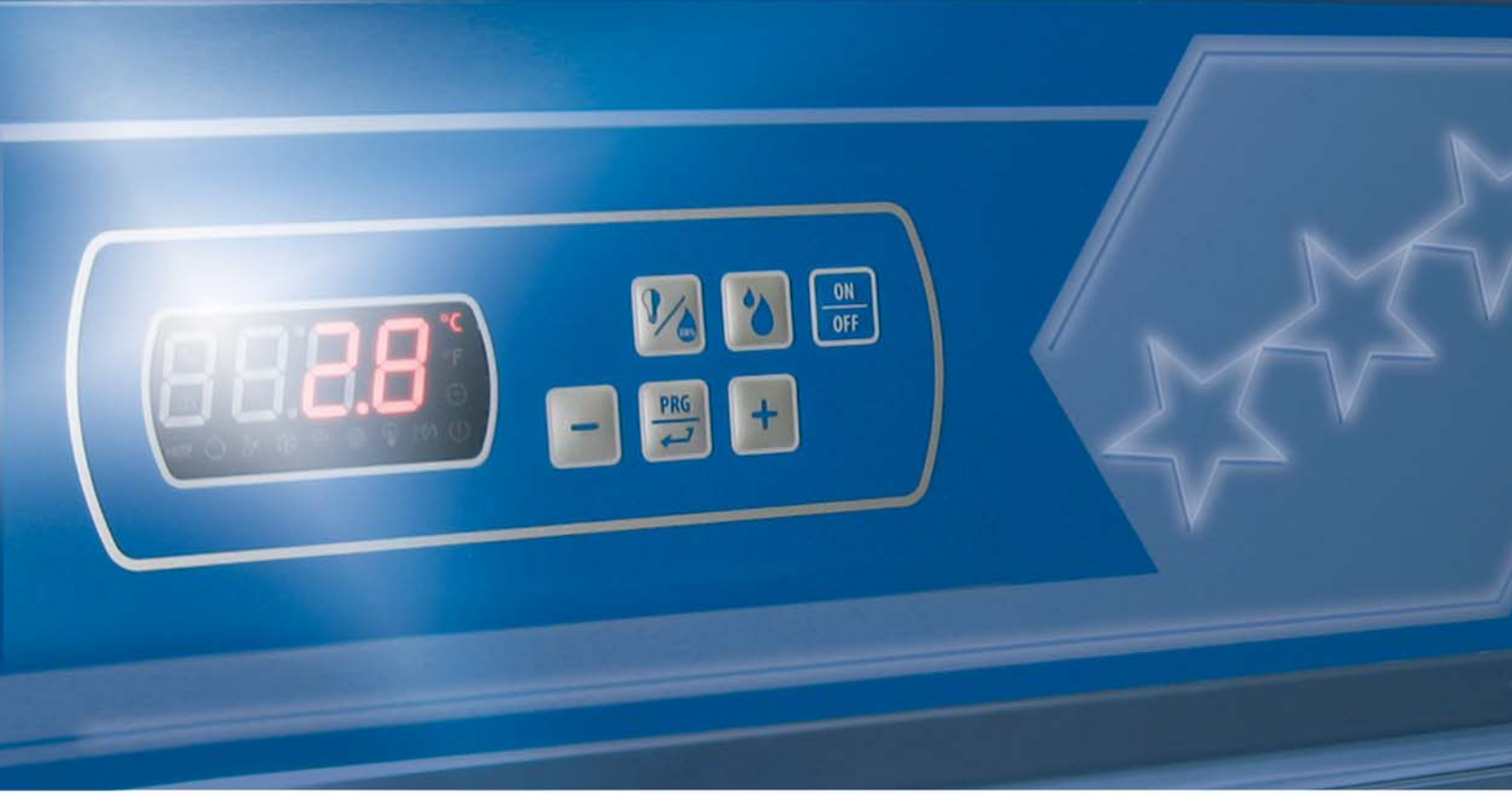


OPERATION AND SERVICE MANUAL HOLDING CABINET “N'ICE”

IRINOX®

REV. 1 (01/2012)

Dear customer,

We wish to thank you for the trust you have shown us by choosing an IRINOX conservation unit, and we ask you to carefully read the manual which will provide you with all the necessary information to immediately start optimal conservation of your products.

We do in any case suggest that you study this manual so as to take advantage of all the potential and benefits that your IRINOX conservation unit has to offer.

Proper operation of the machine also depends on its proper use.

Keep this manual near your conservation unit, so that it can easily be consulted by you and your operators.

Enjoy working with IRINOX!

Register online with Club Irinox : www.irinox.com

The graphic representation of the commands in this manual makes it easier to understand the operations to be performed, so that you can immediately start satisfactorily using your IRINOX conservation unit.

Legend of symbols

suggestions and details for proper use of the conservation unit

instructions for your safety

Additional information in this manual

Guarantee and service information

Validity of guarantee: for single parts, 12 months from invoice date, as shown in the current price lists.

Contacts:

Customer service:	+39.0438.5844
Assistance for use	+39.0438.5844
Technical service - spare parts	+39.0438.2020
Fax	+39.0438.2023
E-mail	irinox@irinox.com
Web site	www.irinox.com

For any request concerning your conservation unit, always specify:

- The model
- The serial number

which are shown on the label on the machine.

CONTENTS

1. GENERAL DOCUMENTATION

1.1. GENERAL WARNINGS

- This manual is an integral part of the product. It provides all information required for correct installation, proper use and maintenance of the machine.
- The user must read this manual and refer to it as needed. It must be kept in a place that that all authorized workers (installer, user, maintenance technician).
- The conservation unit is intended for professional use. Therefore, it is to be used only by skilled personnel.
- The conservation unit is intended only for its designed use, i.e. the conservation of foodstuffs.
- This does not include products that require constant monitoring and recording of the temperature, such as:
  - heat-sensitive chemical products
  - medicines
  - blood products
- Do not store explosive material in the appliance or any other products containing propellants such as spray cans, explosive liquids or flammable liquids.
- The manufacturer shall not be held liable for any damage arising from incorrect and unreasonable use, such as:
  - improper use by untrained personnel.
  - modifications or works which are not specific to the model.
  - use of spare parts which are not original or not specific to the model.
  - failure to comply with even a part of the instructions in this manual.

1.2 INTRODUCTION

Installation must be performed authorized and specialized personnel, respecting the instructions in this manual. With each single machine, the manufacturer provides a declaration of compliance with machinery directive 2006/42 and directive 2006/95.

Should the machine be supplied with a remote condenser unit, it is the responsibility of the installer to check all connections and to issue a declaration that the installation was duly performed and is in accordance with the aforementioned directive.

1.3 TRANSPORT AND HANDLING

- Loading and unloading of the machine on the means of transport can be performed using a forklift or pallet truck with forks that are more than half as long as the cabinet. The hoisting apparatus must be suitably chosen on the basis of the size and mass of the packaged machine as indicated on the package label (⏩ see Table 1).
- All necessary precautions must be followed when handling the chiller to prevent damage to it and the instructions on the package must be respected.

Table 1

	NET WEIGHT kg	CARDBOARD PACKAGING					CRATE PACKAGING				
		W (mm)	**H** (mm)	**D** (mm)	**m³**	**kg**	**W** (mm)	**H** (mm)	**D** (mm)	**m³**	**kg**
Model of conservation units											
NICE	165	760	2220	905	1,5	200	840	2270	830	1,6	250
Model of condensing units (if remote)											
Condensing units	26	650	500	650	0,2	40	760	500	760	0,3	50

1.4. UNPACKING

- Remove the cardboard or wooden packaging or box from the wooden base on which the machine is standing,
  lift the machine using suitable equipment (forklift), remove the wooden base and stand the machine in the chosen place (⏩ see par. 2.2).
- Check the condition of the conservation unit after having removed the packaging.
- Remove the protective PVC film from all sides (fig. 1).
- ⚠ Use protective gloves to handle the packing and the wooden base.
- N.B.: all the various parts of the packaging must be disposed of according to the rules of the various Countries in which the chiller will be used. In any case, none of the packaging must be left in the environment.

