

**TAVOLI REFRIGERATI E FREEZER CON CONTROLLO ELETTRONICO  
REFRIGERATED AND FREEZER COUNTERS WITH ELECTRONIC CONTROL  
TABLES RÉFRIGÉRÉES ET FREEZERS À CONTRÔLE ÉLECTRONIQUE  
MESAS REFRIGERADAS Y CONGELADOR CON CONTROL ELECTRÓNICO**

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PART NO. **595R 001 01**  
VERSION 2 2006.11

**INSTALLATION DIAGRAM  
SCHEMA D'INSTALLAZIONE**

**SCHÉMA D'INSTALLATION  
DIAGRAMA DE INSTALACIÓN**

**TAVOLO REFRIGERATO 2 VANI CON ALZATINA  
2-COMPARTMENT REFRIGERATED COUNTER WITH  
SHOULDER  
TABLE RÉFRIGÉRÉE 2 COMPARTIMENTS AVEC BORD  
REHAUSSÉ  
MESA REFRIGERADA DE 2 COMPARTIMENTOS CON  
COPETE**

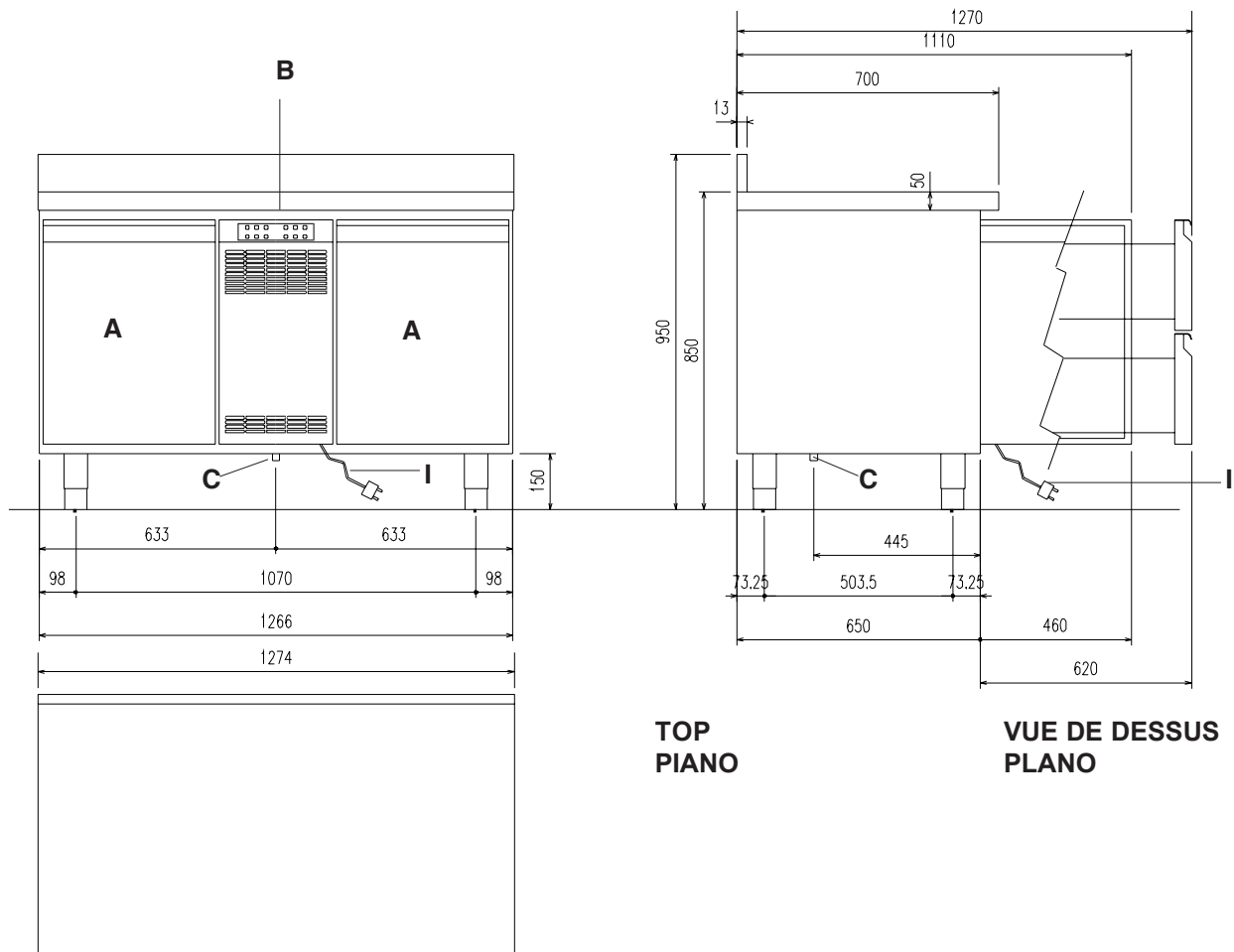
**TAVOLO FREEZER 2 VANI CON ALZATINA  
2-COMPARTMENT FREEZER COUNTER WITH  
SHOULDER  
TABLE RÉFRIGÉRÉE 2 COMPARTIMENTS AVEC BORD  
REHAUSSÉ  
MESA CONGELADOR DE 2 COMPARTIMENTOS CON  
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**FRONT VIEW  
VISTA FRONTALE**

**VUE DE FACE  
VISTA FRONTAL**

**SIDE VIEW  
VISTA LATERALE**

**VUE LATÉRALE  
VISTA LATERAL**



**USA**

- A = MODULAR COMPARTMENT DESIGNED FOR SOLID DOORS (WIRE SHELVES IN CELL) OR DRAWER UNIT
- B = MODULAR COMPARTMENT DESIGNED FOR REFRIGERATING UNIT OR FREEZER
- C = OUTLET FOR DRAINING OF LIQUIDS FROM CELL, DIAMETER 0,69"/17,5 mm.
- I = POWER SUPPLY CABLE, LENGTH 131,10"/3330 mm, SCHUKO TYPE PLUG

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- A = COMPARTIMENT MODULAIRE PRÉDISPOSÉ POUR PORTES NORMALES (CLAYETTES EN CELLULE) OU BLOCTIROIRS
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- A = VANO MODULARE PREDISPOSTO PER PORTE CIECHE (GRIGLIE PORTA VIVANDE IN CELLA) O CASSETTIERA
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DIAGRAMA DE INSTALACIÓN**

**TAVOLO REFRIGERATO 3 VANI CON ALZATINA  
3-COMPARTMENT REFRIGERATED COUNTER WITH  
SHOULDER  
TABLE RÉFRIGÉRÉE 3 COMPARTIMENTS AVEC BORD  
REHAUSSÉ  
MESA REFRIGERADA DE 3 COMPARTIMENTOS CON  
COPETE**

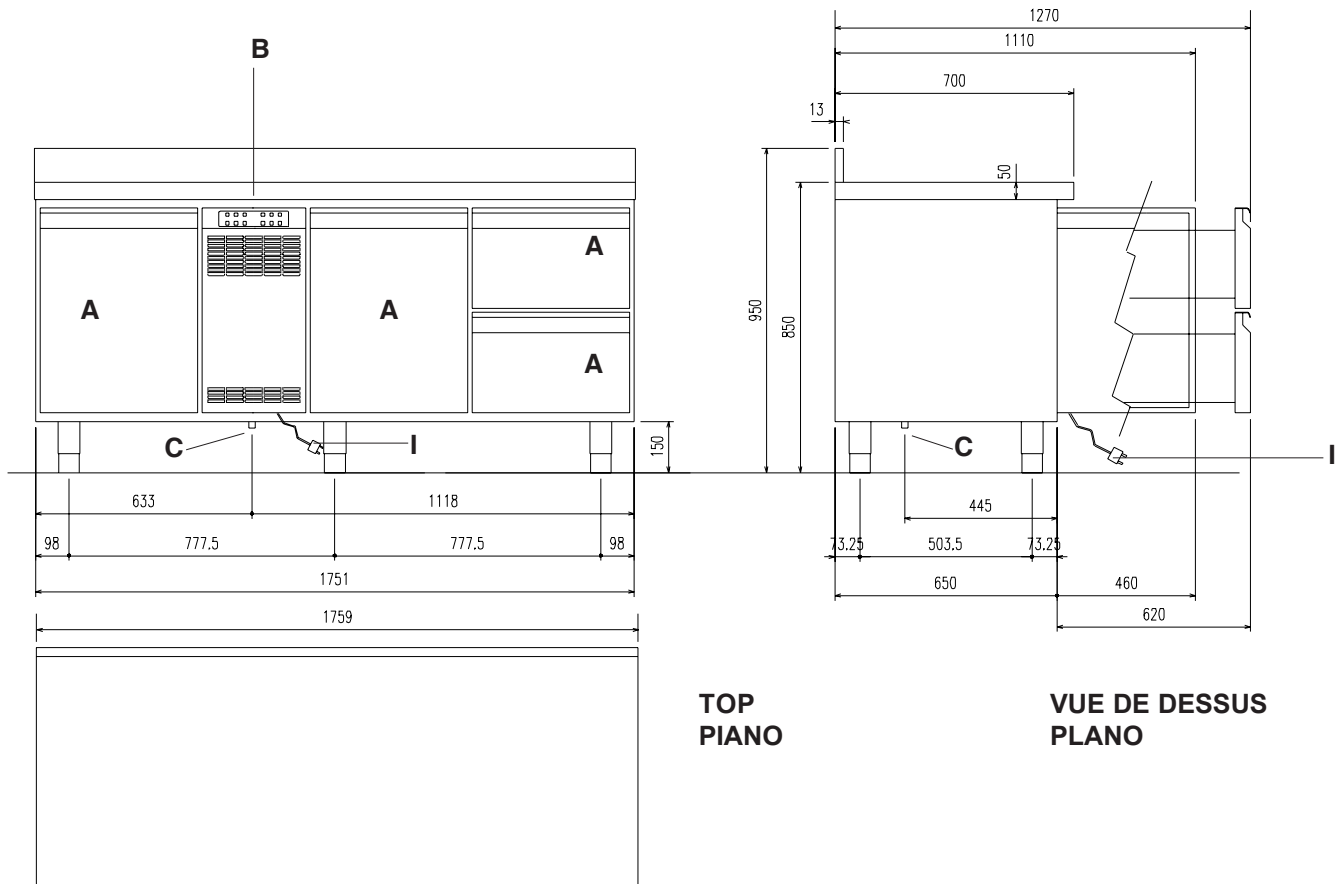
**TAVOLO FREEZER 3 VANI CON ALZATINA  
3-COMPARTMENT FREEZER COUNTER WITH  
SHOULDER  
TABLE RÉFRIGÉRÉE 3 COMPARTIMENTS AVEC BORD  
REHAUSSÉ  
MESA CONGELADOR DE 3 COMPARTIMENTOS CON  
COPETE**

