaging the interior of the equipment).

Do not use mechanical, electrical or chemical processes to speed up the defrosting process.

5. MAINTENANCE

CAUTION: The equipment's power cord must be disconnected from the mains before any inspection, maintenance, and cleaning work so as to avoid any electrical shock or injury. During maintenance, do not breathe in dust or aerosols near the equipment as they may be harmful to your health.

Frequent and correct maintenance is essential to ensure performance and functionality of the equipment, consequently, maintenance is recommended at least twice a year and cleaning at least once a month;

The following operations must be carried out for efficient maintenance:

- Lubricate the hinges and gaskets. Wipe off any excess lubricant;

- Check that the appliance is levelled. If necessary, adjust the levellers/feet;
- Inspect all seals and gaskets. Make sure they are still soft and flexible.

Keep the equipment clean by avoiding the build-up of dust or other materials in the ventilation grills.

Maintenance operations must be carried out by the manufacturer, the service agents, or qualified personnel in order to avoid danger. They should not be carried out by children without supervision.

5.1. CLEANING

The equipment should be cleaned at least once a month. The following operations are to be carried out:

- Always keep the equipment free of ice. Use a soft cloth or soft brush to remove loose ice. Never use sharp tools and be careful not to damage the door seal. Keeping the equipment free of ice prolongs its useful life;
- Clean the exterior and interior of the appliance with a soft, dry cloth, or with a solution of water and ammonia-free neutral detergent.
- Clean all seals and gaskets using a damp cloth. Remove all dirt and wipe off with a dry cloth afterwards;
- Do not spill water directly into the equipment. Water spills can damage insulation materials and electrical components;
- Remove dust from the inside of the compressor compartment using only a dry brush or vacuum cleaner;
- The cooling system parts of this unit are completely sealed. They do not require any lubrication.

6. REPLACEMENT OF LIGHTING (applicable Models)

LED lights, with power equal to 12W/m. Power supply:10 to 12V DC.

This operation must be carried out by the manufacturer, authorized representatives, or qualified personnel in order to avoid accidents.

7. TROUBLESHOOTING GUIDE

Problem	Solution
The Appliance is not working	Check for power outage and the information displayed on the digital panel.
	Check if there is current in the socket.
The equipment works, but it is not very cold	Check for the build-up of dust on the condenser.
	Check controller setting.
	Check if fans (when applicable) are working or are tuck.
	Check for dirt accumulation on the condenser near the compressor.
	Check ice build-up on the evaporator.
	Check that the door is properly closed (ID alarm).
Water appears on the bottom of the equipment	Check that the drain hole is not blocked or that the tube is not in the direction of the recipient in the compressor compartment.
	Check equipment levelling.
High temperature alarm (AH)	Check ice build-up on the evaporator.
	Check for dirt accumulation on the condenser near the compressor.
	Check that the fans work (when applicable).
	Make sure the door was not left open for too long.
Low temperature alarm (AL)	Check thermostat temperature.
	Turn the equipment off for 5 minutes and then switch on again.
Lighting does not work	Turn the digital key on/off with the light switch function.
Excessive build-up of ice (negative cold storage models)	Check the temperature and humidity of the environment in which the equipment is inserted, according to the climatic class shown on the nameplate.
	Check door seal.
Damaged power cord	If the power cord is damaged, it must be replaced by the manufacturer, authorized service agent, or qualified personnel in order to avoid danger.

7.1. REPAIR GUIDE

Internal fan does not work	Temperature below the limits	LED lights do not light up	Light does not turn off	Led light flashing	Does not reach the temperature, but stops and starts	Suction line ice	It is cold, it does not reach the temperature	**Possible cause / Repairs**
•								Fan wires off /Check connection
•				•				Incorrect wire in the thermostat
•		•	•					Door open (door open alarm/ close the door and see door micro connection)
•	•							Faulty fan/ Replace fan
•								Faulty Digital thermostat relay/ Replace digital thermostat
•								Evaporator temperature above the programmed value for operation: +>18 °C // ->5 °C internal fan stopped. Wait for the equipment to cool
	•				•			Fan stuck/ Check fan position
	•							Set Point temperature / Check settings
	•				•			Wrong thermostat connections / Check connections
		•	•					Thermostat relay stuck / replace thermostat.
		•	•					Press the light button on the thermostat.
		•		•				Opaque door/ Close door open door
		•		•				Incorrect transformer wires/ Check Connections
		•		•				Faulty transformer/ Replace transformer
		•		•				LEDs faulty/replace LED/LED power cable cut or short-circuited.
						•	•	Excess refrigerant / check gas charge/dirty condenser/ perform maintenance.

If the malfunction continues after these checks, technical assistance should be requested from your authorized dealer.

Please indicate the type of malfunction, type of appliance, serial number, and date of purchase (invoice). The serial number and type of appliance are described on the equipment information label (normally located inside the equipment, on the side).

In case of need for accessories or spare parts, you should also request them from your authorized dealer, always mentioning the equipment data described above.

Note: For the protection of persons and property against direct/ indirect contacts, the use of a differential protection of the power outlet directly to this equipment with a trip sensitivity of 300 mA is mandatory.

8. RECYCLING INSTRUCTIONS

8.1. RECYCLING OF THE PACKAGING

The packaging protects your equipment from damage during transportation. The materials used are recyclable and/or reusable.

Be attentive to the storage area of the products used for packaging the equipment and always keep them out of the reach of children, and dispose of them in appropriate recycling facilities according to the type of material.

Help us protect the environment by recycling the packaging. Contact your local municipal services for information on how to proceed, or a licensed operator for this specific waste stream (WEEE), or the establishment where you purchased the product.

8.2. RECYCLING OF USED EQUIPMENT

This appliance is marked in accordance with the European Directive 2012/19 EC on electrical and electronic equipment (Waste of electrical and electronic equipment - WEEE). The Directive defines the manner for collection and treatment of end-of-life appliances in EC countries. Used appliances are not worthless rubbish. Disposing of them while respecting the environment will allow us to get back precious raw materials.

WARNING!

This is an out-of-service appliance therefore:

Disconnect the plug from the mains;

Do not use the power supply cord.

Refrigeration equipment contains refrigerant and chemical compounds in the insulation. Both should be properly disposed of.

Care should be taken not to damage the refrigerant tubing until it is properly recycled.

Do not puncture the compressor or piping (risk of explosion and oil spillag