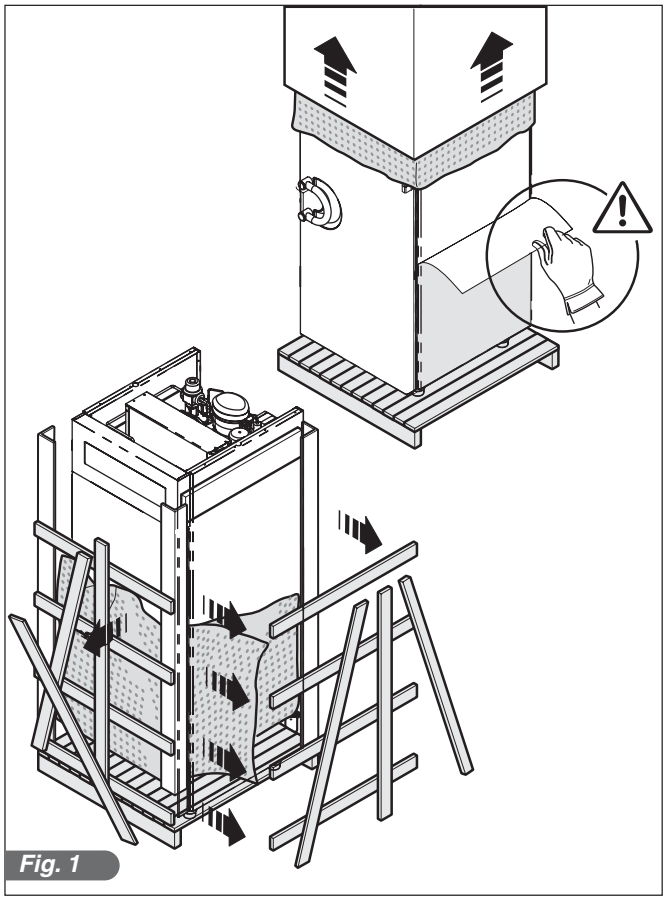


Fig. 1

1.5. BASIC SAFETY INSTRUCTIONS

If the instructions in this manual are not followed, the user takes upon himself responsibility for any operations carried out on the machine.

- These are the safety rules in general:
  do not touch the machine with damp hands or feet
- do not work on the machine barefoot
- do not insert screwdrivers, kitchen utensils or other objects between the guards and moving parts
- before cleaning or carrying out routine maintenance, disconnect the machine from the mains by turning the main switch off and removing the plug
- do not pull at the cable to unplug the machine.

2. INSTALLATION

2.1. PLATE DATA

- Check that the data on the plate and the electric power supply characteristics correspond (V, kW, Hz, no. of phases and available power).
- The plate with the characteristics of the unit is found on the right side of the conservation unit (fig.2) and under the control panel.

Preparation of machinery rooms for the condensing units must comply with fire prevention standards in the country of installation. Contact the local fire department for instructions.

i Also keep in mind that the intervention of safety valves or fuse plugs in the refrigerating circuit will result in the immediate discharge in the environment of all the coolant used. Please arrange for suitable disposal methods and emergency measures as shown in the coolant technical data sheet (⏩ see par. 2.12).

Climatic classes:
- **4** (environment temperature 30°C with relative humidity 55% not condensing) according to CEI EN 60335-1 regulations, CEI EN 60335-2-89, ISO 23953-2:2005(E).

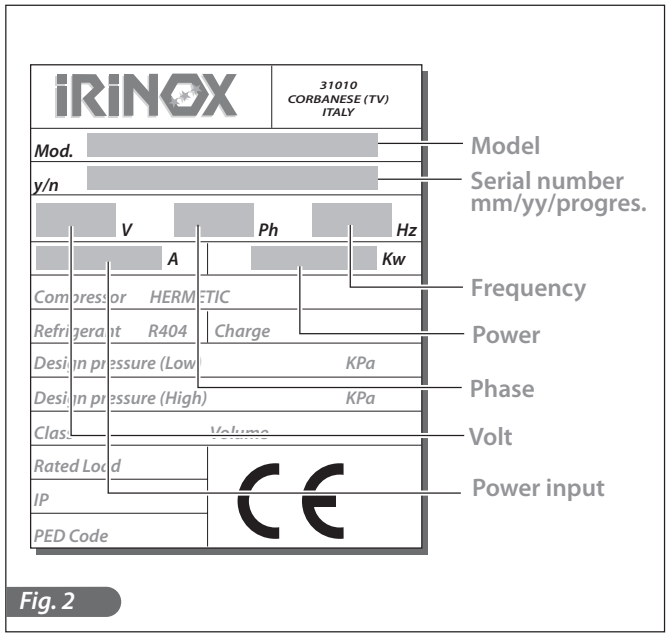


Fig. 2

2.2. POSITIONING

- The machine must be installed and tested by fully respecting the accident-prevention standards, traditional precautions and the laws in force.
- The installer must check for any fire-prevention rules (consult the local fire department for instructions).
- Place the machine in its location.
- Permanently level the appliance by means of the adjustable feet. Use special hoisting apparatus for the heaviest machines (fig. 3).
- If the cells are not levelled, their proper functioning and the drainage of condensation may be jeopardized.

Avoid (Fig.4):

- Places exposed to direct sunlight
- Closed locations that are hot and have poor air circulation (⏩ see table 2).
- Avoid installing the machine near any source of heat.