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**SCHÉMA D'INSTALLATION  
DIAGRAMA DE INSTALACIÓN**

**TAVOLO REFRIGERATO 4 VANI CON ALZATINA  
4 COMPARTMENT REFRIGERATED COUNTER WITH  
SHOULDER**

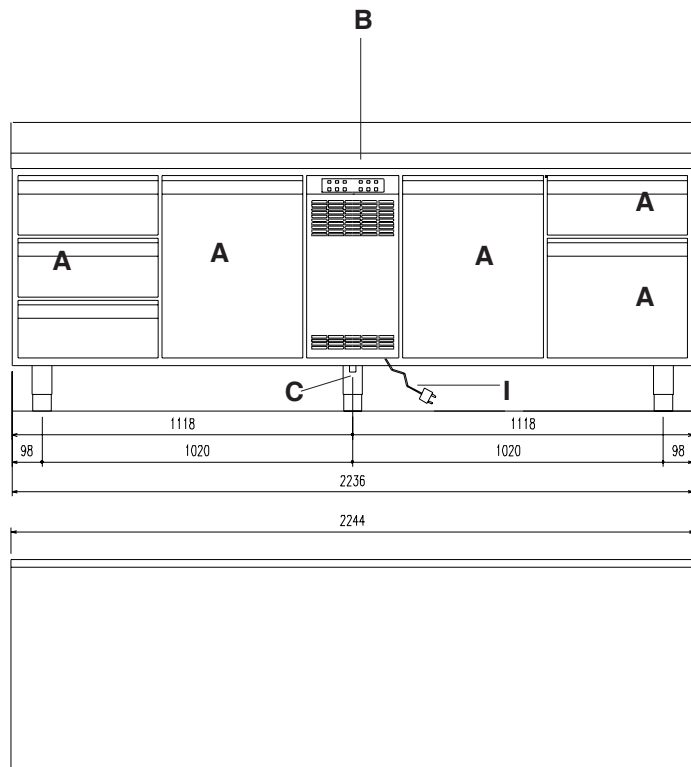
**TABLE RÉFRIGÉRÉE 4 COMPARTIMENTS AVEC BORD  
REHAUSSÉ  
MESA REFRIGERADA DE 4 COMPARTIMENTOS CON  
COPETE**

**FRONT VIEW  
VISTA FRONTALE**

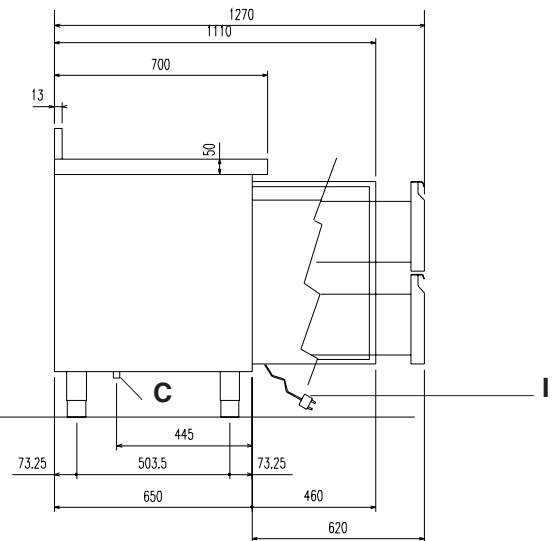
**VUE DE FACE  
VISTA FRONTAL**

**SIDE VIEW  
VISTA LATERALE**

**VUE LATÉRALE  
VISTA LATERAL**



**TOP  
PIANO**



**VUE DE DESSUS  
PLANO**

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PANNEAU DE COMMANDE VERSION "RÉFRIGÉRATEUR"

PANEL DE CONTROL VERSIÓN "FRIGORÍFICO"

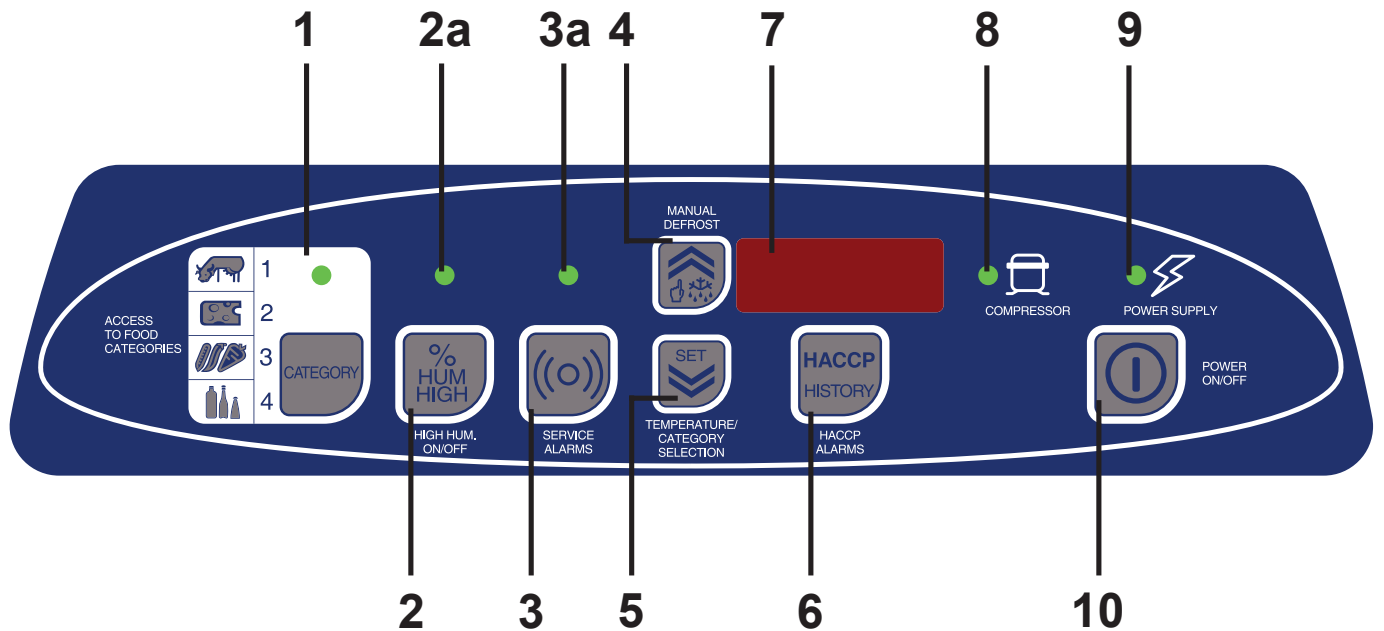


Fig.1

**USA**

- 1 - Access to button for food categories
- 2 - High humidity ON/OFF button
- 2a - High humidity light
- 3 - Service alarms button
- 3a - Service alarms warning light
- 4 - Top button: manual defrost
- 5 - Bottom button: Temperature setting / Category selection
- 6 - HACCP alarms button
- 7 - Display
- 8 - Compressor status light
- 9 - Power status light
- 10 - ON/OFF button

**FR**

- 1 - Accès au bouton pour les catégories d'aliments
- 2 - Bouton ON/OFF humidité élevée
- 2a - Voyant humidité élevée
- 3 - Bouton alarmes de service
- 3a - Voyant alarmes de service
- 4 - Bouton supérieur : dégivrage manuel
- 5 - Bouton inférieur : Réglage température / Sélection catégorie
- 6 - Bouton alarmes HACCP
- 7 - Afficheur
- 8 - Voyant état compresseur
- 9 - Voyant état alimentation
- 10 - Bouton ON/OFF

**IT**

- 1 - Accesso al pulsante per le categorie degli alimenti
- 2 - Pulsante ON/OFF elevata umidità
- 2a - Spia elevata umidità
- 3 - Pulsante allarmi di servizio
- 3a - Spia allarmi di servizio
- 4 - Pulsante superiore: sbrinamento manuale
- 5 - Pulsante inferiore: Impostazione temperatura / Selezione categoria
- 6 - Pulsante allarmi HACCP
- 7 - Display
- 8 - Spia stato compressore
- 9 - Spia stato alimentazione
- 10 - Pulsante ON/OFF

