

INSTALLATION, OPERATION AND SERVICE MANUAL



ROLL-IN & PASS-THROUGH REFRIGERATED & FREEZER CABINETS

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1. RULES AND GENERAL WARNINGS

1.1 FOREWORD

Thank you for having chosen this product. It is the end result of modern technical know how, exhaustive tests and continuous efforts aimed at offering a product which is distinguished by its superior strength, great safety and excellent operation. If you take care of your appliance properly, following the maintenance suggested in this booklet, your appliance will have a long, trouble-free life.

1.2 GENERAL WARNINGS

This book contains important safety information regarding installation, operation and maintenance: keep it in a safe place for future reference. The installation should be carried out by professionally qualified personnel in compliance with the manufacturer's instructions. The appliance should only be used by competent personnel. Scrupulously follow the instructions contained in this booklet.

The manufacturer declines all responsibility for any operations effected on the appliance without respecting the instructions reported in this booklet.

1.3 USE

The appliance should only be used for the purpose for which it has been expressly designed, i.e. for containing, refrigerating and storing foods; any other use is to be considered incorrect and therefore dangerous.

ATTENTION: the appliance is not fit for external installations and environments subjected to action of atmospheric agents (rain, direct sun light). The manufacturer declines every responsibility for any incorrect use of the product.

1.4 TESTING

The appliance is shipped ready for use. The fulfillment of the tests and inspection operation (visual inspection-electrical test-functional test) is guaranteed and certified by the specific enclosures (see chapter 8).

1.5 GENERAL SAFETY REGULATIONS

The construction of the appliance is made according to the European security laws 73/23-93/68/CEE, the electric wirings according to the EN 60335-1, EN 60335-2-89 norms and the electromagnetic compatibility according to the EN 55014, EN 61000-3-2, EN 61000-3-3, EN 61000-4-6, EN 61000-4-2(89*336/CEE) norms and subsequent 2006/95/CE -93/68 2004/108/CE

In the transfer and repositioning of the appliance, we recommend of preventing any risk of capsizing and injury

2. TECHNICAL DATA

2.1 MATERIALS AND FLUIDS USED

This areas in contact with the food are made in steel or granite. A cooling fluid approved by law regulations, HFC, is used in the cooling unit. The type and quantity of the gas charged in the refrigerant unit is indicated on the rating plate.

2.2 MODEL, PERFORMANCE, CONSUMPTIONS AND GAS

**Please see data plate inside the appliance's cell*

REFRIGERATED CABINETS FOR REMOTE CONDENSING UNIT (NON-R290)

<i>Freon</i>	<i>type R404A - R507A - R744(*)</i>
<i>Maximum distance condensing unit - counter (1)</i>	<i>m 15</i>
<i>Difference in height condensing unit - counter (1)</i>	<i>m 3</i>
<i>Suction pipe section (mm - internal)</i>	<i>Ø 10</i>
<i>Delivery pipe section (mm - internal)</i>	<i>Ø 8</i>

(1) Longer distances require, generally, higher power condensing units.

**For R744 configuration R744 (CO2), please contact the technical department.*

2.3 SAFETY MECHANICAL CHARACTERISTICS, RISKS

The table has neither sharp edges, profiles, nor projecting parts. The protections for the moving and electric parts are fixed to the appliance with screws, to prevent any accidental access to these dangerous points.

3. INSTALLATION (instructions for the installer)

3.1 REMOVAL OF THE PACKAGE

Before proceeding to unpack the appliance check the packaging of the cooler and its protections. Any damage should be reported immediately to the carrier. Under no circumstances any damaged appliance can be returned to the manufacturer without prior written authorisation. Remove the packing and position the appliance in the place where it is to be used. Remove the protective plastics film from the external panels of the appliance very slowly to avoid adhesive remaining on the surface. Any residual adhesive should be removed using suitable products.

3.2 POSITIONING

Place the appliance in a ventilated place far from sources of heat, such as radiators or air-conditioning units, so that the cooling unit components may cool correctly. The room temperature must not exceed what is indicated in the "CLIMATE CLASS" table (section 5.1 of this manual), reported in the data plate at the rear of this booklet and inside the appliance. Adjust the height of the appliance and the slope by acting on the leveling feet, in the meantime checking the closing of the doors.