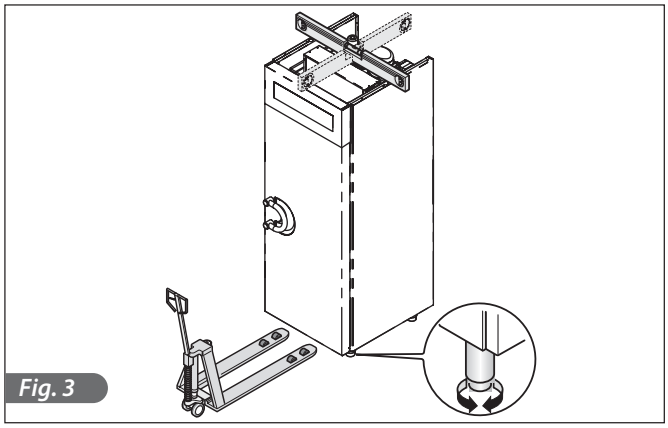


Fig. 3

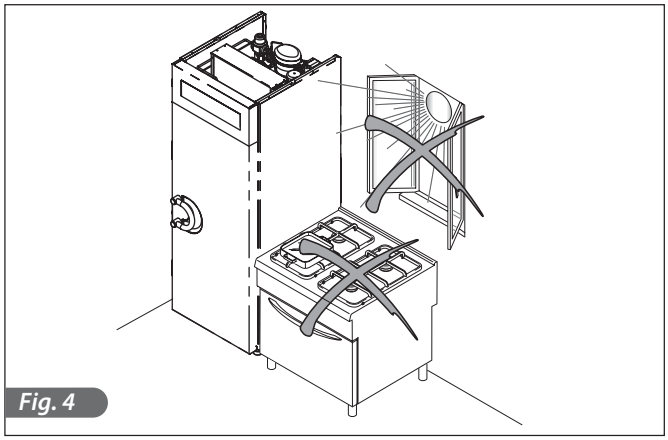
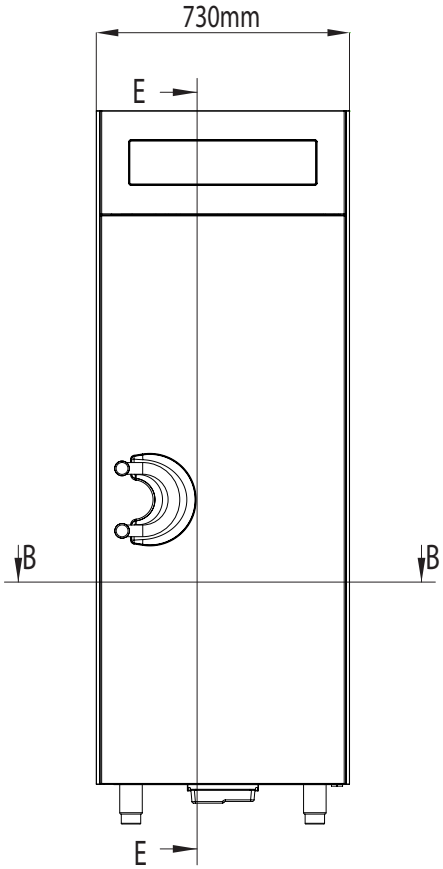
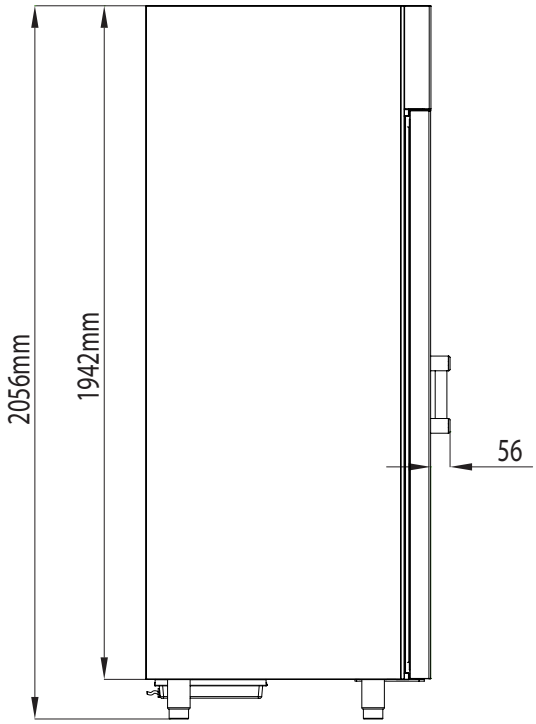
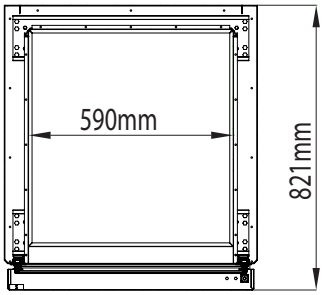


Fig. 4

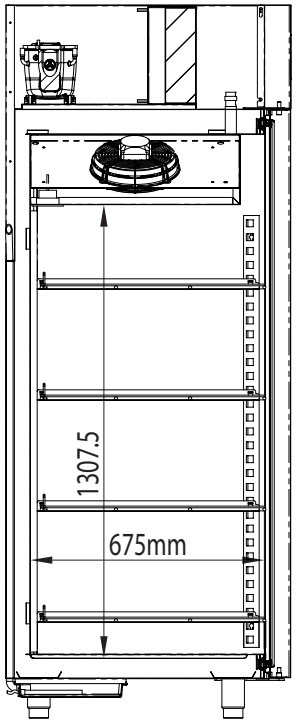
2.3. DIMENSIONAL DATA







B-B



E-E

2.4. AMBIENT TEMPERATURE AND AIR CIRCULATION

For air cooled refrigeration units, the air temperature in the place of operation must not exceed 30°C. Declared performance cannot be guaranteed if this temperature is exceeded.
The remote condensation units must be installed in special rooms or outdoors, protected against direct sunlight. If circumstances make it necessary, the installer must decide whether to provide a covering or shelter. Sufficient air circulation must however be ensured.

i For greater details ⏩ see **table 2.**

Table 2

MINIMUM AIR CIRCULATION		
AIR	**m^3/h**	638

Table 3

MAXIMUM WATER USE (when foreseen)		
Well water	**(l/h)**	119
Values referred to the declared condensation power at -10/+40°C in accordance with EN12900.		

2.5. COOLING POWERS

Table 4

Cooling yield [W]	Condensation power [W]
1172	1863
Declared values at T.evap=-10°C and T.cond.=+40°C. Superheating in accordance with EN12900.	

2.6. ELECTRICAL CONNECTION

Up the line from each unit it is obligatory to install an automatic circuit breaker for the all-pole/omnipolar disconnection of the power supply, in compliance with the laws in force in the Country of installation.

The power supply is to be carried to the electrical panel of each single unit, as per the data in **Table 5**.

- The electrical power cables must be properly sized for the units installed;
- The electrical cables must be placed and fastened in the cable passage, and laid suitably for the place of installation;
- Each wire must be inserted to the corresponding terminal.
- The earth wire must be correctly connected to an efficient earthing system.

⚠ ***The manufacturer declines any responsibility or guarantee obligations if damage occurs to the unit, persons or things due to installation that is incorrect and/or does not respect the laws in force.***

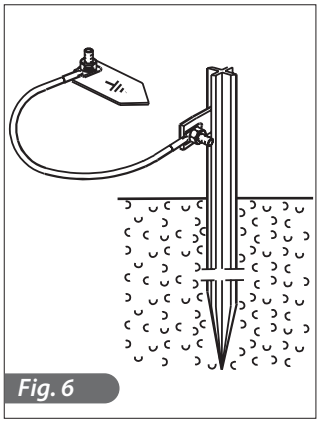


Fig. 6

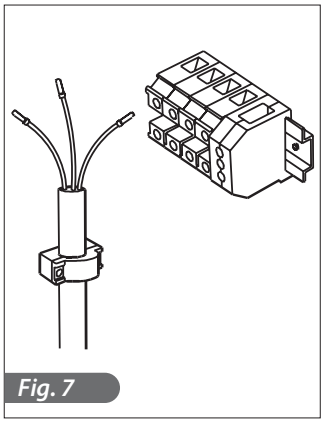


Fig. 7

Table 5

POWER SUPPLY			nominal POWER SUPPLY		defrosting ABSORPTION		POWER SUPPLY CABLE		REMOTE CONDENSING UNIT CABLES (if foreseen)	
Voltage (V)	Frequency (Hz)	Poles	Power (kW)	Current (A)	Power (kW)	Current (A)	Type	Section	Type	Section
230	50	1P+N+PE	0,96	5,5	1,9	8,9	FG7OR	3G1,5mm^2	FG7OR	2x1,5mm^2 + 3G2,5mm^2
230	60	1P+N+PE	1,1	6,3	2	9,6	FG7OR	3G1,5mm^2	FG7OR	2x1,5mm^2 + 3G2,5mm^2
200	50	2P+PE	0,94	5,7	1,8	9,8	FG7OR	3G1,5mm^2	FG7OR	2x1,5mm^2 + 3G2,5mm^2
200	60	2P+PE	1,1	6,4	2	10,5	FG7OR	3G1,5mm^2	FG7OR	2x1,5mm^2 + 3G2,5mm^2

NOTE: cable sized for a length of 7m with industrial voltage drop $\Delta V\% \leq 1\%$

2.7. REFRIGERATION CONNECTION

2.7.1. Installation at same level

General criteria that must be met for the installation of remote units:

1) Slope of pipes (Fig.8)

2) Tightening of brackets on insulated pipes.
For the quantity of brackets to apply on the refrigeration connecting lines of the remote unit ⏩ see **table 6**.

3) Hermetic welding (Fig.10).

4) Creation of vacuum (0.03mBar) in the connection pipes (delivery and suction). Unless otherwise specified, the condensing unit is charged with freon.

5) Check vacuum seal of pipes.

6) Opening of cut-off bibcocks on condensing unit.

7) Check for leaks.

8) Check of exact gas charge via the liquid flow indicator located on the condensing unit.

9) Checking the condensation water circulation and pressure (system with water condensation).