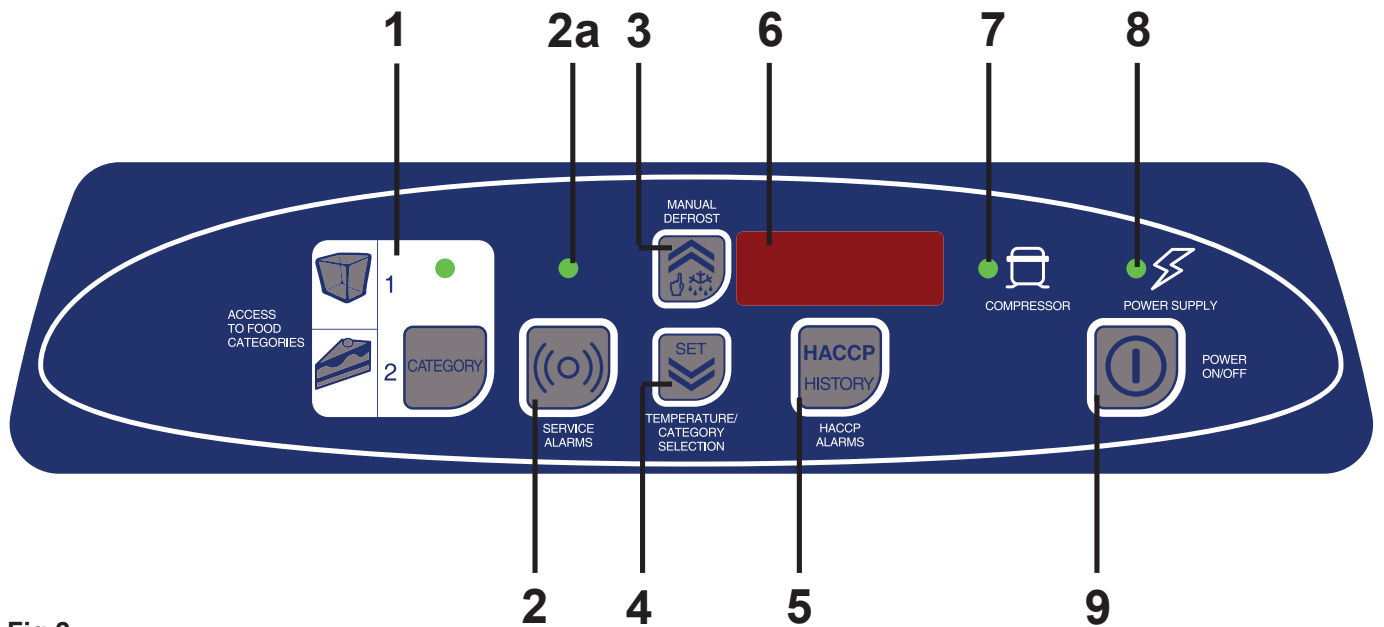
**ES**

- 1 - Acceso a la tecla para las diferentes categorías de alimentos
- 2 - Tecla ON/OFF de humedad elevada
- 2a - Indicador de humedad elevada
- 3 - Tecla de alarmas de servicio
- 3a - Indicador de alarmas de servicio
- 4 - Tecla superior: descongelación manual
- 5 - Tecla inferior: ajuste de temperatura/ selección de categoría
- 6 - Tecla de alarmas HACCP
- 7 - Pantalla
- 8 - Indicador de estado del compresor
- 9 - Indicador de estado de la alimentación
- 10 - Tecla ON/OFF



**“FREEZER” VERSION CONTROL PANEL  
PANNELLO DI CONTROLLO VERSIONE  
“CONGELATORE”**

**PANNEAU DE COMMANDE VERSION “CONGÉLATEUR”  
PANEL DE CONTROL VERSIÓN “CONGELADOR”**



**Fig.2**

**USA**

- 1 - Access to button for food categories
- 2 - Service alarms button
- 2a - Service alarms warning light
- 3 - Top button: manual defrost
- 4 - Bottom button: Temperature setting / Category selection
- 5 - HACCP alarms button
- 6 - Display
- 7 - Compressor status light
- 8 - Power status light
- 9 - ON/OFF button

**FR**

- 1 - Accès au bouton pour les catégories d'aliments
- 2 - Bouton alarmes de service
- 2a - Voyants alarmes de service
- 3 - Bouton supérieur : dégivrage manuel
- 4 - Bouton inférieur : Réglage température / Sélection catégorie
- 5 - Bouton alarmes HACCP
- 6 - Afficheur
- 7 - Voyant état compresseur
- 8 - Voyant état alimentation
- 9 - Bouton ON/OFF

**IT**

- 1 - Accesso al pulsante per le categorie degli alimenti
- 2 - Pulsante degli allarmi di servizio
- 2a - Spie allarmi di servizio
- 3 - Pulsante superiore: sbrinamento manuale
- 4 - Pulsante inferiore: Impostazione temperatura / Selezione categoria
- 5 - Pulsante allarmi HACCP
- 6 - Display
- 7 - Spia stato compressore
- 8 - Spia stato alimentazione
- 9 - Pulsante ON/OFF

**ES**

- 1 - Acceso a la tecla para las diferentes categorías de alimentos
- 2 - Tecla de las alarmas de servicio
- 2a - Indicadores de las alarmas de servicio
- 3 - Tecla superior: descongelación manual
- 4 - Tecla inferior: ajuste de temperatura/ selección de categoría
- 5 - Tecla de alarmas HACCP
- 6 - Pantalla
- 7 - Indicador de estado del compresor
- 8 - Indicador de estado de la alimentación
- 9 - Tecla ON/OFF

**CATEGORIES: TEMPERATURE AND HUMIDITY SETTING**  
**CATEGORIE: TEMPERATURA E IMPOSTAZIONE DELL'UMIDITA'**

**CATÉGORIES: TEMPÉRATURE ET PROGRAMMATION DE L'HUMIDITÉ**  
**CATEGORÍAS: TEMPERATURA Y CONFIGURACIÓN DE LA HUMEDAD**

**REFRIGERATOR**  
**VERSIONE A TEMPERATURA NEGATIVA**

**VERSION À TEMPÉRATURE NÉGATIVE**  
**VERSIÓN DE TEMPERATURA NEGATIVA**





			Temp. °C	Humidity
1		Pork & beef meat	0	High
2		Cheese, salted meat	4	Low
3		Vegetables & fruit	6	High
4		Drinks	8	Low

Fig.3

**USA**

- 1 - Poultry and game
- 2 - Red meats
- 3 - Cheeses and charcuterie
- 4 - Fruit and vegetables
- 5 - Drinks

**FR**

- 1 - Volailles et gibiers
- 2 - Viandes rouges
- 3 - Fromages et saucisses
- 4 - Légumes et fruits
- 5 - Boissons

**IT**

- 1 - Pollame e selvaggina
- 2 - Carni rosse
- 3 - Formaggi e salumi
- 4 - Verdura e frutta
- 5 - Bevande

**ES**

- 1 - Pollo y salvajina
- 2 - Carnes rojas
- 3 - Quesos y embutidos
- 4 - Verdura y fruta
- 5 - Bebidas

**FREEZER**  
**VERSIONE A BASSA TEMPERATURA**

**VERSION À BASSE TEMPÉRATURE**  
**VERSIÓN DE BAJA TEMPERATURA**



			Temp. °C	Humidity
1		Frozen food	-18	=
2		Ice cake	-22	=

Fig.4

**USA**

- 1 - Frozen foods
- 2 - Frozen cakes/gateaux

**FR**

- 1 - Aliments congelés
- 2 - Gâteaux glacés

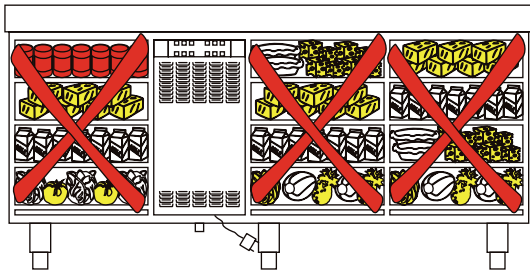
**IT**

- 1 - Cibi congelati
- 2 - Torte gelato

**ES**

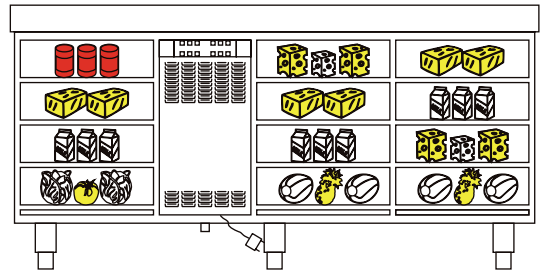
- 1 - Comidas congeladas
- 2 - Tortas/helado

**INCORRECT DISTRIBUTION OF FOOD**  
**CARICO NON CORRETTO DEGLI ALIMENTI**  
**CHARGEMENT DES ALIMENTS INCORRECT**  
**CARGA INCORRECTA DE LOS ALIMENTOS**



**Fig.5**

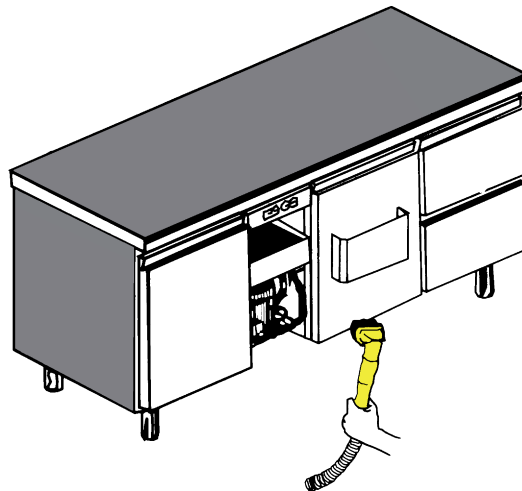
**CORRECT DISTRIBUTION OF FOOD**  
**CARICO CORRETTO DEGLI ALIMENTI**  
**CHARGEMENT DES ALIMENTS CORRECT**  
**CARGA CORRECTA DE LOS ALIMENTOS**



