

**ABBATTITORI/SURGELATORI DI TEMPERATURA  
CELLULES DE REFROIDISSEMENT RAPIDE/CELLULES MIXTES  
SCHNELLKÜHLER/SCHOCKFROSTER  
BLAST CHILLERS/FREEZERS  
ABATIDORES/CONGELADORES RAPIDOS DE TEMPERATURA  
AFKOEL/VRIESKAST  
ABATEDORES/CONGELADORES RÁPIDOS DA TEMPERATURA  
БЫСТРЫЕ ОХЛАДИТЕЛИ/МОРОЗИЛЬНИКИ**

**MANUALE D'USO E INSTALLAZIONE  
MANUEL D'UTILISATION ET D'INSTALLATION  
BEDIEN- UND INSTALLATIONSHANDBUCH  
USE AND INSTALLATION MANUAL  
MANUAL DE USO E INSTALACIÓN  
HANDLEIDING  
MANUAL DE USO  
РУКОВОДСТВО К ИСПОЛЬЗОВАНИЮ**



IT

Leggere attentamente le avvertenze contenute nel presente libretto in quanto forniscono importanti indicazioni riguardanti la sicurezza, d'uso e di manutenzione.

**Conservare con cura questo libretto per ogni ulteriore consultazione dei vari operatori.**

**Il costruttore si riserva il diritto di apportare modifiche al presente manuale, senza preavviso e responsabilità alcuna.**

FR

Lire avec attention les instructions contenues dans ce livret car elles fournissent d'importants renseignements pour ce qui concerne la sécurité, l'emploi et l'entretien.

**Garder avec soin ce livret pour des consultations ultérieures de différents opérateurs.**

**Le constructeur se réserve le droit d'apporter des modifications à ce manuel, sans préavis ni responsabilité d'aucune sorte.**

DE

Lesen Sie bitte aufmerksam diese Gebrauchsanweisung durch, die wichtige Informationen bezüglich der Sicherheit, dem Gebrauch und der Instandhaltung enthält.

**Heben Sie sorgfältig diese Gebrauchsanweisung auf, damit verschiedene Anwender sie zu Rat ziehen können.**

**Der Hersteller behält sich das Recht, Änderungen dieser Gebrauchsanweisung ohne Ankündigung und ohne Übernahme der Verantwortung vornehmen zu können.**

GB

Carefully read the instructions contained in the handbook. You may find important safety instructions and recommendations for use and maintenance.

**Please retain the handbook for future reference.**

**The Manufacturer is not liable for any changes to this handbook, which may be altered without prior notice.**

ES

Lea atentamente las advertencias contenidas en este manual pues dan importantes indicaciones concernientes la seguridad, la utilización y el mantenimiento del aparato.

**Rogamos guarde el folleto de instalación y utilización, para eventuales futuros usuarios.**

**El constructor se reserva el derecho de hacer modificaciones al actual manual, sin dar algún preaviso y sin responsabilidad alguna.**

NL

Nauwkeurig de waarschuwingen in dit boekje lezen, aangezien zij belangrijke aanwijzingen verschaffen wat betreft de veiligheid, het gebruik en het onderhoud.

**Dit boekje goed bewaren.**

**De fabrikant behoudt zich het recht voor om veranderingen in deze handleiding aan te brengen, zonder voorafgaande waarschuwing en zonder enkele aansprakelijkheid.**

P

Leia com atenção as advertências contidas neste manual pois fornecem importantes indicações para a segurança, a utilização e a manutenção do aparelho.



**O construtor reserva-se o direito de modificar o manual sem dar aviso prévio e sem nenhuma responsabilidade.**

RU

Внимательно читайте предупреждения, содержащиеся в настоящем руководстве, касающиеся надежности использования и обслуживания.

**Конструктор сохраняет за собой право вносить изменения в настоящее руководство без предупреждения и любой ответственности.**

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# - INSTRUCTION MANUAL -

## INFORMATION FOR THE READER

## CHAPTER 0

This manual is subdivided into two parts.



**1st part:** covers all the information necessary to the user.



**2nd part:** covers all the information necessary to the qualified operators authorized to move, transport, install, service, repair and demolish the appliance.

While users are instructed to refer to the 1st part only, the 2nd part is addressed to skilled operators. They may also read the 1st part for a more complete picture of the information provided if necessary.

## GENERAL INSTRUCTIONS ON DELIVERY

## CHAPTER 1

### GENERAL INSTRUCTIONS

Make sure that the consignment has not been tampered with or damaged during transport.

After unpacking the cooling cabinet make sure all sections or components have been included and specifications and conditions are as to your order.  
If not, please inform the retailer immediately.

We assure you have made the best choice in purchasing our products and hope you will be fully satisfied with our their performance. To this purpose, we recommend you strictly comply with the instructions and regulations contained in this handbook.

Please remember that no reproductions of this handbook are allowed. Due to our constant technological updating and research, the features described in this handbook may be altered without prior notice.



### TECHNICAL DATA

Please refer to the technical data of your own appliance. (**tab.1a-1b**)

### LIST OF REGULATION REFERENCES

The cooling cabinet we manufacture fully complies with the following European and national regulations:

89/392;91/368;93/44 (machine regulations)  
89/336 (EMC regulation)  
73/23 (low-voltage regulation)  
93/68 (new approach regulation)  
658/88 CEE  
108/89 CEE  
DPR 327/80 art.31 (Italy)  
D.M. 15-06-71 (Italy)  
D.L. n°110 27-01-92 (Italy)

J.O. 16-07-74 n°74-163 (France) and the following  
European regulations:  
EN60204-1;EN292-I-II;EN294;EN349  
EN55014;EN55104  
EN60335-1;EN60335-2-24  
EN378-1  
NF D 40-001 (France)  
NF E 35-400 (France)  
U 60-010 (France)

### GENERAL INSTRUCTIONS

The quick cooler is a refrigerating appliance which can cool cooked foodstuffs to a temperature of +3°C (positive quick cooling) and to -18°C (negative quick cooling).

Machine capacity as to the quantity to be cooled depend on the model purchased.

# - INSTRUCTION MANUAL -

## SETTING UP

Before setting to operation thoroughly clean the cooling cabinet with a suitable detergent or sodium bicarb dissolved in lukewarm water. Clean the appliance inside to remove any condensate caused by the Manufacturer's final testing.

Cooling and freezing speed depends on the following factors:

- a) container shape, type and material;
- b) whether container lids are used;
- c) foodstuff features (density, water contents, fat contents);
- d) starting temperature;
- e) thermal conduction inside the foodstuffs

Positive /Negative quick cooling time depends on type of foodstuffs to be processed.

Full-speed cycle is recommended for high-density or large-sized foodstuffs. However, the following limits should never be exceeded : 3,6 [kg] load (for GN1/1, EN1/1 or 60x40 sheets) or 7,2 [kg] load (for GN2/1, EN2/1 or 60x80 sheets), 50 [mm] thickness for negative quick cooling and 80 [mm] thickness for positive quick cooling (**tab.2**).

The low-speed cycle is suitable to process delicate foodstuffs, such as vegetables, creamy products, creamy desserts or low-thickness products.

We recommend making sure that any positive quick cooling cycles, up to +3 [°C] to the core of the product, do not last over 90 minutes, and that negative quick cooling cycles, up to -18 [°C] to the core of the product, do not last over 4 hours.