ATTENTION: KEEP A HEIGHT OF 500mm ABOVE THE 'EQUIPMENT TO ENSURE THE OPENING OF THE CONTROL PANEL AND THE MAINTENANCE OF THE COLLING SYSTEM.

3.3 POSITIONING NOTES REGARDING MODELS ADAPTED FOR REMOTE CONDENSING UNIT

Place the condensing unit in a ventilated place far from sources of heat. If the condensing unit is to be placed outdoors then the unit must have an adequate protective covering against the effect of atmospheric agents as stipulated by the local standards and regulations. Select the diameter of the pipe according to the measurements listed in the paragraph "Technical data". Lay the copper pipes, choosing the shortest route with as few bends, elbows or vertical sections as possible, observing the following recommendations:

- in the horizontal sections the suction line must have at least a 2 % incline towards the condensing unit.
- siphons must be installed before each ascending section of the suction line. -insulate the suction line using an appropriate sheathing.
- fit a solenoid valve, a dehydration filter and a indicator for the detection of liquids just before the point where the delivery line enters the appliance.
- wash both suctions and delivery pipes with dry nitrogen under pressure.
- pressurise the lines, through the charging connection, at 20 bar with dry nitrogen and check for leak detector.

CREATING THE VACUUM IN THE LINE (NON-R290)

- Using a vacuum pump, create a vacuum of 10 pa. in the evaporator and the feed pipes.
- Load the refrigerant (please see refrigerant details reported in the appliance data plate).

Also check that a suitable capacity magneto thermal switch with a contact separation of at least 3 mm is inserted between the supply cable and the mains electric line. ⚠

After connecting to the mains and with the appliance in operation, check that the supply voltage does not deviate from the rated voltage value by more than $\pm 10\%$.

Always disconnect the appliance from the mains electricity supply ⚠

before carrying out any cleaning or maintenance operations or in the event of malfunctioning. Failure to observe the above indications may jeopardise appliance safety.

NOTE: considering the models adapted for remote units, carry out the power supply connection of the considering unit and solenoid valve as indicated in the wiring diagram attached to the table. The power supply cable must have an appropriate section area.

The manufacturer cannot be held liable for any damage or injury caused by lack of or inefficiency of the earthing system, uncorrected installation, tampering, poor maintenance, improper use or failure to observe the electrical safety regulations in force in the country where the appliance is being used.

3.4 REMOTE UNITS: checks when starting up the system for the first time

Using the coolant liquid flow indicator, check if the freon charge is sufficient. If it is not, bubbles in the liquid will benoted through the flow indicator. In this case, proceed with adding freon as follows:

- Check that the freon is the type indicated on the rating plate.
- Connect the freon container pipe to the feed cock fitting of the condensing unit.
- Introduce freon until the bubbles disappear from the liquid flow indicator.
- Using a gauge, check that the evaporation and condensation pressure are correct.

WARNING: the freon charging operation and the connection to the electrical supply should be carried out by professionally qualified personnel.

3.5 FIRST START

Before connecting the appliance, check that the mains voltage corresponds to that indicated on the data plate.

To connect to the power supply, just insert the plug on the power cable into the corresponding socket of the electrical system. **Turn the ON / OFF button located in front of or behind the electrical box on the dashboard (where applicable).**

The safety of this appliance is only guaranteed if it properly connected to an efficient earthing system in compliance with current safety regulations. It is necessary to verify this safety requirement. Should there be any doubt over the effectiveness of the earthing system, have the installation thoroughly checked by professionally qualified personnel.

4. OPERATION

FOR INSTRUCTIONS REGARDING CONTROL PANEL AND RELATED OPERATIONS PLEASE REFER TO THE INSTRUCTIONS MANUAL OF THE THERMOSTAT, HERE ATTACHED.

5. LOADING OF THE PRODUCTS

Place the product into the cell uniformly (leave enough space from the door and from the back) to allow a good internal air circulation. Cover or wrap the foods before introducing them into the table, avoid putting hot foods or liquids in the refrigerator. Don't leave the door open more than necessary after loading or taking out the products.