**Fig.6**

**CLEANING OF THE CONDENSER**  
**PULIZIA PERIODICA DEL CONDENSATORE**

**NETTOYAGE PÉRIODIQUE DU CONDENSEUR**  
**LIMPIEZA PERIÓDICA DEL CONDENSADOR**



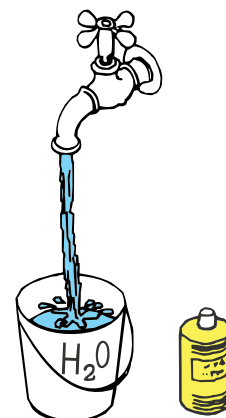
**Fig.7**

**CLEANING THE CABINET HOUSING AND ACCESSORIES**  
**PULIZIA DEL MOBILE E DEGLI ACCESSORI**

**NETTOYAGE DE L'APPAREIL ET DES ACCESSOIRES**  
**LIMPIEZA DEL ARMARIO Y ACCESORIOS**



**Fig.8**



**Fig.9**

FUNCTIONAL SPACES  
SPAZI FUNZIONALI

ESPACES FONCTIONNELS  
ESPACIOS FUNCIONALES

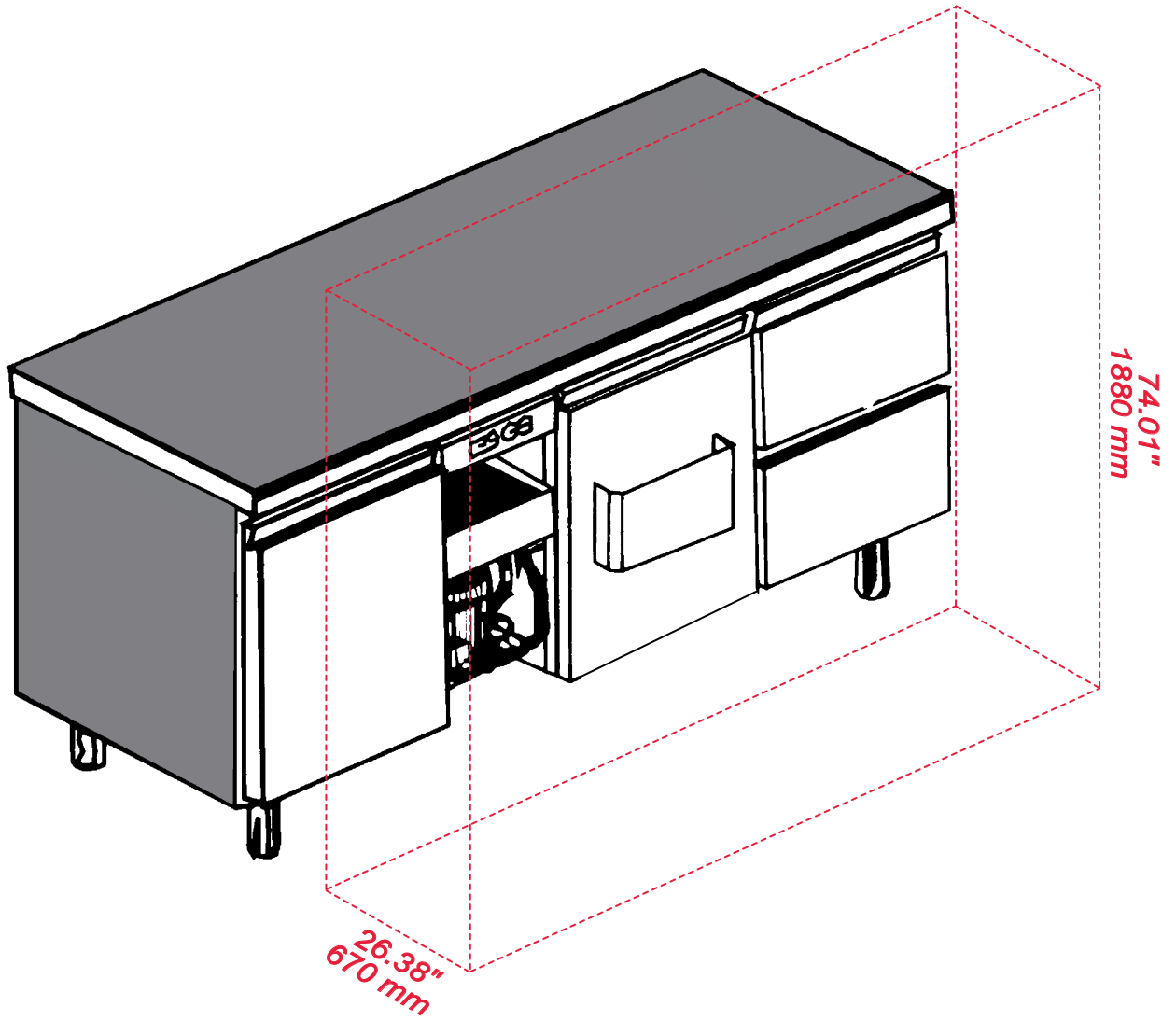


Fig.10

06:41	*** Defrost END		
23:41			5
23:31			5
23:21			5
23:11			5
23:01	*** Defrost START		
22:51			5
End:		11/03/2001	22:35
Start:		11/03/2001	22:32
**** POWER FAIL ****			
22:31			5
22:28			5
			°C
time			Tcell
	11/03/2002	22:27	
22:26			
22:21			
22:16			5
22:11			5
22:06			5
22:01			5
21:56			5
21:51			5
21:46			5
21:41			5
21:36			5
21:31	*** Door opened OFF		
21:26			5
21:21	*** Door opened ON		
21:16			5
21:11			5
21:06	*** High T cell OFF		
21:01			17
20:56			17
20:51			17
20:46	*** High T cell ON		
20:41			5
20:36			5
20:31			5
			°C
time			Tcell
	11/03/2002	20:31	

} Allarme di servizio di tipo "b"

} ALLARME DI HACCP

ON MACCHINA

Fig.11



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## PRECAUTIONS

**To reduce the risk of fire, electric shock or injury during use of the appliance, follow these basic precautions, with particular attention to the following:**

- Read all instructions before using the appliance.
- This Manual does not cover every possible condition and situation that may occur. Use common sense and caution when installing, operating and servicing this appliance.
- **FOR YOUR SAFETY DO NOT STORE OR USE GASOLINE OR OTHER FLAMMABLE VAPORS AND LIQUIDS IN THE VICINITY OF THIS OR ANY OTHER APPLIANCE.**
- The installation of this unit must comply with the local and national regulations on plumbing, hygiene, safety and good trade practices.
- **BEFORE CARRYING OUT ANY TECHNICAL INTERVENTION, DISCONNECT THE POWER SUPPLY AND PLACE A RED SIGN ON THE SWITCH INDICATING WORK ON THE CIRCUIT.**
- **IMPORTANT:** CONTACT THE AUTHORIZED TECHNICAL SERVICE COMPANY FOR CARRYING OUT MAINTENANCE AND REPAIRS.
- **IMPORTANT:** The use of non-original parts relieves the manufacturer of all liability and invalidates any warranty.
- **IMPORTANT:** The Manufacturer reserves the right to change the characteristics of the equipment presented in this handbook, at any time without notice.
- **IMPORTANT:** The appliance warranty is not valid if the appliance has not been installed, started and demonstrated under the supervision of an installer authorized by the factory.
- **IMPORTANT:** The unit must be installed by personnel qualified to carry out electrical and plumbing work. Incorrect installation can cause injury to personnel and/or damage to the equipment. The unit must be installed in compliance with the applicable regulations.

**KEEP THESE  
INSTRUCTIONS**



## A.1 GENERAL INFORMATION

### A.1.1 FOREWORD

This manual provides all the information necessary for correct installation, use and maintenance of the equipment.

Therefore the manual and all the technical documentation supplied must always be kept with the appliance for possible consultation by technicians or users. It is important to inform the appliance user regarding the regulations on safety during and after installation.

Read the instructions in the manual carefully before carrying out any operation on the appliance as they provide important information on safe installation and use. **Incorrect installation, adjustment, modification, assistance or maintenance can cause damage, injury or risk of death. The manufacturer declines any liability for operations carried out on the equipment without following the instructions given in the manual. The manufacturer also declines any liability in case of problems caused by the use of non-original spare parts. No part of this manual may be reproduced.**

### A.1.2 INTENDED USE AND LIMITATIONS

This appliance is designed for the refrigeration and preservation of foods. Any other use is to be considered improper.

**IMPORTANT:** The appliances are not suitable for installation outdoors and/or in places exposed to atmospheric agents (rain, direct sunlight, etc.).

**The manufacturer declines any liability for improper use of the products.**

### A.1.3 TESTING

Our appliances are designed and optimized with laboratory testing in order to offer high performance and efficiency. The product has been fully tested and is ready for use.

Passing of the tests (visual inspection - electrical test - functional test) is guaranteed and certified by means of the specified enclosures (par. D.5).

### A.1.4 GENERAL SAFETY RULES

The appliance is manufactured in compliance with the following directives:

- Hygiene: **ANSI/NSF 7**
- Safety: **ANSI/UL 471 ED.8**
- **CAN / CSA C22.2 N.120 - M91**

The equipment presented in this manual is "Energy Star"



### A.1.5 CUSTOMER'S RESPONSIBILITIES

The electric line powering the appliance **MUST** be equipped with a mains circuit breaker or main switch (provided for by the customer). The switch must have cutoff capability. Before making the electrical connections to the appliance, make sure the power supply complies with the voltage, amperage and phase given on the dataplate. The Customer must also provide a cable with earth connection of capacity complying with that given on the dataplate.

### A.1.6 DATAPLATE POSITION

- The **dataplate** is located on the left inside the unit compartment.
- The **plate** giving the appliance PNC and Serial Number is located under the trademark.

### A.1.7 MECHANICAL SAFETY CHARACTERISTICS, HAZARDS

The appliance does not have sharp edges or protruding parts. **DANGER! DO NOT REMOVE.** The guards installed on the unit prevent access to components which require air circulation.

## A.1.8 IMMEDIATE INSPECTION FOR DAMAGE DUE TO TRANSPORT

Check the packing for any damage before and during unloading. The carrier is responsible for the safety of the container during transport and delivery. If the equipment received has visible or hidden damage, a claim can be made with the carrier. Visible damage or losses must be reported on the consignment note at the time of delivery. The consignment note must be signed by the carrier's representative (driver). If the consignment note is not signed, the carrier can refuse the claim. The necessary forms are available from the supplier. The request for inspection must be made to the carrier within 15 days in case of hidden damage or losses detectable only after unpacking the appliance. The carrier will arrange an inspection. Keep all the contents and packing material. Under no circumstances should a damaged appliance be returned to the manufacturer without prior notice and written authorization.

## A.2 TECHNICAL DATA

### A.2.1 MATERIALS AND FLUIDS USED

All areas that can come into contact with food are in steel or coated with non-toxic plastic material. An HFC refrigerant fluid complying with current regulations is used in the cooling units. The type of refrigerant gas used is given on the dataplate.

### A.2.2 DIMENSIONS, PERFORMANCE AND CONSUMPTION

#### 2-COMPARTMENT REFRIGERATED COUNTER WITH SHOULDER

External dimensions:

- Width	50.16"	1274 mm
- Depth with door closed	27.56"	700 mm
- Depth with door open	43.70"	1110 mm
- Depth with drawers open	49.99"	1270 mm
- Height	37.40"	950 mm

Compartment dimensions:

- Width	14.37"	365 mm
- Depth	19.68"	500 mm
- Height	21.26"	540 mm
Grill dimensions	20.87"x12.79"	530x325 mm

Power supply	115V single-phase 60Hz	
Total power	330 W	
Refrigerant type	R134a	
Qty refrigerant	0.573 lbs	260 g
Number and type of defrosts (*)	every 7 hours	
Energy consumption (24h)	4.9 kW	
Refrigerating capacity (1)	361 W	
Refrigerating capacity (2)	776 W	
Working temperature	28.4°F/50°F	-2°C/+10°C

(\*) Hot gas

(1) Calculated with room temperature 109.4°F/+43°C, dew point 131°F/+55°C and evaporation temperature 14°F/-10°C.

(2) ASHRAE PERFORMANCE: room temperature 95°F/+35°C, dew point 129.92°F/+54.4°C and evaporation temperature 44.96°F/+7.2°C.