The processing room is to be pre-cooled before starting the positive and /or negative quick cooling cycle. Moreover, avoid covering the foodstuffs during the cycle, which would increase the cycle length.

We recommend using the core probe in order to have the exact core temperature reading. Do not stop the cycle before reaching a temperature of +3 [°C] during positive quick cooling and -18[°C] during negative quick cooling.



**Tab.2**

Model	Max. output/cycle		Capacity		
	+70[°C]÷+3[°C]	+70[°C]÷-18[°C]	n° max	GN	EN
<b>DS31-DS31A-DS31M-DS31C</b>	10,8[kg]	3,6[kg]	3	1/1	600X400
<b>IS51-IS51A-IS51M-IS51C</b>	20[kg]	12[kg]	5	1/1	600X400
<b>DS51-DS51A-DS51M-DS51C</b>					
<b>IA51-IA51A-IA51M-IA51C</b>	18[kg]	-	5	1/1	600X400
<b>IS51H</b>	16[kg]	10[kg]	5	1/1	600X400
<b>FS611</b>	30[kg]	18[kg]	6	1/1	600X400
<b>IS101L-IS101S</b>	42[kg]	25[kg]	10	1/1	600X400
<b>IA101L-IA101S</b>	36[kg]	-	10	1/1	600X400
<b>IS72S</b>	52[kg]	25[kg]	10	2/1	
<b>IA72S</b>	51[kg]	-	10	2/1	
<b>IS102S-IS102SR</b>	100[kg]	50[kg]	10	2/1	
<b>ISR201R</b>	120[kg]	72[kg]	20	1/1	600X400
<b>ISR202R-ISP202R</b>	210[kg]	144[kg]	20	2/1	600X800

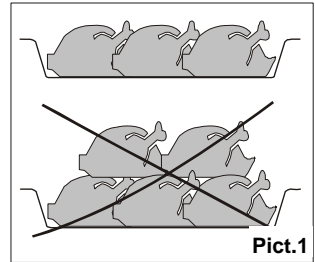
## TESTING

Name and Surname	Address	Tel./fax no.

# - INSTRUCTION MANUAL -

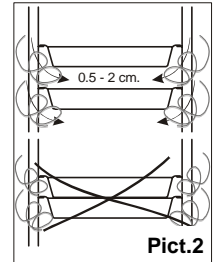
## MACHINE LOADING

Do not pile up foodstuffs to be cooled. Thickness should be lower than 50 mm] in negative quick cooling and lower than 80[mm] in positive quick cooling. **(pict.1)**



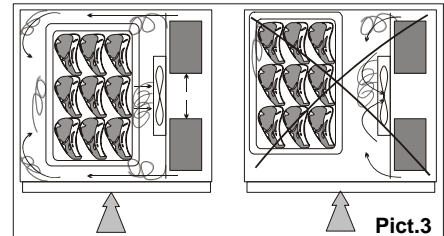
Pict.1

Make sure air circulation is not hampered between food trays. **(pict.2)**



Pict.2

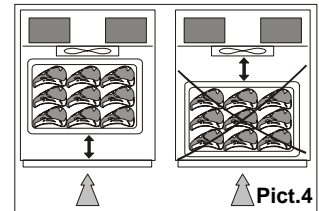
The grid-holding frame (included in those models which include trolleys) is to be located at the centre of the cabinet. **(pict.3)**



Pict.3

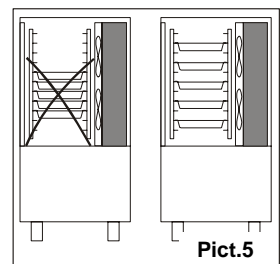
## POSITION OF TRAYS

Place the trays as close to the evaporator as possible. **(pict.4)**



Pict.4

If the cabinet is not full place the trays at equal distance from one another. **(pict.5)**



Pict.5

## LENGTH

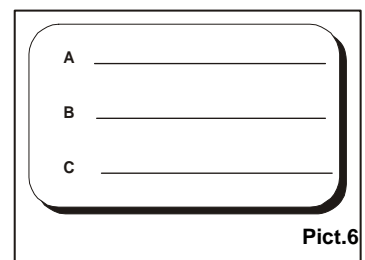
Cooled or frozen processed foodstuffs may be stored in a refrigerator for 5 days of processing with no quality alterations.

For best results we recommend keeping temperature constant throughout the storing (0°C to 4°C), according to the various commodities.

Storing time may be increased to approx. two weeks by using vacuum processing.

After a negative quick cooling cycle, foodstuffs may be stored safely for 3 to 18 months, according to the type of foodstuff processed.

We strongly recommend keeping storing temperature at -20°C or below.



Pict.6



# - INSTRUCTION MANUAL -

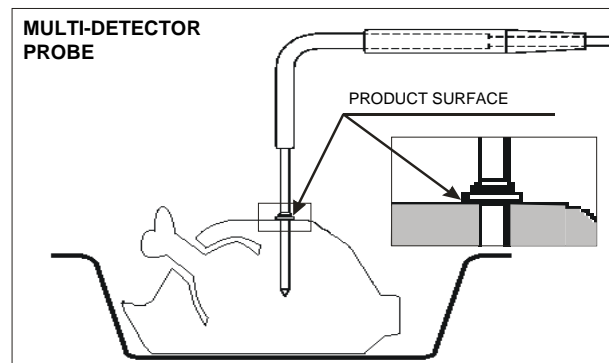
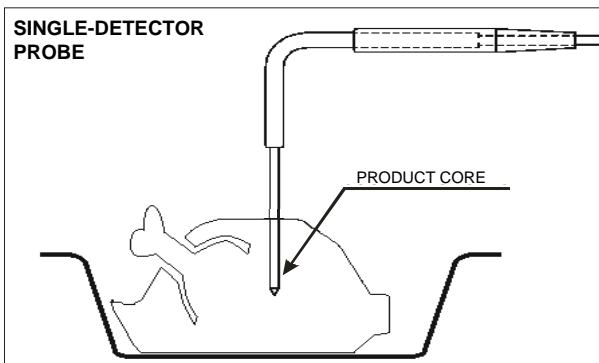
**Table 3** shows the storing time rates for a few examples of frozen food. Do not leave cooked products at room temperature before quick cooling. Avoid any loss of moisture, which will affect food freshness. The cooled product should be wrapped in a specific film for foodstuffs (better still, vacuum stored) and provided with a sticker reporting the content [A], date of processing [B] and expiry date [C] written in permanent type ink (**pict.6**).

**Tab.3**

Foodstuff	Storing temperature [°C]	Recommended storing time
Pork	-18	6
Beef	-18	9
Poultry	-18	10
Fat fish	-18	2
Lean fish	-18	4
Peas	-18	12
Strawberries	-18	12
Spinach	-18	6

## CORE PROBE

For proper position of the probe, refer to the following pictures.