The criteria listed above are sufficient for installation at the same level (Fig.11)

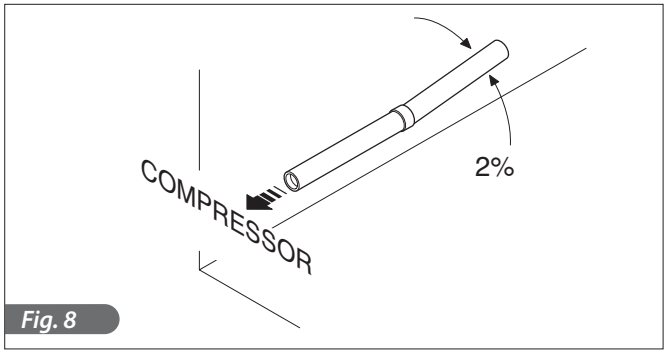


Fig. 8

Table 6

DISTANCE Cell -> Remote group	NUMBER OF BRACKETS
5 metres	2
10 metres	3
15 metres	5
20 metres	7
25 metres	8

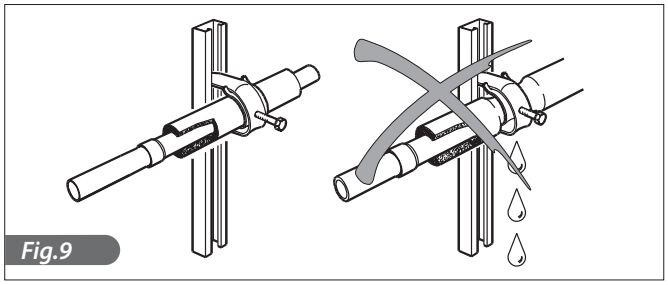


Fig.9

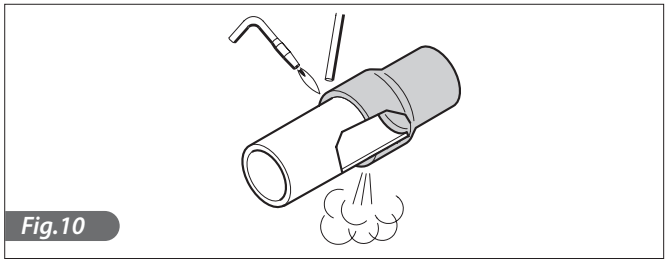


Fig.10

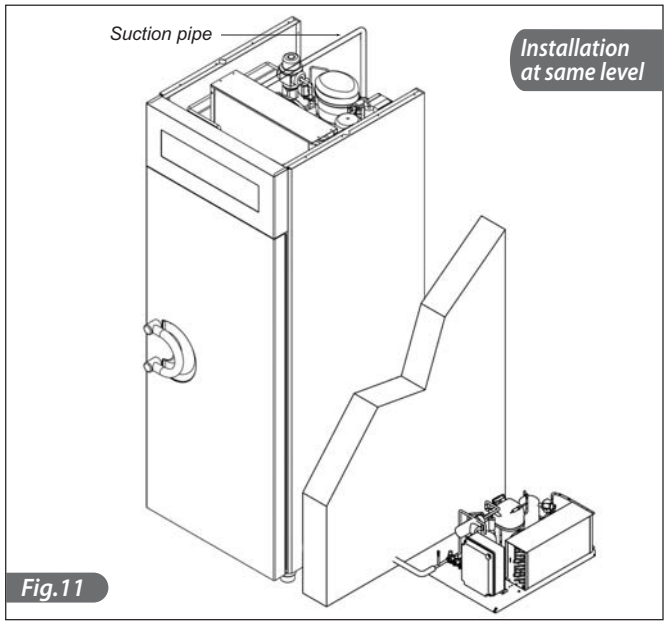


Fig.11

2.7.2. Installation at different levels

If the remote group is installed higher than the unit (fig. 13), it is necessary to fit a siphon at the beginning of each departure or upward section (a), at intervals of 1.8 metres of difference in level along the return pipe, and at every arrival (b).

If the remote unit is installed lower than the unit, siphons are not necessary (fig. 12).

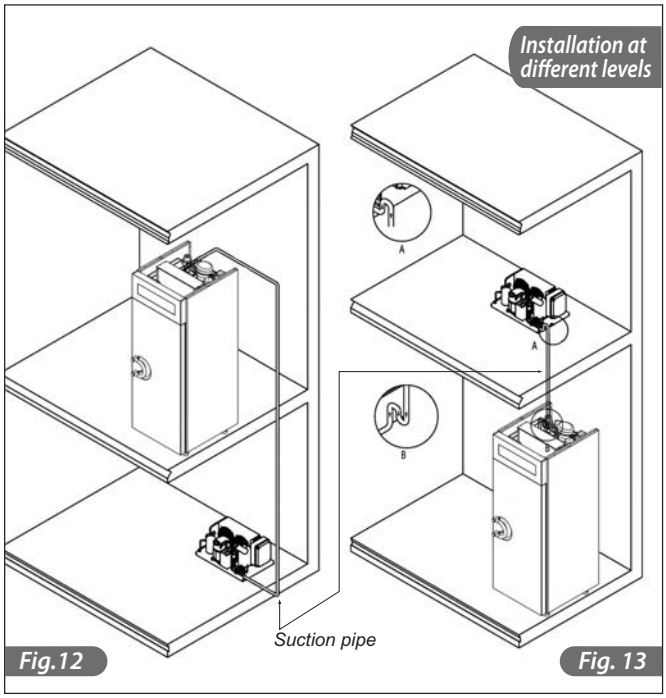


Fig.12 Fig. 13

2.7.3. Refrigeration connection of remote groups

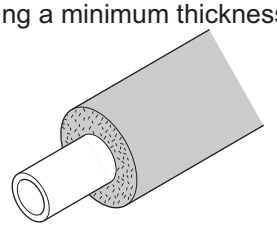
Diameters for appliance feed pipes are sized in accordance with the installation distance up to a maximum of 15 metres (⏩ see **table 7**).
For greater distances please consult the manufacturer.

Table 7

Delivery line Ø mm	Suction line Ø mm	Hot gas line Ø mm
8	10	8

Maximum pipe length: 15m

The insulation of suction and hot gas pipelines must be carried out using good quality insulators of the closed-cell type having a minimum thickness of 19 mm.



2.8. CONDENSATION DISCHARGE CONNECTION

The conserver is supplied with a supplied condensate water collection tray. A heater will provide for evaporation of the water contained in the tray.

2.9. CONNECTION OF WATER COOLED UNITS

- When testing (mains water), make sure the machine is at a standstill, that the water supply is ready and that water is not coming out of the condenser drain pipe; in this case, adjust the pressure valve until water coming out is completely stopped (Fig. 17).
- We suggest you install a gate valve and a viewable filter on the water delivery pipeline. The condenser water delivery and discharge pipes are indicated by special nameplates. Both fittings are threaded 3/4”F.
- See ***Table 3*** for maximum water consumption

CHARACTERISTICS OF THE LINE FOR WATER COOLED UNIT	
Maximum inlet pressure of water	1600 KPa
Minimum inlet pressure of water	50 KPa
Maximum inlet water temperature to ensure normal operation of the unit	25°C (well water)

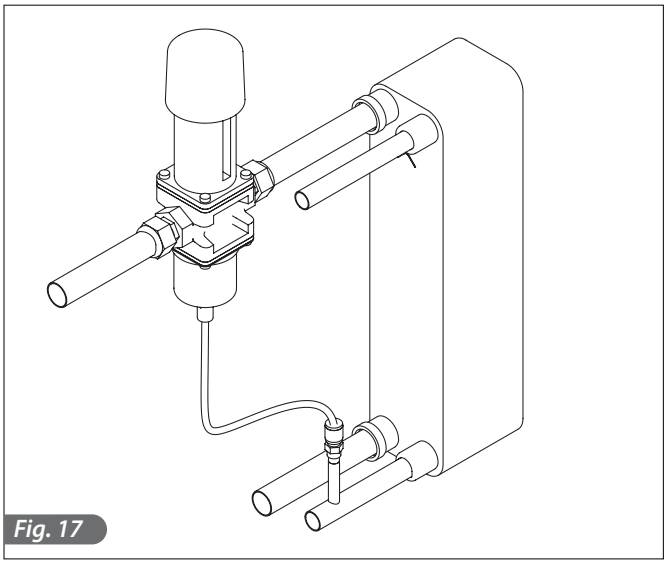


Fig. 17

2.10. NOTES FOR THE INSTALLER

Checking for correct installation and testing:

- Check for possible gas leaks on welded parts or joints made during installation.
- Check for proper insulation of pipes connecting the chiller with the remote condensing unit (when foreseen).
- Check electrical connection.
- Check power inputs.
- Check the standard pressures.
- Check water connection with the pressure valve adjustment during operation as well as proper water condensation circulation (when the condenser is at water).
- Run at least one complete conservation cycle (reach the set temperature), and a manual defrost cycle.