**3-COMPARTMENT REFRIGERATED COUNTER WITH SHOULDER**

## External dimensions:

- Width	69.25"	1759 mm
- Depth with door closed	27.56"	700 mm
- Depth with door open	43.70"	1110 mm
- Depth with drawers open	49.99"	1270 mm
- Height	37.40"	950 mm

## Compartment dimensions:

- Width	14.37"	365 mm
- Depth	19.68"	500 mm
- Height	21.26"	540 mm
Grill dimensions	20.87"x12.79"	530x325 mm

Power supply 115V single-phase 60Hz

Total power		320 W
Refrigerant type		R134a
Qty refrigerant	0.573 lbs	260 g
Number and type of defrosts (*)		every 7 hours
Energy consumption (24h)		5.52 kW
Refrigerating capacity (1)		361 W
Refrigerating capacity (2)		776 W
Working temperature	28.4°F/50°F	-2°C/+10°C

(\*) Hot gas

(1) Calculated with room temperature 109.4°F/+43°C, dew point 131°F/+55°C and evaporation temperature 14°F/-10°C.

(2) ASHRAE PERFORMANCE: room temperature 95°F/+35°C, dew point 129.92°F/+54.4°C and evaporation temperature 44.96°F/+7.2°C.

**4-COMPARTMENT REFRIGERATED COUNTER WITH SHOULDER**

## External dimensions:

- Width	50.16"	2244 mm
- Depth with door closed	27.56"	700 mm
- Depth with door open	43.70"	1110 mm
- Depth with drawers open	49.99"	1270 mm
- Height	37.40"	950 mm

## Compartment dimensions:

- Width	14.37"	365 mm
- Depth	19.68"	500 mm
- Height	21.26"	540 mm
Grill dimensions	20.87"x12.79"	530x325 mm

Power supply 115V single-phase 60Hz

Total power		340 W
Refrigerant type		R134a
Qty refrigerant	0.73 lbs	330 g
Number and type of defrosts (*)		every 7 hours
Energy consumption (24h)		6.19 kW
Refrigerating capacity (1)		361 W
Refrigerating capacity (2)		776 W
Working temperature	28.4°F/50°F	-2°C/+10°C

(\*) Hot gas

(1) Calculated with room temperature 109.4°F/+43°C, dew point 131°F/+55°C and evaporation temperature 14°F/-10°C.

(2) ASHRAE PERFORMANCE: room temperature 95°F/+35°C, dew point 129.92°F/+54.4°C and evaporation temperature 44.96°F/+7.2°C.

**2-COMPARTMENT FREEZER COUNTER WITH SHOULDER**

## External dimensions:

- Width	50.16"	1274 mm
- Depth with door closed	27.56"	700 mm
- Depth with door open	43.70"	1110 mm
- Depth with drawers open	49.99"	1270 mm
- Height	37.40"	950 mm

## Compartment dimensions:

- Width	14.37"	365 mm
- Depth	19.68"	500 mm
- Height	21.26"	540 mm
Grill dimensions	20.87"x12.79"	530x325 mm

Power supply 115V single-phase 60Hz

Total power		830 W
Refrigerant type		R404A
Qty refrigerant	0.595 lbs	270 g
Number and type of defrosts (*)		every 6 hours
Energy consumption (24h)	10.87 kW	
Refrigerating capacity (1)	1978 W	
Refrigerating capacity (2)	1068 W	
Working temperature	-11.2°F/5°F	-24°C/-15°C

(\*) Hot gas

(1) Calculated with room temperature 109.4°F/+43°C, dew point 131°F/+55°C and evaporation temperature 14°F/-10°C.

(2) ASHRAE PERFORMANCE: room temperature 89.96°F/+32.2°C, dew point 129.92°F/+54.4°C and evaporation temperature -9.94°F/-23.3°C.

**3-COMPARTMENT FREEZER COUNTER WITH SHOULDER**

## External dimensions:

- Width	69.25"	1759 mm
- Depth with door closed	27.56"	700 mm
- Depth with door open	43.70"	1110 mm
- Depth with drawers open	49.99"	1270 mm
- Height	37.40"	950 mm

## Compartment dimensions:

- Width	14.37"	365 mm
- Depth	19.68"	500 mm
- Height	21.26"	540 mm
Grill dimensions	20.87"x12.79"	530x325 mm

Power supply 115V single-phase 60Hz

Total power		870 W
Refrigerant type		R404A
Qty refrigerant	0.595 lbs	270 g
Number and type of defrosts (*)		every 6 hours
Energy consumption (24h)	14.72 kW	
Refrigerating capacity (1)	1978 W	
Refrigerating capacity (2)	1068 W	
Working temperature	-11.2°F/5°F	-24°C/-15°C

(\*) Hot gas

(1) Calculated with room temperature 109.4°F/+43°C, dew point 131°F/+55°C and evaporation temperature 14°F/-10°C.

(2) ASHRAE PERFORMANCE: room temperature 89.96°F/+32.2°C, dew point 129.92°F/+54.4°C and evaporation temperature -9.94°F/-23.3°C.

## B.1 INSTALLATION

### WEAR PROTECTIVE GLOVES WHEN UNPACKING AND INSTALLING THE APPLIANCE.



Read these instructions carefully before carrying out installation. Installation and start-up must be carried out by a qualified installer. If the installation instructions for this product are not carried out by a qualified service personnel (expert and competent in the installation of commercial equipment) the manufacturer's Warranty terms and conditions shall be deemed void and no warranty shall be applied.



**IN CASE OF DOUBT, CONTACT YOUR LOCAL SERVICE CENTER.**



#### IMPORTANT:

The operations described below must be carried out in compliance with current safety regulations, regarding the equipment used and the operating procedures.

**IMPORTANT:** Before moving the appliance make sure that the load-bearing capacity of the lifting equipment to be used is suitable for its weight.

### B.1.1 UNPACKING

#### B.1.1.1 Unpacking and handling

Cut the straps and remove the protective film, taking care not to scratch the sheet metal if scissors or blades are used. Remove the top part (cardboard), polystyrene corners and the vertical protection. For appliances with stainless-steel cabinets, carefully remove the protective film without tearing it, to avoid leaving glue stuck to the surface.

Remove any traces of glue with a non-corrosive solvent, rinsing and drying carefully. It is advisable to go over all the stainless-steel surfaces with a cloth moistened with paraffin oil, in order to create a protective film. Use a palletizer or fork-lift truck to lift the equipment. Inserting the forks under the pallet, lift the appliance and carry it to the place of installation, making sure the load is balanced.



#### CAUTION:

Do not push or pull the appliance to move it, as it may tip over.

#### B.1.1.2 Disposal of packing materials

Packing materials must be disposed of in compliance with the current regulations in the country where the appliance is used. Recyclable plastic parts are marked as follows:



PE

**polythene:** outer wrapping, instruction handbook bag



PP

**polypropylene:** straps



PS

**polystyrene foam:** corner pads



**press board:** corner protection elements

### B.1.2 POSITIONING

Install the equipment, taking all the safety precautions required for this type of operation and respecting the relevant fire-prevention instructions.

Install the appliance in a ventilated place, away from heat sources such as radiators or air-conditioning systems, to allow correct cooling of the cooling unit assembly.

Never cover the condenser, even temporarily, as this can compromise proper operation of the condenser and therefore the equipment.

Make sure the position of the appliance allows easy door opening.

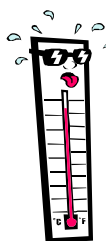
Pay particular attention to leveling of the floor on which the appliance stands, in order to ensure optimum operation.

If the appliance is installed in rooms where there are corrosive substances (chlorine, etc.), it is advisable to go over all the stainless steel surfaces with a cloth moistened with paraffin oil in order to create a protective film.

The room temperature must not exceed 109.4°F/+43 °C in order to maintain the recommended internal temperatures.

Adjust the height and leveling with the adjustment feet, also checking correct door and drawer closing.

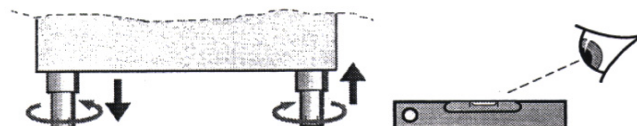
**Note:** The plug must be accessible even after positioning the appliance in the place of installation.



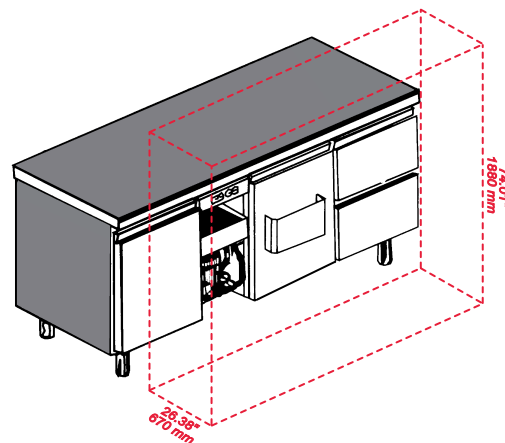
#### IMPORTANT:

Level the appliance, otherwise its operation could be compromised.

Adjust the height and leveling using the adjustment feet, also checking door closing



For correct appliance operation it is advisable to respect the distances given in the following picture



If the equipment is installed in places where there are corrosive substances (chlorine, etc.), it is advisable to go over all the stainless-steel surfaces with a cloth moistened with paraffin oil in order to create a protective film.

The maximum room temperature at which the appliance can operate is +109.4°F/+43°C.

### B.1.3 ELECTRICAL CONNECTION

When making the electrical connection, respect that given on the dataplate.

The appliance uses a single-phase 115V/60Hz power supply.



#### IMPORTANT:

Connection to the power supply must be carried out in compliance with current regulations and the standards required by the National Electric Code (NEC), known as NFPA 70.

Make sure connection to the power supply is carried out in compliance with the current regulations.

Before connecting **make sure:**

- The cable is correctly grounded and that the power supply complies with the frequency given on the dataplate. In case of doubts regarding the efficiency of the earth connection have the system checked by qualified personnel.
- The appliance must be connected to the power supply in a permanent way.
- To protect the appliance from possible overloads or short-circuits, the electric line powering the appliance **MUST** be equipped with a mains circuit breaker or main switch (provided for by the customer). The switch must have cutoff capability. Before making any electrical connections to the appliance, check that the power supply complies with the voltage, amperage and phase given on the dataplate. The Customer must also provide a cable with ground connection of capacity suitable for that given on the dataplate.
- After making the connection and with the appliance operating, check that the rated voltage level does not fluctuate by  $\pm 10\%$ .