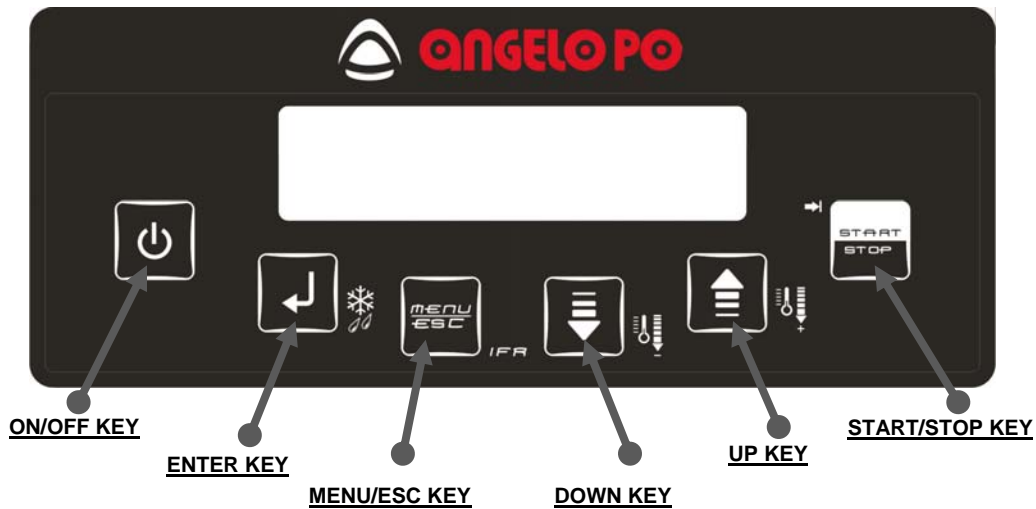


# - INSTRUCTION MANUAL -

## CONTROL PANEL

## CHAPTER 2

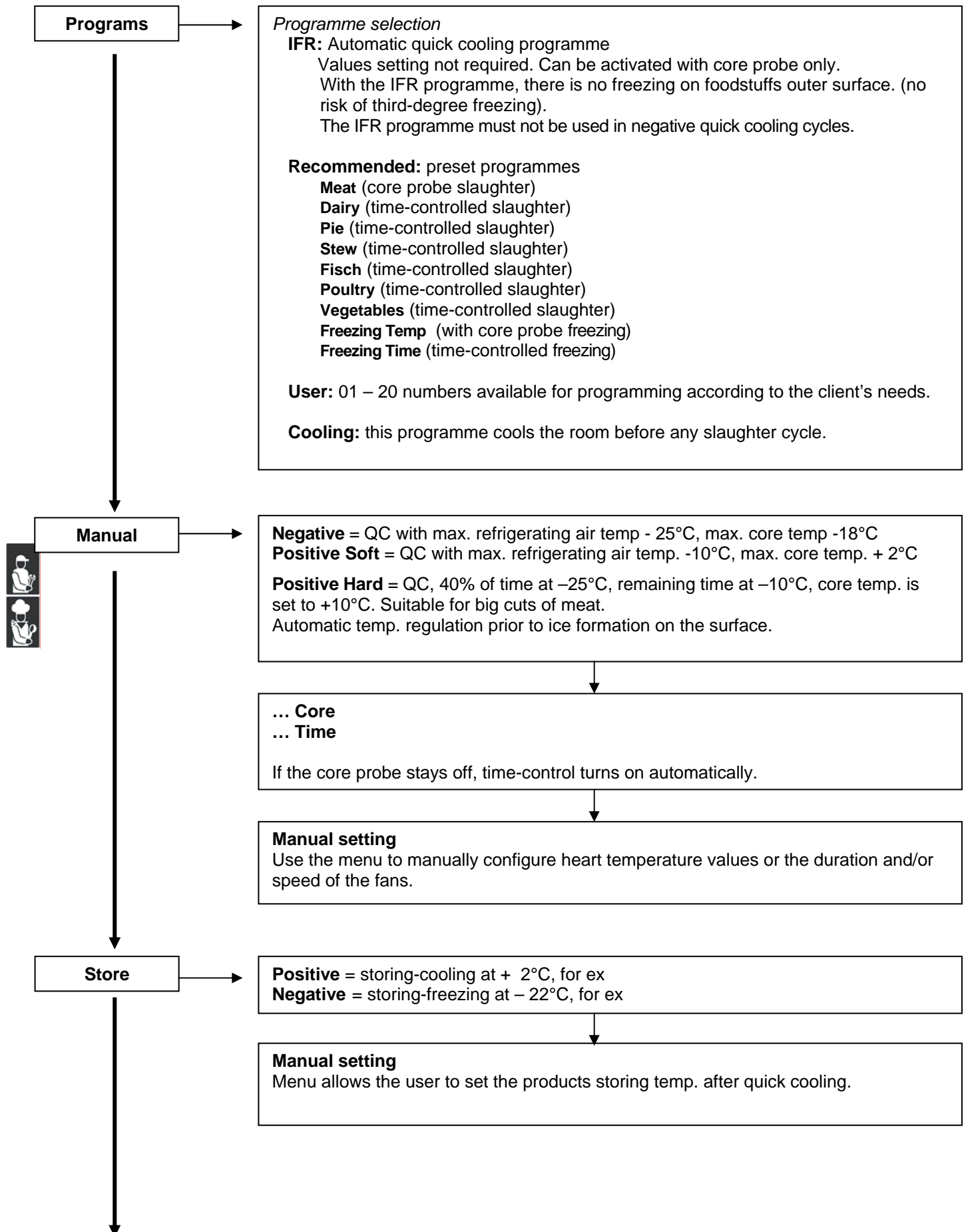
### DESCRIPTION OF CONTROLS



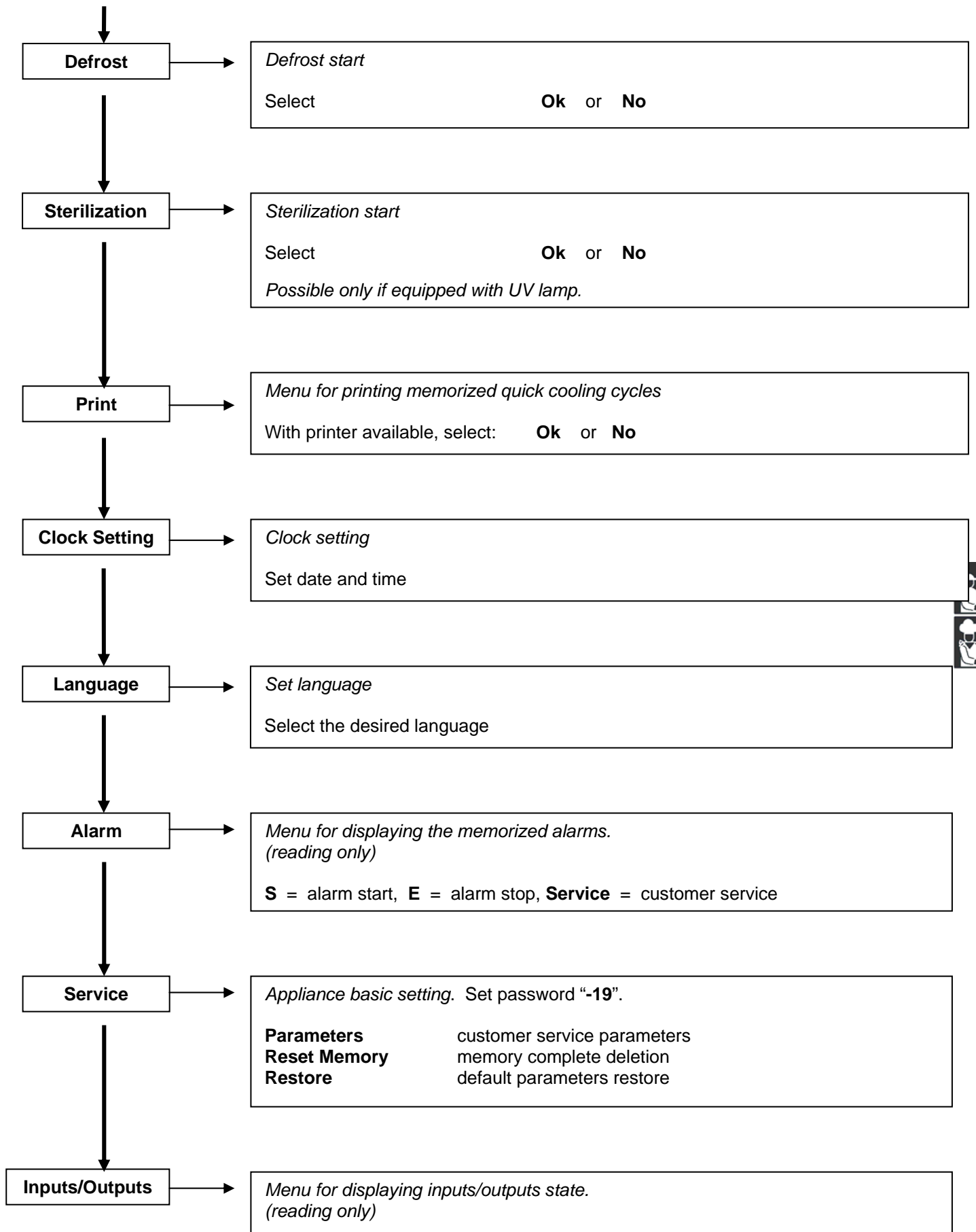
	<p><b><u>ON/OFF key</u></b> Pressing the key for 5 sec the controller turns off and the sign blinks on the display </p> <p>When the button is repeatedly pressed the controller lights up again, preparing itself to start an IFR slaughter cycle. </p>
	<p><b><u>Enter key</u></b> Allows access to a menu or parameter selection.</p> <p><b>Manual defrost:</b> press the key  for 5 s (default parameter values)</p> <p><b>During a cycle:</b> press the  button to display all the information regarding the ongoing cycle. Press  to scroll through this information.</p>
	<p><b><u>Menu/Esc key</u></b> Allows access to the main menu or return to the previous menu.</p> <p><b>Quick IFR slaughter key:</b> press the key for 5 s (default parameter values)</p>
	<p><b><u>Up e Down keys</u></b> Allow to scroll the different menus or change parameter values.</p> <p><b>Quick Soft posit. slaughter key:</b> press the key  for 5 s (default parameter values)</p> <p><b>Quick negative slaughter key:</b> press the key  for 5 s (default parameter values)</p> <p><b>Keyboard lock:</b> press the keys   for 5s (default parameter values)</p> <p><b>During a cycle:</b> press the  button to display, for a few seconds, the elapsed time.</p>
	<p><b><u>Start/Stop key</u></b> Allow to start/stop a quick cooling cycle.</p> <p><b>Quick cooling key:</b> keep the  key pressed for 5 s (default parameters)</p>