In the negative temperature cabinets, please enter food already frozen.

ATTENTION: THE MAXIMUM LOAD FOR EACH GRID DOES NOT HAVE TO EXCEED 50 KG. IT MUST ALWAYS BE EQUALLY DISTRIBUTED AND IT MUST NOT EXCEED THE LOADING LIMIT INDICATED INSIDE THE CELL

ATTENTION: DO NOT PLACE INSIDE THE APPLIANCE EXPLOSIVE SUBSTANCES LIKE AEROSOL WITH PROPELLANT INFLAMMABLE GAS.

5.1 CLIMATE CLASS

Test room climate class	Dry bulb temperature °C	Relative humidity %	Dew point °C	Water vapor mass in dry air g/Kg
0	20	50	9,3	7,3
1	16	80	12,6	9,1
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
8	23,9	55	14,3	10,2

NOTE: The water vapour mass in dry air is one of the main points influencing the performance and the energy consumption of the cabinets. See also Annex D to compare lab and store conditions.

* See data plate at the back of the booklet of inside the appliance

6. MAINTENANCE (SEE SECTION 6.4 FOR R290 GAS)

6.1 ROUTINE MAINTENANCE

A-PRECAUTIONS FOR THE MAINTENANCE

Routine maintenance operations can be performed by non specialized personnel, only if the instructions reported in this chapter are carefully followed.

ATTENTION: disconnect the appliance from the mains power supply before carrying out any cleaning or maintenance operations.

For the above – mentioned operations, do not remove the safety devices.

B-CLEANING THE APPLIANCES AND THE ACCESSORIES

Before using, clean the cooler and all accessories of the appliance using warm water and neutral soap, then rinse and wipe dry. Do not use detergents such as solvents or abrasive powders. Protect stainless steel parts of the appliance with silicon wax.

C-CLEANING THE CONDENSER

The periodic cleaning of the appliance depends on the use of the machine.

The periodic cleaning of the condenser is necessary to guarantee a good performance and function of the appliance in time. We advise cleaning the fins of the condenser: once a month in a dusty environment; or once every three months in a clean and closed environment. To remove the dirt, use a brush or a vacuum cleaner. Do not use pointed objects as these could damage the condenser.

Warning: never use jets of water for cleaning the appliance.

WARNING: to gain access to the condenser of the refrigerated cabinet, if not possible the cleaning from above the appliance, remove the louvered front panel by unscrewing the 2 screws below the panel and by rotating the same from the bottom upwards. should the panel be removed, the operation must be done by qualified personnel.

Warning: please use gloves and appropriate tools. Danger of cuts and lacerations.



D- LONG INACTIVITY PRECAUTIONS

If the appliance is not going to be used for a long period, then these instructions must be followed:

- *disconnect the appliance, pulling out the plug from the supply socket.*
- *Remove all the products and clean the cell and the accessories.*
- *Apply a protective film of vaseline oil on the stainless steel surfaces using a damp cloth.*
- *Leave the doors open in order to allow air circulation in the cell, this is to prevent the formation of mould and bad smells.*
- *Make sure that the premise is aired regularly.*

6.2 EXTRAORDINARY MAINTENANCE OPERATIONS – malfunctioning

The extraordinary maintenance operations must be carried out by specialized personnel only.

To keep the equipment safe and in good working condition, It is recommended to carry out an inspection and maintenance of the safety devices every six months.

A- TROUBLE SHOOTING

1 THE APPLIANCE DOES NOT START:

- *Check that the plug is correctly inserted into the socket.*
- *Check that there is voltage at the socket.*

2 THE CELL IS TOO HOT:

- *Check the regulation of the thermostat.*
- *Check that there is no source of heat nearby.*
- *Check that the door closes perfectly.*
- *Check that the condenser is clean.*

3 THE APPLIANCE IS EXCESSIVELY NOISY:

- *Check that the level of the appliance. A not leveled appliance could cause some vibrations.*
- *Check that the table isn't touching other appliances or other parts that could enter in resonance. Carry out this check up and if the fault persists, get in contact with our technical assistance centres. Remember to signal:*
 - *the type of fault.*
 - *the code and serial number of cooler, that can be found written on rating plate attached in the front grid of the appliance.*