Connection must be made with a cable suitable for the amperage and voltage.

**The manufacturer declines any liability for damage or injury due to non-compliance with the above rules or the current safety regulations in the country where the equipment is used.**

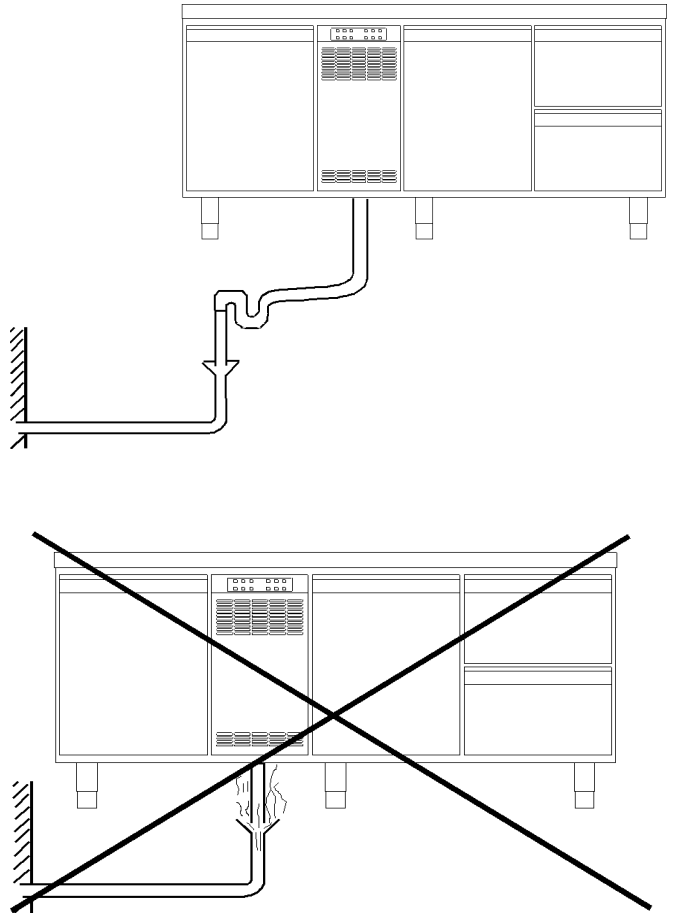
### B.1.4 WATER CONNECTION

The appliance is equipped with a drain hole for draining any liquids collected in the compartment.

Connect the hole "C", located on the bottom of the appliance and closed with a plug, to a special drain.

The diameter of the drain hole is "0.69" / 17.5 mm"; therefore it is advisable to connect it to a hose of diameter "0.69" / 17.5 mm".

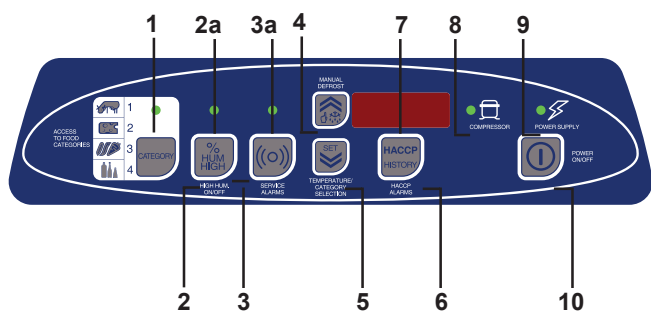
**Note:** Discharge must be into an open drain through a trap, to prevent any backflow from the sewage network reaching the pipes inside the appliance.



## C.1 OPERATION and INSTRUCTIONS FOR THE USER

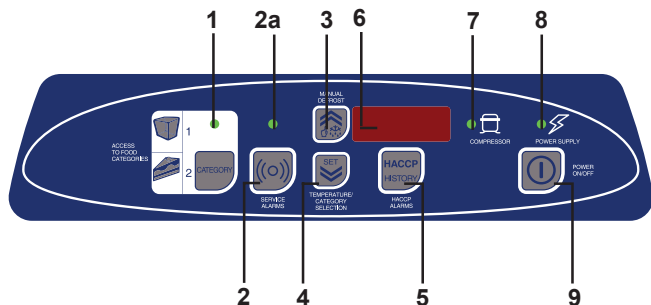
### C.1.1 CONTROL PANELS (see fig. 1/2/3/4)

#### C.1.1.1 "Refrigerator" version control panel



- 1 - Access to button for food categories
- 2 - High humidity ON/OFF button
- 2a - High humidity light
- 3 - Service alarms button
- 3a - Service alarms warning light
- 4 - Top button: manual defrost
- 5 - Bottom button: Temperature setting / Category selection
- 6 - HACCP alarms button
- 7 - Display
- 8 - Compressor status light
- 9 - Power status light
- 10 - ON/OFF button

#### C.1.1.2 "Freezer" version control panel

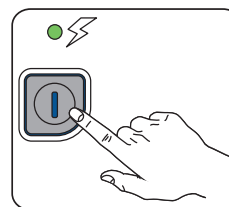


- 1 - Access to button for food categories
- 2 - Service alarms button
- 2a - Service alarms warning light
- 3 - Top button: manual defrost
- 4 - Bottom button: Temperature setting / Category selection
- 5 - HACCP alarms button
- 6 - Display
- 7 - Compressor status light
- 8 - Power status light
- 9 - ON/OFF button

### C.1.2 FIRST START-UP AND TEMPERATURE ADJUSTMENT

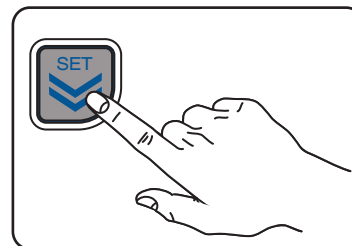
The appliance has a main **ON/OFF** switch.

Switch the appliance on by pressing the **ON/OFF** button:



To set the compartment temperature, proceed as follows:

- hold the bottom **SET** button down for 5 seconds

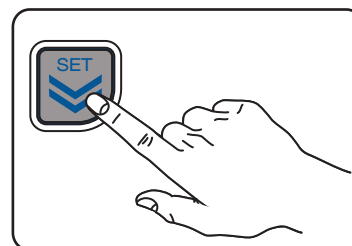


The **SET TEMPERATURE** value will be displayed

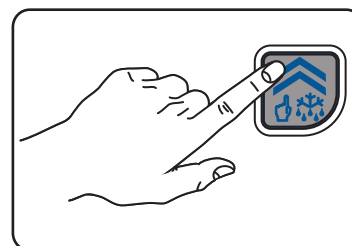


The **unit of measure** light starts flashing.

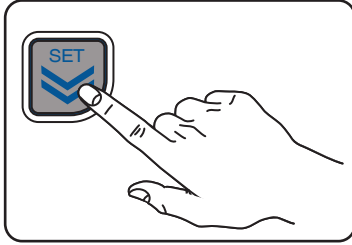
- To change the set temperature, press the bottom **SET** button or the top **MANUAL DEFROST** button within 15 seconds



or

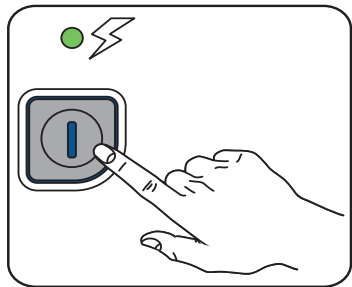


- To store the new set value, wait until it stops flashing and exit the program

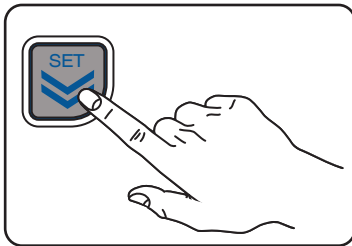


If no selection is made within 15 seconds, the last value displayed will be automatically confirmed and the display of compartment temperature will be updated.

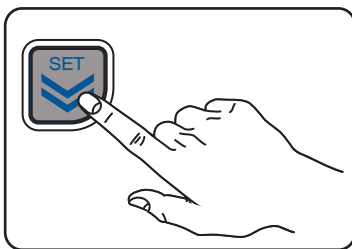
**Example of setting:**  
- Switch on the appliance



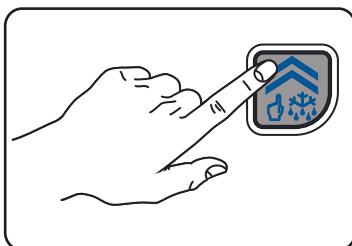
- Confirm the set temperature



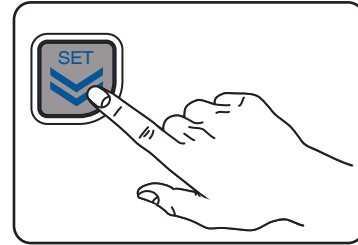
- Press the bottom SET button or the top MANUAL DEFROST button



or



- To store the new set value, wait until it stops flashing and exit the program



Temperature adjustment range for appliances:

**2-3-4 compartment refrigerated counters**

Position "MIN" = 28.4°F / -2°C  
Position "MAX" = +50°F / +10°C

**2-3 compartment freezer counters**

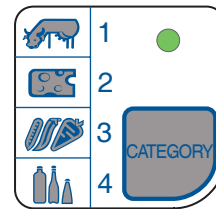
Position "MIN" = -11.2°F / -24°C  
Position "MAX" = 5°F / -15°C

**C.1.3 PRESERVATION USING THE FOOD SELECTION BUTTON**

By using the "CATEGORY" button to select the food to be preserved, the appliance creates the right balance between **temperature** and **humidity in the compartment** for best preservation of a specific product.