⚠ ***Instruct the customer on the exact utilisation of the chiller with specific reference to the use and requirements of that specific customer.***

⚠ ***Installation and commissioning must be carried out by authorized personnel.***

2.11. SAFETY AND CONTROL SYSTEMS

- Door microswitch (A): blocks operation of the fans in the cell when the door is opened
- Protection fuses (B): protect the circuits against short circuits and overloads.
- Fuse holders (C): contain the fuses and allow opening and disconnection of circuits.
- Electronic cards (D): based on acquired parameters, they control the various devices of the machine that are connected to them.
- Control of temperature in cell and end of defrosting (E): managed by the electronic card via probe NTC.

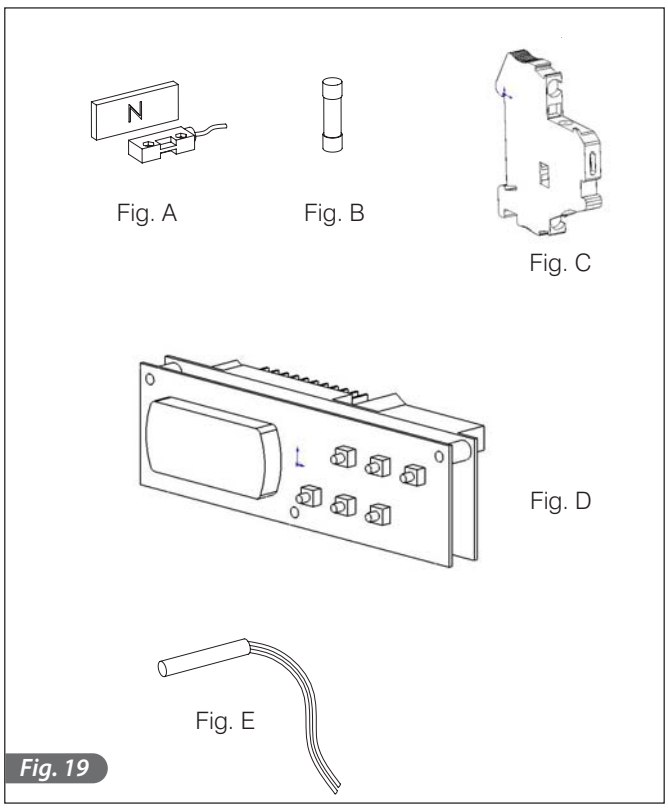


Fig. 19

2.12. R404A GAS SAFETY INFORMATION

• Identification of hazards
Exposure for long periods by inhalation can cause anaesthetic effects. Very high levels of exposure may cause anomalies in heartbeat and cause sudden death. If the product is nebulized or sprayed it can cause cold burns to the eyes and skin. It is dangerous for the ozone layer.

• First aid measures
Inhalation
Move the injured person away from the source of exposure to a warm place where he can rest. If necessary, administer oxygen. Practice artificial respiration if the person has stopped, or seems about to stop, breathing. In the event of cardiac arrest perform CPR. Call for medical assistance immediately.

Contact with the skin
Thaw the parts concerned using water.
Remove contaminated clothes.
Attention: in the event of cold burns, clothes can adhere to the skin. In case of contact with the skin, wash immediately and thoroughly with warm water. If symptoms occur (irritation or blisters) ask for medical assistance.

Contact with the eyes
Wash immediately with an eye-wash or clean water, keeping the eyelids apart for at least 10 minutes. Ask for medical advice.

Ingestion
Do not induce vomiting.
If the injured person is conscious, make him rinse his mouth out and drink 200-300 ml of water.
Request medical assistance immediately.

Further medical care
Treatment for symptoms and support therapy where indicated. Do not administer adrenalin or similar substances after exposure because of the risk of cardiac arrhythmia with the possibility of cardiac arrest.

• Fire-prevention measures
Non-flammable.
Thermal decomposition causes the emission of very toxic and corrosive vapours (hydrogen chloride, hydrogen fluoride). In the event of fire, use breathing apparatus and suitable protective clothes.

Fire extinguishers
Use extinguishers suitable for the type of fire.

• Toxicological information
Inhalation
High concentrations in the atmosphere can cause an anaesthetic effect and possible unconsciousness. Very high levels of exposure may cause anomalies in heartbeat and cause sudden death.
Even higher concentrations can cause suffocation due to reduced oxygen content in the air.

Contact with the skin
If the product is nebulized or sprayed it can cause cold burns to the eyes and skin. It does not seem to be dangerous if absorbed by the skin. Repeated and prolonged contact can cause loss of natural skin oils with consequent drying, chapping and dermatitis.

• Ecological information
It breaks down quite quickly in the lower atmosphere (troposphere). The products or decomposition have high dispersion features and thus have a low concentration.
It does not promote photochemical smog (i.e. it is not part of the volatile organic compounds -VOC- in compliance with the UNECE agreement).
Its ozone destruction potential (ODP) is 0.055 measured against a standard ODP of 1 for cfc11 (according to the uNeP definitions).
This substance is regulated by the Protocol of Montreal (1992 revision).
Product discharges into the atmosphere do not cause long-term water contamination.

• Disposal suggestions
The best solution is to collect and recycle the product. If this is not possible, it must be destroyed in a plant that is authorised and equipped to absorb and neutralize the acid gases and other toxic operating by-products.

• Measures to be followed in the event of accidental dispersion
Make sure that the person eliminating the dispersion is suitably protected (using special apparatus to protect the respiratory tract) while cleaning up spills.
If it is safe enough to do so, isolate the source of dispersion. If the dispersion is modest and ventilation is sufficient, simply let it evaporate.
For dispersion of large quantities:
- ventilate the area;
- contain the spilled material using sand, soil or other suitable absorbing material;
- prevent it from penetrating into drains, sewers, basements and construction excavations because the vapours can cause suffocation.

• Handling
Avoid inhalation of high concentrations of vapours. Concentrations in the atmosphere must be reduced to a minimum and kept at the lowest reasonably possible level, below the professional exposure limit.
The vapours are heavier than the air and for this reason it is possible that high concentrations form near ground level where ventilation is scarce. In these cases, ensure adequate ventilation and wear protective apparatus for the respiratory tract with a reserve supply of air. Avoid contact with open flames and hot surfaces because irritating and toxic products of decomposition may form. Avoid contact of the liquid with eyes/skin.

2.13. DISPOSAL OF THE MACHINE

Demolition and disposal of the machine must be carried out in accordance with standards currently in effect in the country of installation, especially concerning the refrigeration gas and lubrication oil of the compressor.

3. OPERATION

3.1. USE

The N'ICE conserver was designed for conservation of food products.
N'ICE can work at +15 / -25°C.