6.3 REPLACEMENT OF THE INTERNAL LIGHT

Where provided, should the internal lamp not work, do the following to replace:

- *Disconnect the appliance from the mains (unplug)*
- *remove the lamp protection with the use of a screwdriver*
- *unscrew the lamp*



(CAUTION: Make sure that the lamp is cold before touching it with bare hands)





- *Replace the lamp with one of the same characteristics (230V, 25W E14)*
- *Reposition the protection and secure it*

6.4 PROPANE R290 GAS APPLIANCE SAFETY INSTRUCTIONS

In order to avoid risk to people, or damage to the appliance or surrounding materials, we recommend that you read and adhere to the instructions below:

WARNING: No naked flames in the vicinity of the appliance. Danger of explosion  

WARNING: No smoking in the vicinity of the appliance. Danger of explosion  

WARNING: Never obstruct the air vents in the front panel whilst the appliance is in operation, it may compromise the performance and safety.

WARNING: Any maintenance must be carried out by fully qualified hydrocarbon gas engineers



WARNING: We recommend the use of anti-static safety clothing & footwear at all times. Danger of flames





WARNING: No mobile telephones in the vicinity of the appliance. Danger of flames. Danger of explosion



WARNING: Appliance must be disconnected from the electrical supply (unplug the appliance) before any intervention.

WARNING: No naked flame either on or in the vicinity of the appliance. Danger of flames. Danger of explosion  

WARNING: Remove with appropriate tools protection evaporator or the dashboard

WARNING: No sharp tools to be used when cleaning the condenser or the evaporator to prevent any possibility of causing gas leaks. Danger of flames. Danger of explosion  

WARNING: Do not use mechanical devices or other tools to accelerate the defrosting process, other than as recommended by the manufacturer.

WARNING: Do not damage the cooling circuit

WARNING: Do not insert other appliances inside the appliance, unless this is recommended by the manufacturer.

7. DISPOSAL AND DEMOLITION

7.1 WASTE STORAGE

Temporary storage of special waste is permitted but only if the final purpose will be the definitive disposal by treatment and/or final collection. Dispose the special waste according to the law regulations of your country.



INFORMATION FOR USERS

pursuant to art. 10 of Directive 2002/96/EC of 27/01/2003 on waste electrical and electronic equipment(WEEE), implemented in Italy with Legislative Decree n° 151 of 25th July 2005

-The above symbol shows that the product was put on the market after 13/08/2005 and that it must be collected separately when the user decides to discard it (including all components, subassemblies and consumables which are part of the product).

-For information on such collection systems, please contact the manufacturer or another organisation belonging to the various National Registers for other Member States of the European Union. Waste from private households (or from a similar source) may be disposed of as sorted municipal waste.

-When purchasing new equipment of an equivalent type, the old equipment may be returned to the distributor. The distributor shall then contact the organisation responsible for collecting the equipment.

-Appropriate separate collection of the discarded equipment and subsequent treatment, recycling and environmentally-compatible disposal prevents potential negative effects to human health and the environment and promotes the reuse and recovery of materials.

-Unlawful disposal of the product by the user is punished as established in the national legislation implementing Directives 91/156/EC and 91/689/EC.

7.2 PROCEDURES FOR THE DISASSEMBLY OF THE APPLIANCE

All countries have different legislations; therefore, the specific prescriptions enforced by the legislation and local authorities of the country where the cooler is demolished must be observed.

A general rule is to hand over the cooler to specialized collection/demolition centres. Disassemble the cooler and divide the components separately according to their chemical characteristics. Remember that the compressor contains oil and refrigerant gas which can be recycled. The coolers components are categorised as special urban waste.

8. ENCLOSED DOCUMENTS

- Spare parts view*
- Set of test and inspection sheets.*
- Wiring diagram.*
- Thermostat instructions booklet.*

Data Plate Information

Model No: _____

Serial No: _____

Data and illustrations herein are only approximate and the manufacturer reserves the right to make any changes to the products to improve the functionality and the design without prior notice