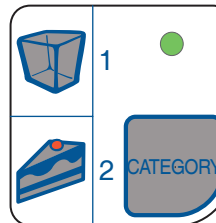
There are 4 preset categories for the **refrigerator** models:

- CATEGORY no. 1 red meat
- CATEGORY no. 2 cheese and meat
- CATEGORY no. 3 fruit & vegetables
- CATEGORY no. 4 beverages

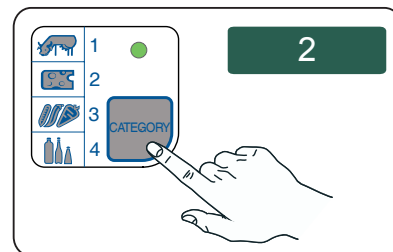


There are 2 preset categories for the **freezer** models:

- CATEGORY no. 1 frozen foods
- CATEGORY no. 2 ice-cream cakes

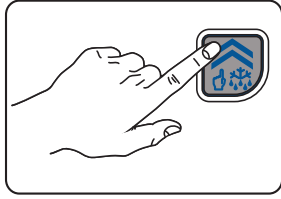


Hold the button down and the selected category will be displayed;

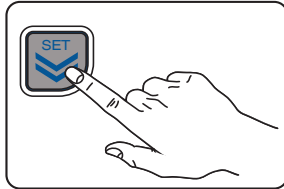


if "NONE" is displayed the function is deactivated.

To select a category, press the top **MANUAL DEFROST** button or bottom **SET** button



or



after pressing the button, if no selection is made within 5 seconds the last category displayed is automatically confirmed and stored.

#### C.1.4 HIGH HUMIDITY ON/OFF BUTTON



(for refrigerator models only)

**This button** allows the appliance to be switched on with a high humidity level. When this function is selected the corresponding light comes on.

With the button pressed (High RH %):

- average humidity with room temperature **109.4°F/+43°C**, compartment temperature **35.6°F/+2°C**:

**R.H. = ~ 80%**

Without pressing the button (Low RH %):

- average humidity with room temperature **109.4°F/+43°C**, compartment temperature **35.6°F/+2°C**:

**R.H. = ~ 66%**

#### C.1.5 LOADING THE PRODUCT

Distribute the products evenly inside the compartment (away from the door and back) to allow good air circulation.

Cover or wrap food before placing it in the refrigerator and do not put very hot foods or steaming liquids inside. Do not leave the door open any longer than necessary when introducing or removing food.

**It is advisable to keep the keys in a place only accessible to authorized personnel. To prevent unauthorized persons from using the appliance it is advisable to keep it closed.**

#### C.1.6 DEFROSTING

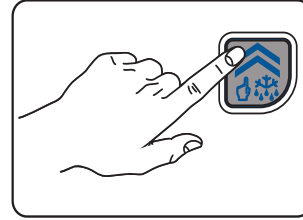
##### - Automatic defrost

The appliance is equipped with an automatic defrost device. This function is signalled by the “dEFr” light.

Defrost water is run into a bowl, where it evaporates automatically.

##### - Manual defrost

The defrost cycle is activated manually by holding down the top **MANUAL DEFROST** button for 5 seconds



During this function the “dEFr” light is on.

#### C.1.7 ALARMS

##### C.1.7.1 General description

The electronic panel provides for two types of alarm systems:

- HACCP
- SERVICE ALARMS

The **HACCP** system stores and manages the COMPARTMENT MAX. HIGH TEMPERATURE ALARMS.

The **SERVICE ALARMS** system stores and manages all the alarms available in the electronic panel (except the “compartment high temperature” alarm).

##### C.1.7.2 HACCP



##### - ALARM CONDITIONS

- The display shows an alarm with the message “TEMP”
- Press the button

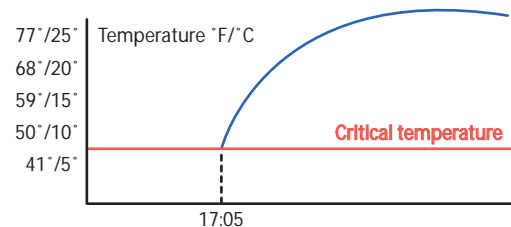


for information on max. temperature, time and date (day, month, year) on which the alarm occurred.

Two situations are provided for:

- a) the alarm is current
- b) the alarm has already occurred

##### a) the alarm is current



#### CHECKING


display:


message

i.e. “TEMP 78.8F / 26C”

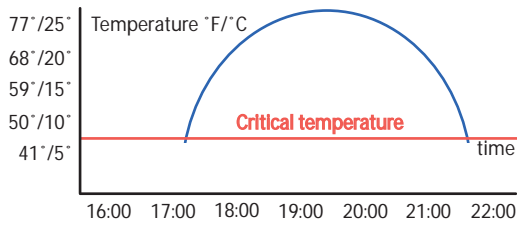
**buzzer:** buzzer activated

**WHAT IS RECORDED?**

Press  the buzzer goes off; press again for 5 seconds until the alarm (AL1) is displayed.

Press again  the temperature, start date and time are given in a message: **“TEMP 78.8F/26C Start 17.05 10-10-99 End—”**.

**b) The alarm has already occurred**





**CHECKING**


**display:** the message **“TEMP”** is displayed

**buzzer:** buzzer activated


**WHAT IS RECORDED?**

Press  the buzzer goes off; press again for 5 seconds until the alarm (AL1) is displayed.


Press again  the temperature, start date and time are given in a message: **“TEMP 78.8F/26C Start 17.05 10-10-99 End—”**.

To access the recorded **HACCP alarms** press the button  for 4 seconds; the display will now show

**HISt** and then **AL\_1** (alarm symbol); this shows the last alarm for the max. compartment temperature stored in the PCB. Press

the button  to display the value of the last alarm

for max. compartment temperature. The display now shows:  
- **TEMP 78.8F/26C** (type and value of the alarm for max. compartment temperature)  
- **Start date and time** (alarm activation date and time)  
- **End date and time** (alarm end date and time)

Press the button  to display the alarm (AL1)

symbol again. Press the button  to display the

next alarm for max. compartment temperature. If no button is pressed within 10 seconds the **HACCP** section is quitted.

**• CHECKING OLD ALARMS**

Hold down the button  :: the display shows AL1

(last alarm); to select the other alarms (AL2, AL3,...) press




**• FOR HOW LONG ARE THE ALARMS STORED?**

Permanently, at least while there is space in the memory (max. number of alarms recorded: 99).



**C.1.7.3 SERVICE ALARMS**

To access the **SERVICE ALARMS** press the button  for 4 seconds; the display shows the first

SERVICE ALARM stored in the electronic panel, e.g. **“b1”** (door

open). Press the button  to display the next

SERVICE ALARM stored in the electronic panel. If other SERVICE ALARMS are not stored in the electronic panel, the display shows **“—”**. If no button is pressed within 5 seconds, the **SERVICE ALARMS** section is quitted.

**• FOR HOW LONG ARE THE ALARMS STORED?**

Until the entire list of stored alarms is displayed. After which they will remain stored until another alarm occurs: resetting is automatic.

**• ALARM SIGNALING**

- alarm button LED flashing
- buzzer activated (acoustic alarm)

**• CHECKING ALARMS**

Hold down the button  the display shows the last alarm that occurred (a message) and the buzzer is deactivated.

To reset the alarm, press  until **“—”** is



### C.1.7.4 LIST OF SERVICE ALARMS

· Type “b” service alarms

<b>b1</b>	Door open Microswitch broken
<b>b2</b>	Reset the HACCP memory
<b>b3</b>	Condenser dirty Condenser fan broken
<b>b4</b>	No power supply Plug not correctly inserted

· Type “E” service alarms

<b>E1</b>	Sensor short circuit
<b>E2</b>	Sensor broken or disconnected
<b>E3</b>	Sensor short circuit
<b>E4</b>	Sensor broken or disconnected
<b>E5</b>	Sensor short circuit
<b>E6</b>	Sensor broken or disconnected
<b>E7</b>	Sensor short circuit
<b>E8</b>	Sensor broken or disconnected
<b>E9</b>	Low compartment temperature
<b>E10</b>	Low evaporator temperature

### C.1.7.5 ALARM MANAGEMENT

- Whenever a high temperature alarm occurs, the display shows the message “TEMP” and the buzzer is activated.
- To reset the buzzer, hold down the button



for 1 second.

- Whenever a type “b” service alarm occurs the display shows the alarm message code and the buzzer is activated.
- Whenever a type “E” service alarm occurs the display shows the alarm message code and the buzzer is activated.

#### CONTACT THE TECHNICAL SERVICE.

- To reset the buzzer, hold down the button



for 1 second.

### C.1.7.6 RESETTING THE HACCP ALARM

The system can record up to a max. of 99 compartment high temperature alarms.

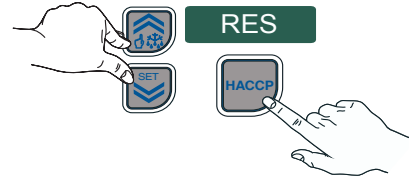
When the **memory is full** and a “b2” alarm occurs or at the **end of year**, the memory must be reset as follows:



- Press the button until the message “HiSt”

appears;

- Hold down the buttons



at the same time until “RES” is displayed.

### C.1.7.7 TROUBLESHOOTING GUIDE

(problems that can be fixed immediately)

MESSAGE	PROBLEM	ACTION
<b>b1</b>	The door is open or the microswitch is broken	Check the door. If closed contact the technical service center
<b>b2</b>	The HACCP memory is full	Reset the HACCP memory
<b>b3</b>	The condenser temperature is high	Check the condenser, if clean or uncovered, contact the technical service center
<b>b4</b>	No current	Check the feed, if everything is OK, contact the technical service center

Refer to the handbook included with the kit for instructions on installing the accessories.

## C.2 HACCP CONNECTIONS (ACCESSORIES)

### C.2.1 Basic system connection (accessory code F880048)

The printer can provide a printout of data obtained by the sensor connected to the electronic board. For this, connect the serial cable (screened) to the printer and the appliance itself.

Set the printout interval (see parameter **TPRN**); and define the type of report by means of the parameter **"PRND"**.

### C.2.2 REPORT PRINTOUTS (fig.11 example of report printout)

Reports are printed automatically when the appliance is switched on.

The printout gives the data obtained by the electronic board and indicates:

- the start date and time, repeated every 20 lines of temperature;
- the compartment temperature at preset intervals (user parameter **TPRN**);
- a description of the type of alarm generated and the alarm start and end time;
- defrost start and end time.

## C.3 MODULARITY OF MAIN COMPONENTS

The Heavy Duty range refrigerated counters have been designed with a modular structure. In this way the main components of the appliance can be easily replaced.