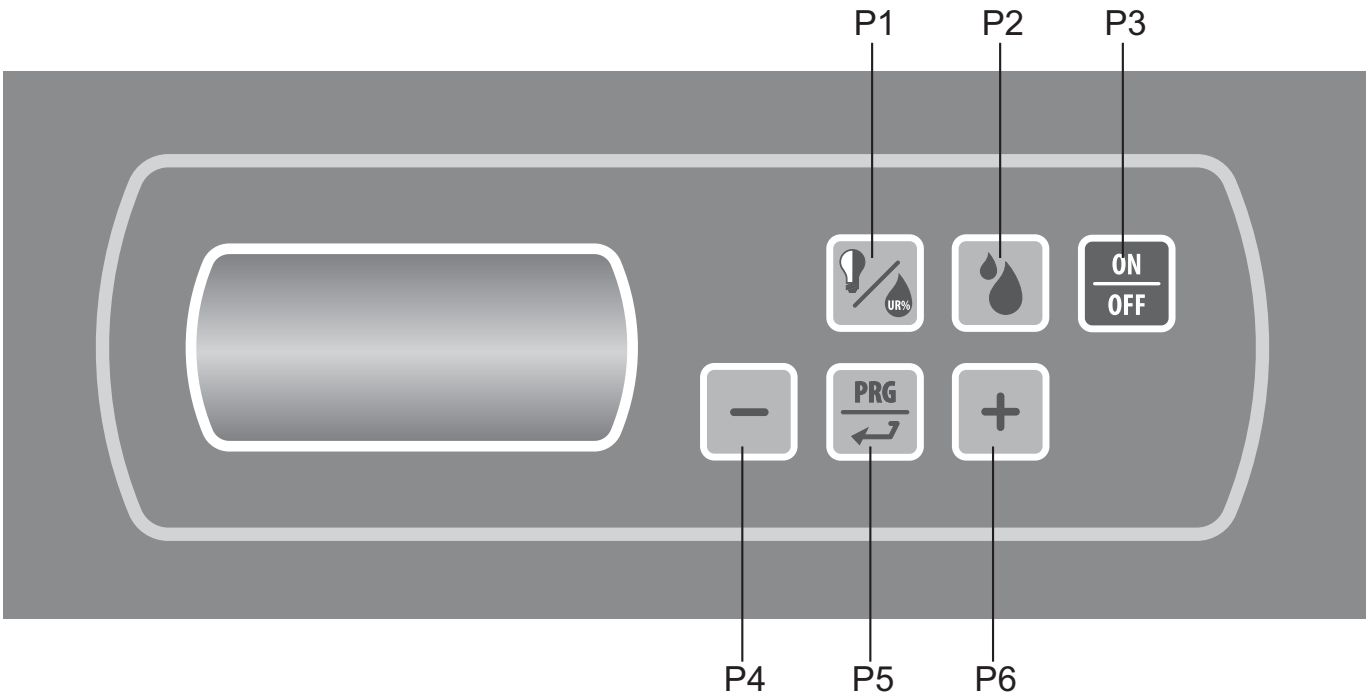
Especially:

• POSITIVE mode (3°C), suitable for the conservation of fresh products, or for brief periods, of cooked food;

• NEGATIVE Mode (-20°C), suitable for the conservation of frozen products also for long periods of time;

• CHOCOLATE Mode (14°C), suitable for the conservation of chocolate based products (for example pralines).

3.2. CONTROL PANEL



P1: Light/humidity key
P2: Manual defrost key
P3: ON/Stand By Key
P4: Value decrease key
P5: Programming Key
P6: Value increase key

DATE AND TIME ADJUSTMENT

Phase	Description
1	Press key P4  for 1 second
2	Through keys P4  or P6,  select "rtc" on the display
3	Press key P5  to confirm and access the clock setting menu. The indicator  will flash
4	Select the current year by pressing key P4  or P6  (last 2 digits, i.e. 2011 = 11)
5	Press key P5  to confirm and move on to the following setting. - YEAR (display: “YY 01”) - MONTH (display: “nn 01”) - DAY (display: “dd 01”) - TIME (display: “hh 01”) in 24 hour format - MINUTES (display: “nn 01”)
6	After setting the minutes, press key P5  to confirm and save the clock setting. "**rtc**" will appear on the display. The indicator  goes off.
7	Press key P3  to exit the menu.

3.3. DESCRIPTION AND FUNCTIONING

Conservation cycle

Phase	Description
1	With the conservation system in stand-by, select the operation mode. See paragraph common functions. ☞ Operation mode selection.
2	Press key P3  for 2 seconds to start up conserving. – The display will show the detected chamber temperature
3	**Change set temperature:** Press key P5  : – The indicator flashes  – The display shows the set time Through keys P4  and P6  change the setpoint – Do not press any key for 15 seconds or press key P5  to exit and save changes. – The indicator  stops flashing – The display will show the detected chamber temperature
4	**End conserving** Press the key P3  for 2 seconds – The display switches off ☞ Conservation system in stand-by. – The indicator  is turned on

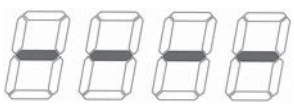
Common functions

Function	Description
Functioning mode selection.	Put the conserver in Stand-by by pressing key P3  . Press key P5  for 4 seconds. The display shows the set functioning mode. Through keys P4  and P6  set the desired functioning mode, where: POS = POSITIVE mode NEG = NEGATIVE mode CIOC = CHOCOLATE mode Press key P5  to confirm the data entered and exit the menu. If no key is pressed, after a pre-set time, one automatically exits the menu and the entered data is saved.
Humidity check (for POSITIVE or CHOCOLATE mode)	Press the key P1  for 4 seconds. Through keys P4  and P6  set the relative humidity level desired, where: Ur1= low humidity Ur2= average humidity Ur3= high humidity Press key P1  to confirm the data entered and exit the menu. If no key is pressed, after a pre-set time, one automatically exits the menu and the entered data is saved.
Overcooling	Press key P6  for 4 seconds to start up the Overcooling cycle.
Manual defrost	Press key P2  for 4 seconds to start up a defrost cycle.
Switching on of cell light	Upon door opening, the light inside the cell is automatically switched on. With the light off, press key P1  to switch on the light inside the cell. With the light on, press key P1  to switch off the light inside the cell.
Key locking	To block the functioning of the keys: Press keys P3  +P4  simultaneously for 1 second The display shows "**Loc**" for 1 second. To unlock the functioning of the keys: Press keys P3  +P4  simultaneously for 1 second The display shows "**UnL**" for 1 second. .

Signals

Indicator	Meaning	
	Steady	Flashing
	Compressor command	Change temperature set point Compressor run requested but pending safety time end
	Defrosting in progress	Defrosting in progress but pending compressor safety time end
	Evaporating fan command	During evaporating fan stop time
	Internal cell light manually switched on through pressing of key P1 	Internal cell light switched on for door opening
	Liquid line electrovalve command	NOT USED
	NOT USED	Date and time change in progress
HACCP	All the information regarding HACCP alarms have been viewed	At least one new HACCP alarm was recorded
	NOT USED	NOT USED
	NOT USED	NOT USED
	OverCooling cycle in progress	NOT USED
	Alarm or error is in progress	NOT USED
°C	The temperature measure unit is °C	NOT USED
°F	The temperature measure unit is °F	NOT USED
	The instrument is in standby	NOT USED

Indications

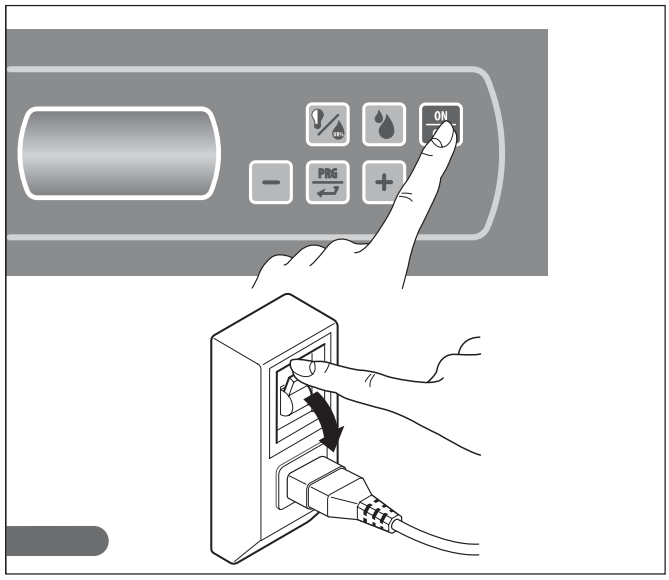
Display	Meaning
	Key lock activated
	Running set point locked
	Function required not available

3.4. SHUTDOWN MODES

In case of emergency, to switch off the conserver, press key P3 ON/OFF for 2 seconds and disconnect power supply.