# - INSTRUCTION MANUAL -



# - INSTRUCTION MANUAL -



# - INSTRUCTION MANUAL -

## OPERATION

## CHAPTER 3

### PROGRAMS

#### IFR SLAUGHTERING CYCLE

# I.F.R.

**(Intelligent Food Recognition)**



The IFR is an innovative patented system of positive quick cooling which allows the cycle optimisation for each type of foodstuffs **by preventing superficial freezing.**



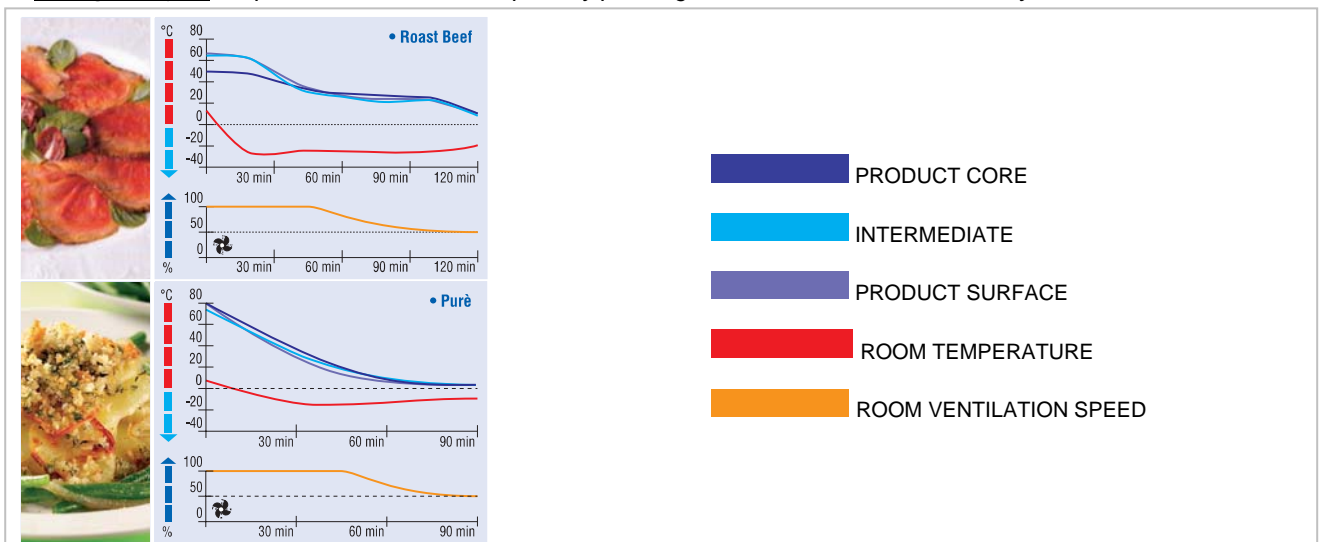
Temperatures are detected by a three-sensor multipoint needle probe. The position inside the foodstuff is determined univocally by a reference disk located along the needle. (ref. pag 6, par. "Core probe").



	Press menu/esc to select the desired menu
	Use the keys up and down to display <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 20px;">                     Programs                      ← Esc ↓ ↑                 </div>
	Press enter to confirm your choice. The display shows <div style="border: 1px solid black; padding: 2px; display: inline-block; margin-left: 20px;">                     IFR →                      ← Esc ↓ ↑                 </div>
	Press start/stop to immediately activate the selected cycle

**Notes:**



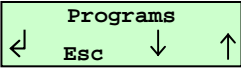

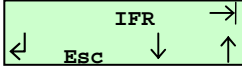



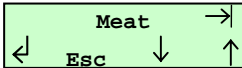


- **during switch on**, the controller automatically prepares itself to start an IFR slaughter cycle: simply press and the cycle will start immediately.
- **from the main menu** it is possible to immediately start an IFR slaughter cycle: keep the pressed for 5 seconds.
- **during the cycle** it is possible to visualise fan speed by pressing ; use the button to modify the value.

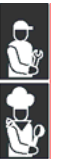


# - INSTRUCTION MANUAL -

## RECOMMENDED

PRESET programmes are working cycles recommended by the manufacturer. Parameters cannot be changed.