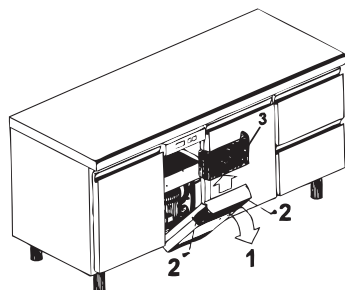
### C.3.1 COOLING UNIT COMPARTMENT MODULARITY

The cooling unit assembly is located in the middle of the appliance in order to guarantee optimum ventilation inside the refrigerated compartment. To access the cooling unit assembly, for routine or extraordinary maintenance operations, proceed as follows:

- remove the chromed cap in the middle of the panel;
- remove the panel middle fixing screw;
- remove the 3 control panel fixing screws, one central and two lateral (right and left);
- remove the control panel then disconnect the wires from the connectors;
- loosen the 4 fixing screws located on the right and left side of the counters, then remove the complete cooling unit assembly;
- in this way the unit is completely removed from the refrigerated counter and routine maintenance operations can be carried out quickly and easily.

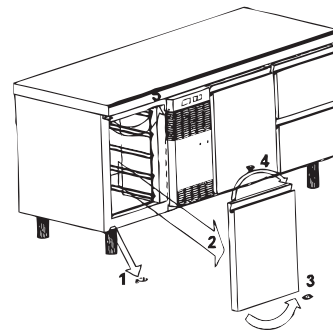
### C.3.2 REFRIGERATED COMPARTMENT MODULARITY

The refrigerated compartments can be easily customized, therefore the structure with doors (inside food rack) can be quickly replaced by that with drawers. The operations necessary for customizing are given below.



### C.3.2.1 Reversing the door

Remove the bottom hinge fixing screws and then the door. Remove the plate on the bottom part of the door and refit it on the opposite side. Shift the top hinge to the other side, place the door on the hinge then fix the bottom hinge in the special seats arranged on the other side.



### C.3.2.2 Replacing fully insulated door compartment with drawer unit

To replace the fully insulated door compartment (inside food racks) with the compartment with drawer unit, carefully carry out the following:

- remove the door (see point C.3.2.1);
- remove the food racks from the metal support structure;
- remove the metal support structure, lifting it a little in order to take it out of the seat located on the bottom of the counter;
- insert the new drawer unit support structure, then secure it to the appliance compartment and fix with 4 screws.
- there are 3 types of drawer units: 1/3 drawers; 1/2 drawers; bottle holder.

**The drawer units are available for "refrigerator" counter models but not for "freezer" models.**

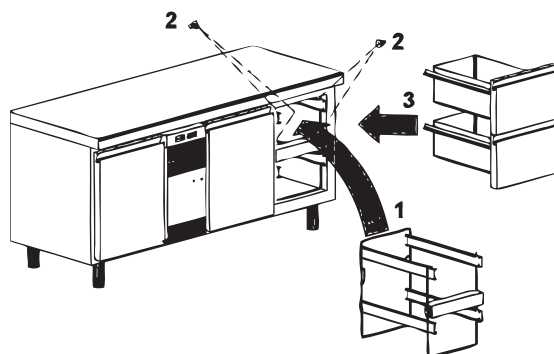
**For installation of the drawer kit, refer to the instructions given inside the kit.**



### IMPORTANT:

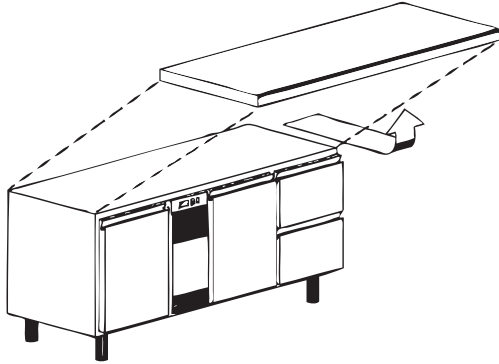
**The drawers must only be used with GN 1/1 pans of height 2.56"/65 mm, already included in the kit.**

**Note:** As the fully insulated door compartments are modular and easily removed, it is possible to optimize all compartment cleaning operations. In fact the rack support structure can be quickly removed, giving complete access to the compartment for cleaning.



### C.3.3 SHELF MODULARITY

To replace the shelf, remove the fixing screws located under the shelf, shift the shelf towards the front of the counter to release it from the rear seats, then lift it out.



## D.1 ROUTINE MAINTENANCE

Routine maintenance tasks can be performed by non-specialized personnel. When performing maintenance, follow the instructions and pay maximum attention. **The manufacturer declines any liability for damage due to incorrect use of the appliance.**

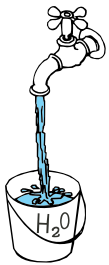


#### WARNING:

**Do not touch the equipment with wet hands or feet. Before performing any cleaning or maintenance, disconnect the equipment from the power supply and unplug the appliance. Removing the safety guards is DANGEROUS, INADVISABLE AND UNNECESSARY for routine maintenance. Wear protective gloves. Do not use scissors, screwdrivers and sharp objects on the cooling circuit.**

#### D.1.1 CLEANING THE CABINET AND ACCESSORIES

Before using the unit, clean all the inside parts and accessories with lukewarm water and neutral soap or products that are over 90% biodegradable (in order to reduce the emission of pollutants into the environment), then rinse and dry carefully. Do not use solvent-based detergents (e.g. trichloro-ethylene) or abrasive powders for cleaning. Protect the metal parts with paraffin oil.



#### D.1.2 CLEANING THE COMPARTMENT

To clean the compartment, remove the plug from the drain hole and let the water run into the drainage system. It is advisable to clean the compartment every week, or more frequently according to appliance use.

#### D.1.2 PRECAUTIONS IN CASE OF PROLONGED DISUSE

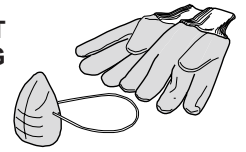
During long periods of disuse, take the following precautions:

- switch the appliance off with the **ON/OFF** button;
- disconnect the circuit breaker ahead of the appliance;
- remove all food from the compartment and clean the inside and accessories;
- leave the door ajar so that air can circulate inside, preventing the formation of unpleasant odours and mould;
- go over all the stainless-steel surfaces vigorously with a cloth moistened with paraffin oil in order to form a protective film;
- make sure the rooms are regularly aired.

## D.2 MAINTENANCE TO BE PERFORMED BY AUTHORIZED PERSONNEL ONLY

Extraordinary maintenance operations must be carried out by **AUTHORIZED SERVICE PERSONNEL**.

**USE SUITABLE SAFETY EQUIPMENT (GLOVES AND MASK) WHEN CARRYING OUT ANY MAINTENANCE OPERATION.**



#### WARNING:

**Do not touch the equipment with wet hands or feet. Before performing any cleaning or maintenance, disconnect the equipment from the power supply and unplug the appliance. DO NOT remove the safety guards. Wear protective gloves when cleaning the condenser. Do not use scissors, screwdrivers and sharp objects on the cooling circuit.**

#### D.2.1 PERIODIC CLEANING OF CONDENSER

The condenser must be cleaned periodically, according to use, to ensure efficient operation and performance. **Removing the safety guards is DANGEROUS AND INADVISABLE.** It is advisable to carefully clean the cooling unit condenser openings at least once a month in dusty environments or once every three months in closed and clean places. The condenser can be cleaned with a brush, provided the bristles are not made of steel or other material that can compromise good operation, or a vacuum cleaner to remove the dust. Take maximum care not to bend the condenser fins, as this would cause a reduction in the heat exchange. Do not use sharp objects, which could damage the condenser.

**NB:** The condenser is installed at the top of the appliance. Do not wash the appliance with jets of water.



#### D.2.2 REPLACING THE POWER CABLE

To replace the power cable proceed as follows:

- Disconnect the power supply;
- Remove the electrical system guard;
- Replace the power cable;
- Refit the guard;
- Reconnect the power supply.

#### D.2.3 QUICK TROUBLESHOOTING GUIDE

In some cases faults can be remedied easily and quickly, by following a short troubleshooting guide:

- A.** The appliance does not switch on:
  - make sure the plug is properly inserted in the power socket.
  - make sure the socket is powered.
- B.** The inside temperature is too high:
  - check the thermostat setting;
  - make sure there is no heat source near the appliance;
  - make sure the door closes properly.
- C.** The appliance is excessively noisy:
  - make sure the appliance is level. An unbalanced position can set off vibrations.
  - make sure the appliance is not touching other equipment or parts which could reverberate;
- D.** The printer does not print:
  - make sure the power cable is properly connected;
  - make sure the printer is switched on (ON switch);
  - make sure parameter "E485" has the value "Prn", otherwise change it (to change the parameter see par. C.1.1.1 modifying user parameters)
  - make sure there is paper in the printer;

If the fault persists after carrying out the above checks, contact Technical Service, remembering to specify the following:

- nature of the fault;
- appliance PNC (production code);
- Ser. No. (appliance serial number).

**Note: The code and serial number are essential for identifying the type of appliance and date of manufacture.**

**Example: PNC 726682 - Ser.No. 62100040**  
**726682: 2-compartment refrigerated counter with shoulder**  
**62100040: produced in 2006, week 21, 40th piece.**

## **D.4 WASTE DISPOSAL AND DEMOLITION**

### **D.4.1 WASTE STORAGE**

At the end of the product's life-cycle make sure it is not dispersed in the environment. The doors must be removed before scrapping the appliance.

Special waste can be stored temporarily awaiting disposal by means of treatment and/or permanent storage. In any case the current environmental protection laws in the country of use must be observed.

### **D.4.2 PROCEDURE REGARDING APPLIANCE DISMANTLING MACRO-OPERATIONS**

Different regulations are in force in the various countries; therefore comply with the provisions of the laws and applicable regulations in the countries where demolition takes place.

In general, the refrigerator must be taken to specialized collection/demolition centers, after dismantling the components and grouping them according to their chemical characteristics (plastic parts are marked with the letter identifying the material). Remember that the compressor contains lubricant oil and refrigerant fluid which can be recycled and that the refrigerator components are classed as special waste not assimilable with urban waste.

Make the appliance unusable by removing the power cable and any compartment closing device, to prevent the risk of someone becoming trapped inside.

**DISMANTLING OPERATIONS MUST BE CARRIED OUT BY QUALIFIED PERSONNEL.**

## **D.5 ENCLOSED DOCUMENTS**

- Test and inspection documents
- Wiring diagram
- Installation diagram