ATTENTION!

By pressing key P3 ON/OFF with machine running, the conserver is placed in Stand-by: all the commands are removed from the various components; the conserver IS NOT DISCONNECTED FROM POWER SUPPLY.



3.5. SUGGESTIONS FOR USE

Before putting the machine in operation, it is necessary to carefully clean the inside of the cell (⏩ see par. 4.2)

3.5.1. Pre-cooling

Before using the conservation unit for the first time, or after a long period of disuse, pre-cool the cell by running the machine empty until the set working temperature is reached.

To obtain good performance from the machine without altering foods, we suggest the following:

- do not place hot foods or liquids in the cell without a cover.
- arrange products so as to favour cold air circulation throughout the cell.
- avoid prolonged and frequent door opening.

3.5.2. Loading the machine

Maximum load per shelf: 10 Kg

Take care that there is enough space between pans, so as to allow sufficient air circulation.

If the machine is not fully loaded, spread the pans and the load evenly throughout the entire height, avoiding concentrations.

When using the N'ICE in positive mode (20÷0°C), run the conservation unit empty for at least four hours so as to work at the desired relative humidity.

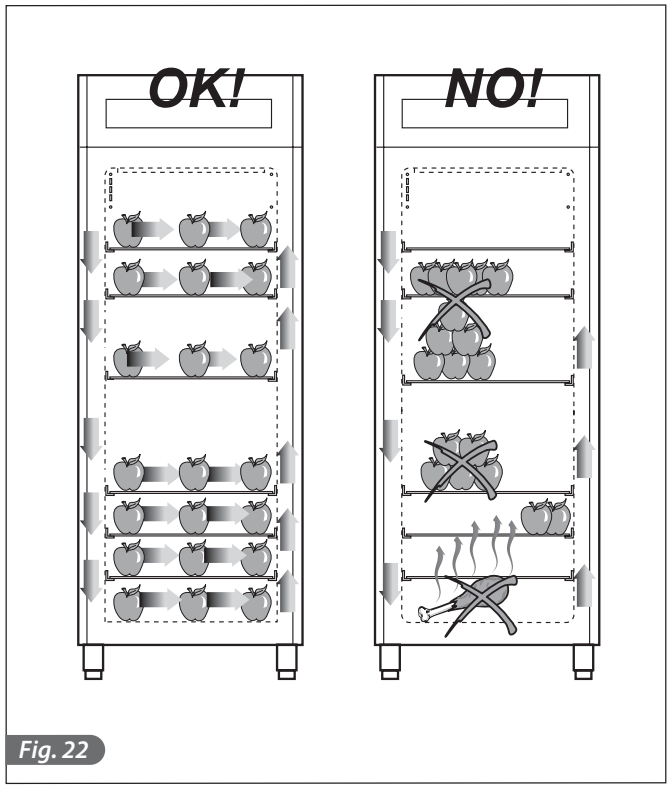


Fig. 22

4. MAINTENANCE

4.1. ORDINARY MAINTENANCE

The information and instructions contained in this chapter are intended for all personnel who work with the machine: the user, the maintenance technician, and also non-specialised personnel.

Basic safety guidelines

To perform cleaning and maintenance in complete safety, please refer to the standards of safety in par. 1.5 (⏭Fig.23):

- do not touch or work with the machine with damp hands or feet
- do not insert screwdrivers, kitchen utensils or other objects between the guards and moving parts
- before cleaning or carrying out routine maintenance, disconnect the machine from the mains by turning the main switch off and removing the plug
- do not pull on the power cord to disconnect the machine from the power supply

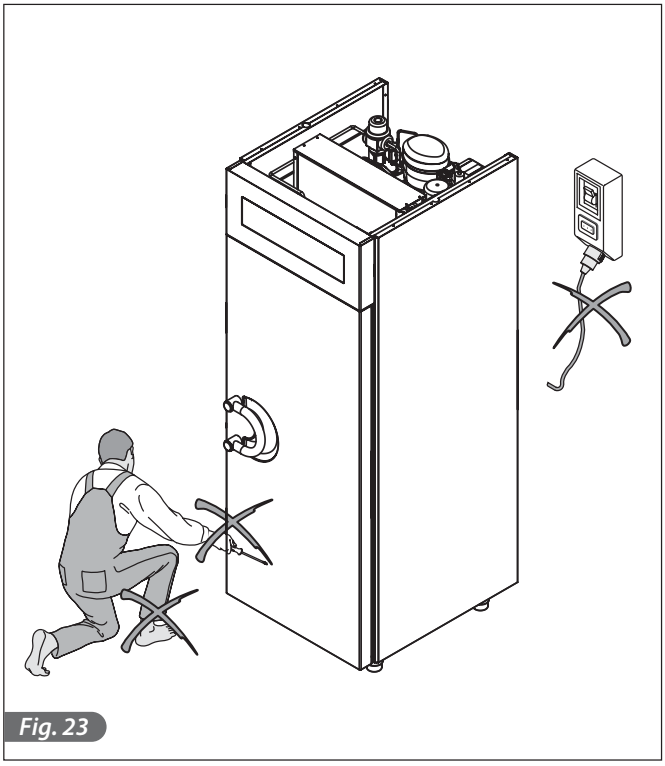


Fig. 23

⚠ It is strictly forbidden to remove guards and safety devices to effect routine maintenance operations. The manufacturer declines any responsibility for accidents caused by not observing the instructions above.

☝ Before putting the machine in operation, it is necessary to carefully clean the inside of the cell as indicated in paragraph 4.2.

4.2. CELL CLEANING

To ensure hygiene and to protect the quality of the foods, the inside of the cell must be cleaned frequently, based on the types of conserved foods.
We recommend weekly cleaning.
The shape of the cell and of the interior components make it possible to clean it using a cloth or sponge.
Use water and neutral, non-abrasive detergents.
The cell can be rinsed using a cloth or sponge dipped in water or a moderate jet of water (having a pressure that does not exceed the pressure of the system).

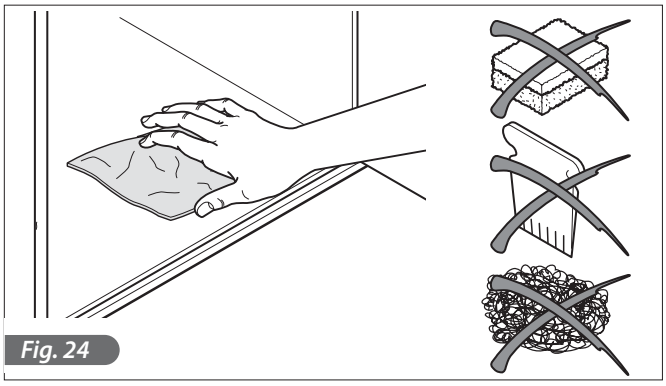


Fig. 24

⚠ Do not scrape the surface using sharp or abrasive objects.

⚠ Do not use abrasive products, solvents or thinners.

☝ When cleaning, always wear protective gloves.

4.3. CLEANING THE CONDENSER

In order for the conservation unit to work correctly and efficiently, the air condenser must be kept clean to allow free airflow. This operation should be done at least every 30 days. This can be done by using a non-metal brush to remove all the dust and lint from the condenser fins. We suggest you use a vacuum cleaner to prevent the dust from going into the environment. If there are any greasy deposits, use a brush soaked in alcohol.