	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to confirm your choice. The display shows 
	Use the keys up and down to display 
	Press enter to gain access to the memorized programmes selection (21-29) The display shows the programme number and name 
	Use the keys up and down to scroll all the memorized programmes
	Press start/stop to immediately activate the selected cycle





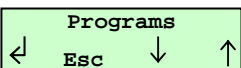
The recommend programmes are listed below:

Prog	Name of the programme	Positive negative	Time/Core	hard	Room set storing	time	Ventilat.
21	Meat	positive	core	yes	+2°C	120 min	100%
22	Dairy	positive	time	no	+2°C	90 min	100%
23	Pie	positive	time	no	+2°C	90 min	100%
24	Stew	positive	time	no	+2°C	90 min	100%
25	Fisch	positive	time	yes	+2°C	90 min	100%
26	Poultry	positive	time	yes	+2°C	90 min	100%
27	Vegetables	positive	time	no	+2°C	90 min	100%
28	Freezing Temp	negative	core	yes	-22°C	240 min	100%
29	Freezing Time	negative	time	yes	-22°C	240 min	100%

## USER'S CYCLE

### USE USER'S PROGRAMMES

The memorized USER programmes can be activated as follows:

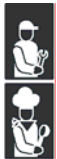
	Press menu/esc to select the desired menu
	Use the keys up and down to display 

# - INSTRUCTION MANUAL -

	Press enter to confirm your choice. The display shows
	Use the keys up and down to display
	Press enter to confirm your choice. The display shows <i>(example)</i>
	Use the keys up and down to scroll all the memorized programmes
	Press start/stop to immediately activate the selected cycle

## MEMORISE USER'S PROGRAMMES



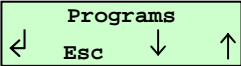

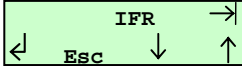

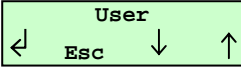




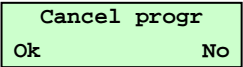


It is possible to memorize up to 20 USER programmes.





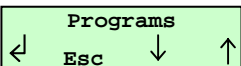
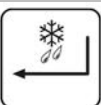
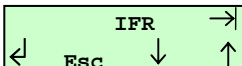

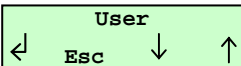
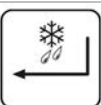
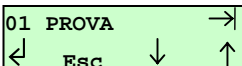

	Press menu/esc to select the desired menu
	Use the keys up and down to display
	Press enter to confirm your choice. Select the manual cycle as described in the previous paragraphs, replacing the standard values with the desired ones. Once the cycle is completely configured, the display will show. <i>(example)</i>
	Keep menu/esc pressed for 5 seconds to memorise the programme. The display will show the first available position
	Use buttons  to scroll through the 20 programmes and select the desired position.
	Press enter to confirm the selected position. The display shows <i>Type in the name of the programme which is to be memorised using buttons  to scroll through the letters and numbers, and press  to confirm and move on to the next character</i>
	Press menu/esc to save the name. The display shows <i>(example)</i>
	Press start/stop to immediately activate the selected cycle

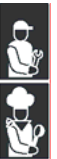
# - INSTRUCTION MANUAL -

## **CANCEL A USER'S PROGRAMMES**


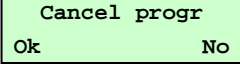

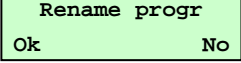

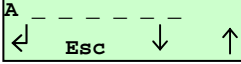





	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to confirm your choice. The display shows 
	Use the keys up and down to display 
	Press enter to confirm your choice. The display shows 
	Use the keys up and down to scroll all the memorized programmes
	Keep menu/esc pressed for 5 seconds. The display shows 
	Press enter to cancel the programme
	Press menu/esc several times to exit

## **RENAME A USER'S PROGRAMMES**

	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to confirm your choice. The display shows 
	Use the keys up and down to display 
	Press enter to confirm your choice. The display shows 
	Use the keys up and down to scroll all the memorized programmes





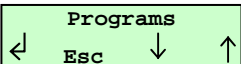

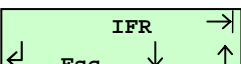

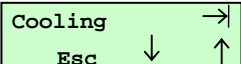

# - INSTRUCTION MANUAL -

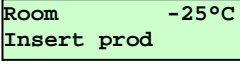
	Keep menu/esc pressed for 5 seconds. The display shows 
	Press up. The display shows 
	Press enter. The display shows  Type in the name of the programme which is to be memorised using buttons   to scroll through the letters and numbers, and press  to confirm and move on to the next character.
	Press menu/esc to confirm the new name
	Press menu/esc several times to exit

## PRE-COOLING CYCLE


It is advisable to run a cooling cycle prior to selecting any slaughter cycle.



	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to confirm your choice. The display shows 
	Use the keys up and down to display 
	Press the start/stop button to immediately activate the cooling cycle

Once the temperature in the room reaches  $-25^{\circ}\text{C}$ , the buzzer will sound for 10 seconds, and the “insert product” request will be displayed. 

Closing the door terminates the cooling cycle.

**Note:** From the main menu it is possible to immediately activate a cooling cycle; simply keep the  button pressed for 5 seconds.



# - INSTRUCTION MANUAL -

## MANUAL CYCLES

### ▪ NEGATIVE SLAUGHTER CYCLE

*WITH CORE PROBE:* cycle suitable for freezing foodstuffs using a room temperature of about -25[°C]. The cycle is controlled by the core probe.

*WITH TIMER:* cycle suitable for freezing foodstuffs using a room temperature of about -25[°C]. The cycle is time-controlled.

### ▪ SOFT POSITIVE SLAUGHTER CYCLE

*WITH CORE PROBE:* cycle suitable for cooling foodstuffs with thickness lower than 4[cm] using a room temperature of about 0[°C]. The cycle is controlled by the core probe.

*WITH TIMER:* cycle suitable for cooling foodstuffs with thickness lower than 4[cm] using a room temperature of about 0[°C]. The cycle is time-controlled.

### ▪ HARD POSITIVE SLAUGHTER CYCLE

*WITH CORE PROBE:* cycle suitable for cooling foodstuffs with thickness exceeding 4[cm] using a room temperature ranging from -25[°C] to -5[°C]. The cycle is controlled by the core probe.

*WITH TIMER:* cycle suitable for cooling foodstuffs with thickness exceeding 4[cm] using a room temperature ranging from -25[°C] to -5[°C]. The cycle is time-controlled.

**NOTE:** At the end of the slaughter or freezing cycle the system will automatically switch to the conservation mode (+2° C at the end of the positive slaughter and -22° C at the end of the freezing phase).

### Cooling time

FOODSTUFF	SHEET	MAX. LOAD	PRODUCT THICKNESS	QUICK COOLING TIME	CYCLE
<b>FIRST COURSES</b>					
Bechamel	GN1/1 h60	6 lt	4 cm	70 minutes	HARD POSITIVE
Meat broth	GN1/1 h110	8 lt	6-7 cm	110 minutes	HARD POSITIVE
Cannelloni	GN1/1 h40	4 Kg	3-4 cm	40 minutes	HARD POSITIVE
Vegetable soup	GN1/1 h100	5 lt	5 cm	100 minutes	HARD POSITIVE
Fresh pasta	GN1/1 h40	1 Kg	5 cm	20 minutes	NEGATIVE
Meat and tomato sauce	GN1/1 h60	5 Kg	5 cm	90 minutes	HARD POSITIVE
Bean soup	GN1/1 h60	5 Kg	5 cm	100 minutes	HARD POSITIVE
Fish soup	GN1/1 h60	4 Kg	5 cm	110 minutes	HARD POSITIVE
<b>MEAT AND POULTRY</b>					
Roast pork	GN1/1 h60	8 Kg	10 cm	110 minutes	HARD POSITIVE
Braised beef	GN1/1 h60	8 Kg	15 cm	110 minutes	HARD POSITIVE
Boiler beef	GN1/1 h60	6 Kg	12-18 cm	110 minutes	HARD POSITIVE
Chicken breast	GN1/1 h40	5 Kg	4-5 cm	30 minutes	SOFT POSITIVE
Roast-beef	GN1/1 h40	4 Kg	10-15 cm	80 minutes	HARD POSITIVE
<b>FISH</b>					
Baked grouper	GN1/1 h40	3 Kg	5-10 cm	110 minutes	HARD POSITIVE
Squill	GN1/1 h40	2 Kg	3 cm	25 minutes	HARD POSITIVE
Vacuum-stored mussel	GN1/1 h60	2 Kg	max 3-4 cm	20 minutes	HARD POSITIVE
Fish salad	GN1/1 h40	4 Kg	3-4 cm	30 minutes	NEGATIVE
Boiled polyp	GN1/1 h60	5 Kg	-	60 minutes	HARD POSITIVE
Stewed cuttlefish	GN1/1 h60	4 Kg	4-5 cm	60 minutes	HARD POSITIVE
<b>VEGETABLES</b>					
Carrots trifolate	GN1/1 h60	4 Kg	4-5 cm	60 minutes	HARD POSITIVE
Mushrooms trifolati	GN1/1 h60	4 Kg	4-5 cm	60 minutes	HARD POSITIVE
Zucchini trifolate	GN1/1 h60	3 Kg	4-5 cm	90 minutes	HARD POSITIVE
<b>PASTRY/DESSERT</b>					
Vanilla / chocolate pudding	GN1/1 h60	6 lt	4-5 cm	90 minutes	SOFT POSITIVE
Creme anglaise	GN1/1 h60	3 lt	4-5 cm	100 minutes	SOFT POSITIVE
Custard a	GN1/1 h60	3 lt	4-5 cm	100 minutes	SOFT POSITIVE
Panna cotta (single portion)	GN1/1 h40	3 lt	6 cm	60 minutes	SOFT POSITIVE
Ice-cream cake	GN1/1 h40	3 Kg	4-6 cm	50 minutes	SOFT POSITIVE
Tiramisù	GN1/1 h60	5 Kg	4-5 cm	45 minutes	SOFT POSITIVE



# - INSTRUCTION MANUAL -

## **NEGATIVE SLAUGHTER CYCLE WITH CORE PROBE**





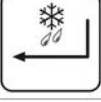


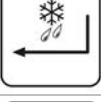

	Press menu/esc to select the desired menu
	Use the keys up and down to display
	Press enter to confirm your choice.
	Press up to display
	Press enter to confirm your choice.
	Press up to display
	Press enter to confirm your choice. The display shows <i>Use buttons   to modify the set point value of the temperature in the room.</i>
	Press enter to confirm your choice. The display shows <i>Use buttons   to modify fan speed</i>
	Press enter to confirm your choice. The display shows
	Press start/stop to immediately activate the selected cycle








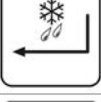

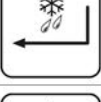


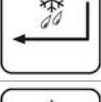




## **NEGATIVE SLAUGHTER CYCLE WITH TIME**

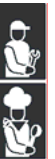
	Press menu/esc to select the desired menu
	Use the keys up and down to display
	Press enter to confirm your choice.
	Press up to display
	Press enter to confirm your choice.

# - INSTRUCTION MANUAL -

	Press up to display <span style="border: 1px solid black; padding: 2px;">Neg Time Ok    Esc    No</span>
	Press enter to confirm your choice. The display shows <span style="border: 1px solid black; padding: 2px;">Neg Time    90' ←    Esc    ↓    ↑</span> <i>Use buttons   to modify the duration of the cycle.</i>
	Press enter to confirm your choice. The display shows <span style="border: 1px solid black; padding: 2px;">Speed    100% ←    Esc    ↓    ↑</span> <i>Use buttons   to modify fan speed</i>
	Press enter to confirm your choice. The display shows <span style="border: 1px solid black; padding: 2px;">Neg Time ←    Esc    →</span>
	Press start/stop to immediately activate the selected cycle



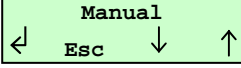







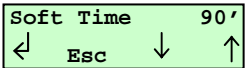
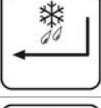
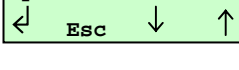
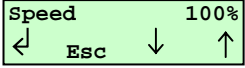
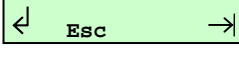

## **SOFT POSITIVE SLAUGHTER CYCLE WITH CORE PROBE**

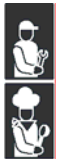
	Press menu/esc to select the desired menu
 	Use the keys up and down to display <span style="border: 1px solid black; padding: 2px;">Manual ←    Esc    ↓    ↑</span>
	Press enter to confirm your choice.
	Press up to display <span style="border: 1px solid black; padding: 2px;">Positive Soft Ok    Esc    No</span>
	Press enter to confirm your choice.
	Press up to display <span style="border: 1px solid black; padding: 2px;">Soft Core Ok    Esc    No</span>
	Press enter to confirm your choice. The display shows <span style="border: 1px solid black; padding: 2px;">Soft Core    -25°C ←    Esc    ↓    ↑</span> <i>Use buttons   to modify the set point value of the temperature in the room.</i>
	Press enter to confirm your choice. The display shows <span style="border: 1px solid black; padding: 2px;">Speed    100% ←    Esc    ↓    ↑</span> <i>Use buttons   to modify fan speed</i>
	Press enter to confirm your choice. The display shows <span style="border: 1px solid black; padding: 2px;">Soft Core ←    Esc    →</span>
	Press start/stop to immediately activate the selected cycle





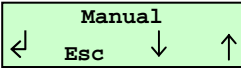


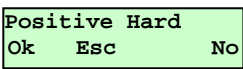

# - INSTRUCTION MANUAL -

## SOFT POSITIVE SLAUGHTER CYCLE WITH TIME


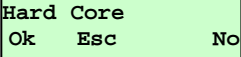




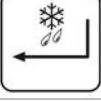



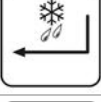
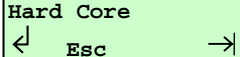

	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to confirm your choice.
	Press up to display 
	Press enter to confirm your choice.
	Press up to display 
	Press enter to confirm your choice. The display shows 
	Press enter to confirm your choice. The display shows 
	Press enter to confirm your choice. The display shows 
	Press start/stop to immediately activate the selected cycle






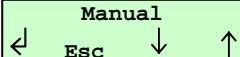
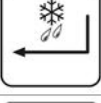

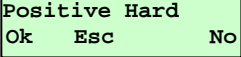
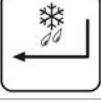

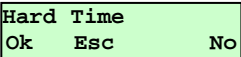

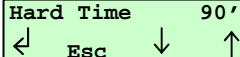


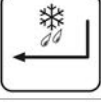




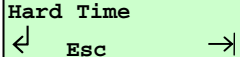

## HARD POSITIVE SLAUGHTER CYCLE WITH CORE PROBE

	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to confirm your choice.
	Press up to display 
	Press enter to confirm your choice.