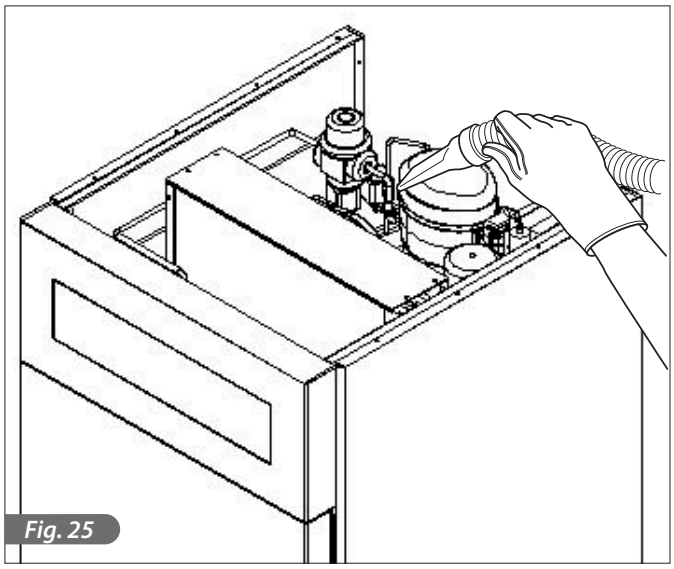


Fig. 25

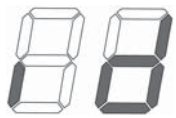
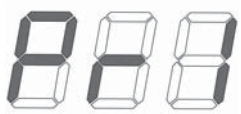
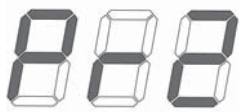
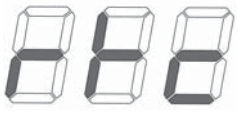
⚠ Do not scrape the surface using sharp or abrasive objects.

⚠ Always use protective gloves, glasses and masks to protect the respiratory tract during cleaning.

4.4. FAULT SEARCH

The machines' electronic control is supplied with a sound and visual signal system which signals the presence of an alarm; **press a key to silence the sound alarm.**

Diagnostics managed by the electronics:

Display	Meaning
	Minimal temperature (HACCP alarm)
	Maximum temperature (HACCP alarm)
	Open door (HACCP alarm)
	No voltage (HACCP alarm)
	Defrosting ended due to maximum duration
	Faulty chamber probe
	Faulty evaporator probe
	Clock error

Diagnostics NOT managed by the electronics:

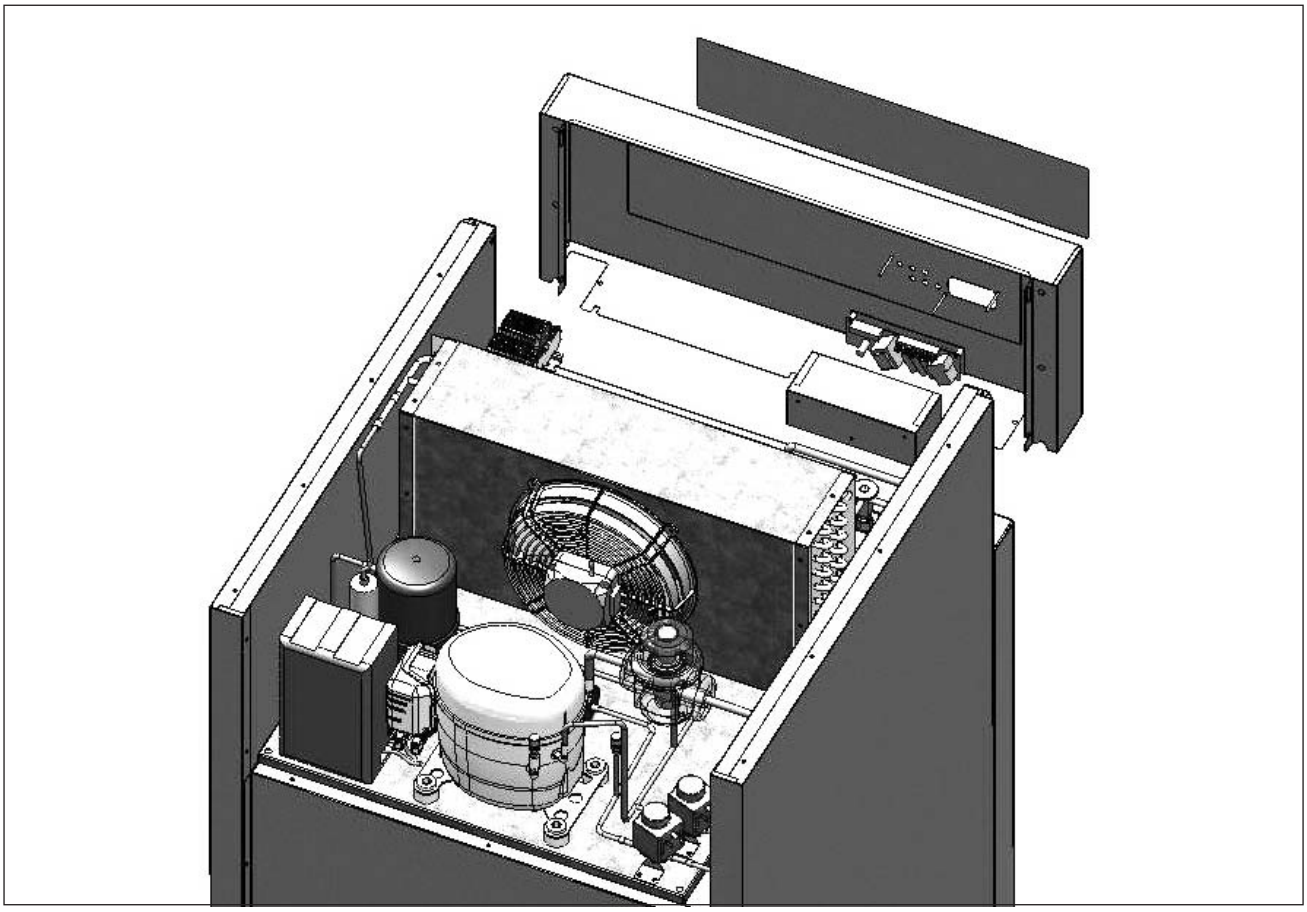
MALFUNCTION	POSSIBLE CAUSE	POSSIBLE SOLUTION
The front card of the cell does not turn on	No power supply	Check the connection to the electrical line
	Intervention of protection fuses	Replacement of fuses by an authorized technician
The cell fans do not run	No power supply	Check the connection to the electrical line
	Faulty fan	Technician required to replace fan
	Faulty card	Technician required to replace card
The compressor does not work	No power supply	Check the connection to the electrical line
	Intervention of internal clixon due to overload	Intervention by a technician
	No consent from electronic card	Technician required to replace electronic card
The compressor runs but does not cool the cell	No refrigerant gas	Intervention by a technician
	Solenoid valve faulty	Intervention by a technician
	Condenser dirty	Clean condensing coil
	Liquid line solenoid valve faulty	Technician required to replace solenoid valve or bobbin
	Defrost line solenoid valve faulty	Technician required to replace solenoid valve or bobbin
The condenser fan does not work	No power supply	Check the connection to the electrical line
	Fan faulty	Technician required to replace fan
	No electronic board consent	Intervention of a technician to replace the electronic card
No evaporator defrost	Incorrect programming of defrost cycles	Check programming of defrost cycles
	Solenoid valve or bobbin of defrost line faulty	Technician required to replace solenoid valve or bobbin

4.5. SPECIAL MAINTENANCE

The information and instructions contained in this paragraph are for the exclusive use of specialized personnel who are authorized to intervene on the electronic and refrigeration components of the machine.

4.5.1. How to access the electronic cards and the electrical panels.

The electronic cards and the electrical control boards are located in the top part of the machine, protected by a plate. Remove the electric power supply before intervening for maintenance. Then remove the steel cover, unscrewing the locking screws.
At the end of maintenance operations, accurately reassemble the covers and lock the locking screws.



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