# - INSTRUCTION MANUAL -

	Press up to display 
	Press enter to confirm your choice. The display shows  Use buttons   to modify the set point value of the temperature in the room.
	Press enter to confirm your choice. The display shows  Use buttons   to modify fan speed
	Press enter to confirm your choice. The display shows 
	Press start/stop to immediately activate the selected cycle

## **HARD POSITIVE SLAUGHTER CYCLE WITH TIME**

	Press menu/esc to select the desired menu
 	Use the keys up and down to display 
	Press enter to confirm your choice.
	Press up to display 
	Press enter to confirm your choice.
	Press up to display 
	Press enter to confirm your choice. The display shows  Use buttons   to modify the duration of the cycle.
	Press enter to confirm your choice. The display shows  Use buttons   to modify fan speed
	Press enter to confirm your choice. The display shows 
	Press start/stop to immediately activate the selected cycle






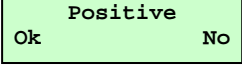

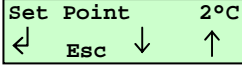

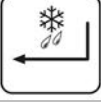
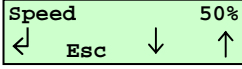

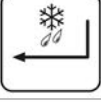




# - INSTRUCTION MANUAL -

## STORE



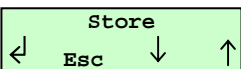


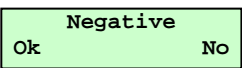

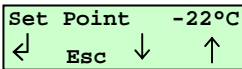

Storing cycles and quick cooling cycles can be started separately

### POSITIVE STORE




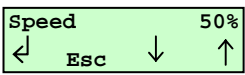

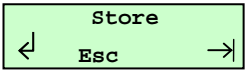

	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to confirm your choice.
	Press up to display 
	Press enter to confirm your choice. The display shows  Use buttons  to modify the set point value of the temperature in the room.
	Press enter to confirm your choice. The display shows  Use buttons  to modify fan speed.
	Press enter to confirm your choice. The display shows 
	Press the key start/stop to start the storing cycle immediately



### NEGATIVE STORE

	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to confirm your choice.
	Press up to display 
	Press enter to confirm your choice. The display shows  Use buttons  to modify the set point value of the temperature in the room.



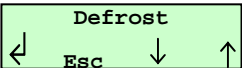
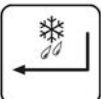
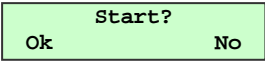

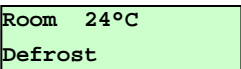
# - INSTRUCTION MANUAL -

	<p>Press enter to confirm your choice. The display shows          Use buttons   to modify fan speed.</p>	
	<p>Press enter to confirm your choice. The display shows</p>	
	<p>Press the key start/stop to start the storing cycle immediately</p>	




# - INSTRUCTION MANUAL -

## DEFROSTING

	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to gain access to the defrost activation The display shows 
	Press enter to immediately activate the defrosting cycle. The display shows 



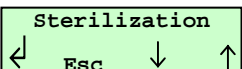

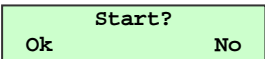

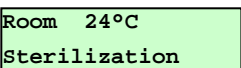
Press  to deactivate the defrosting cycle

**Note:** immediate defrost can be started from the main menu by pressing the key  for at least 5 seconds

## STERILIZATION



**NOTE:** the germicidal lamp kit is not supplied as standard equipment. It is an optional item.

	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to gain access to the defrost activation The display shows 
	Press enter to gain access to the mode for starting sterilisation The display shows 

Opening the door interrupts the sterilisation process; press  to deactivate the sterilisation.



# - INSTRUCTION MANUAL -

## PRINT



**NOTE:** the printer is not supplied as standard equipment. It is an optional item.

	Press menu/esc to select the desired menu
	Use the keys up and down to display
	Press enter to gain access to the mode for printing the quick cooling cycles memorized The display shows
	Press Enter to start printing the memorized cycles  ( <i>quick cooler name, date, number of programme being used, name of programme being used, temperature setpoint and quick cooling type, starting time and room/core temperature, end-of-cycle time and room/core temperature</i> ) <div style="float: right; font-size: small;">                     10:54 19°C Stop                      10:49 19°C Start                      Cella                      +3°C Hard Tempo                      ABB PROD AVICOLI                      Programma: 26                      Data: 21/02/2005                      ABBATTITORE FRODO                 </div>

## CLOCK SETTING

See installation manual (page 30).



## LANGUAGE

See installation manual (page 30).

## ALARM

See installation manual (page 31).

## SERVICE

See installation manual (page 33).

## INPUTS/OUTPUTS

See installation manual (page 39).

# - INSTRUCTION MANUAL -

## MAINTENANCE

## CHAPTER 4

### MAINTENANCE AND CLEANING

#### CLEANING THE CABINET

Clean inside the cooling cabinet daily.

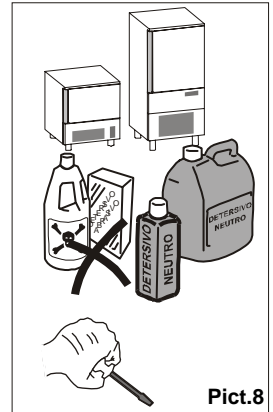
Both the cabinet and all the internal components have been designed and shaped to allow washing and cleaning all parts easily.

Before cleaning, defrost the appliance and remove the internal drain.

Disconnect the master switch.

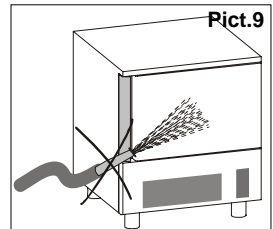
Clean all components (stainless-steel, plastic or painted parts) with lukewarm water and detergent.

Then rinse and dry without using abrasives or chemical solvents. **(pict.8)**



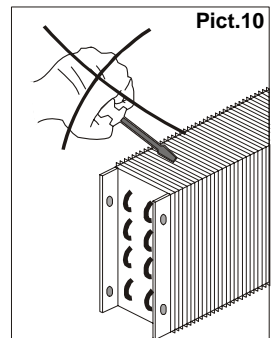
Pict.8

Do not wash the appliance by spraying high-pressure water on the machine. **(pict.9)**



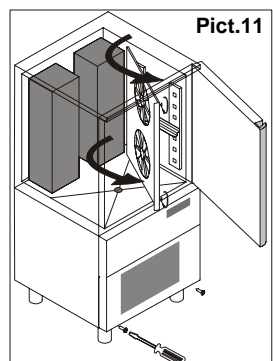
Pict.9

Do not rinse with sharp or abrasive tools, especially the evaporator. **(pict.10)**



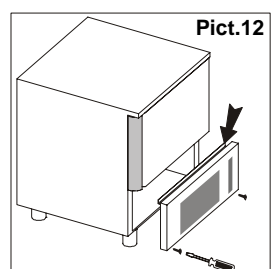
Pict.10

You may clean inside the evaporator after loosening the knobs and rotating the protection component. **(pict.11)**



Pict.11

Remove the front control board with a tool and clean the raceway to remove all dirt. **(pict.12)**

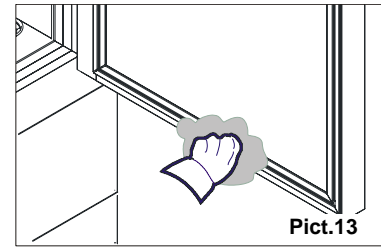


Pict.12



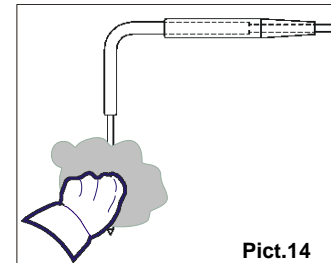
# - INSTRUCTION MANUAL -

Wash the door gasket with water. Accurately dry with a dry cloth. We recommend wearing protecting gloves throughout the operations. (pict.13)



Hand-wash the probe using lukewarm water and a mild detergent or products with biodegradability higher than 90%. Rinse with water and sanitary solution. Do not use detergents containing solvents (such as trichloroethylene, etc) or abrasive powders

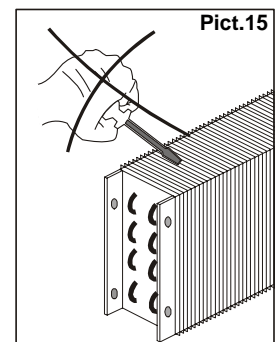
ATTENTION: do not use hot water to wash the probe (pict.14)



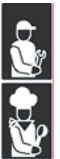
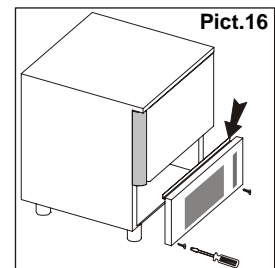
## CLEANING THE AIR CONDENSER

The air condenser should be kept clean to ensure the appliance's performance and efficiency, as air should freely circulate inside the appliance. (pict.15)

The condenser should therefore be cleaned every 30 days, using non-metal brushes to remove all dust and dirt from condenser blades.



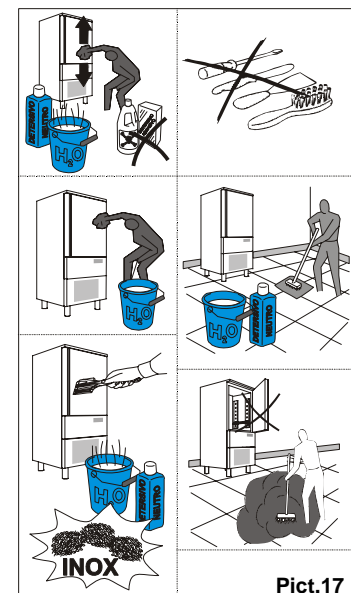
Access to the condenser is obtained by removing the front panel. (pict.16)



## STAINLESS-STEEL MAINTENANCE

By stainless steel we mean INOX AISI 304 steel. We recommend following the instructions below for the maintenance and cleaning of stainless-steel parts. This is of the utmost importance to ensure the non-toxicity and complete hygiene of the processed foodstuffs. Stainless-steel is provided with a thin oxide layer which prevents it from rusting. However, some detergents may destroy or affect this layer, therefore causing corrosion. Before using any cleansing product, ask your dealer about a neutral chloriness cleansing product, as to avoid steel corrosions. If the surface has been scratched polish it with fine STAINLESS-STEEL wool or a synthetic-fibre abrasive sponge. Always rub in the direction of the silking. (pict.17)

**WARNING:** Never use iron wool for cleaning STAINLESS STEEL. Furthermore, avoid leaving iron wool on the appliance surface as tiny iron deposits may cause the surface to rust by contamination and affect the hygiene of the appliance.

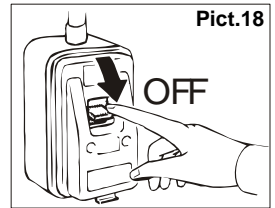


# - INSTRUCTION MANUAL -

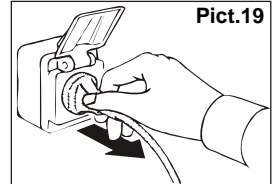
## DISCONTINUED USE

Should the machine be disconnected over long periods, follow the instructions below to maintain the appliance in good condition:

Turn the mains switch OFF. (**pict.18**)



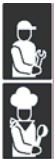
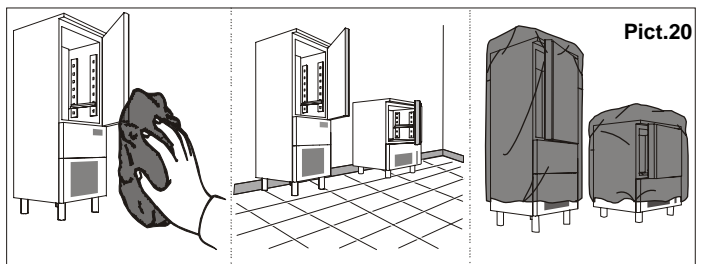
Disconnect the plug. (**pict.19**)



Empty the appliance and clean it in accordance with the instructions given in the chapter "CLEANING". Leave the door ajar to prevent a bad smell.

Cover the compressor unit with a nylon cloth to protect it from dust. (**pict.20**)

In case of appliances with remote control, if you decide to turn it off, remember to put the switch off also in the remote control.

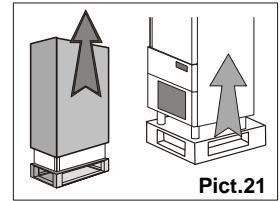


# - INSTALLATION MANUAL -

## INSTALLATION

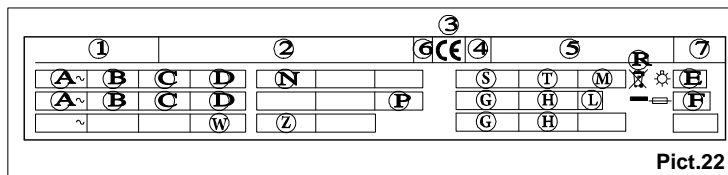
### INTRODUCTION

After unpacking the appliance make sure it has not been damaged. **(pict.21)**  
 Make sure the technical wiring specifications comply with the ratings (i.e., V, kW, Hz, no. phases and mains power). Check the power supply type, adjustments, performance and calibration of the device located before the appliance. Check and record the coolant type inside the system and refer to the recorded data in any refill.



Pict.21

Please quote the product's serial number (shown on the rating plate) on any enquiry to the Manufacturer. **(pict.22)**



Pict.22

List of rates shown on the rating plate:

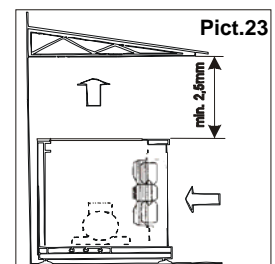
- |   |  |
|---|--|
| <ul style="list-style-type: none"> <li>1) Model</li> <li>2) Manufacturer's name and address</li> <li>3) CE mark</li> <li>4) Year of make</li> <li>5) Serial number</li> <li>6) Power insulation class</li> <li>7) Power protection class</li> <li>A) Input voltage</li> <li>B) Electric current intensity</li> <li>C) Frequency</li> <li>D) Rated power</li> <li>E) Total lamp power</li> </ul> | <ul style="list-style-type: none"> <li>F) Fuse current</li> <li>G) Coolant type</li> <li>H) Coolant q.ty</li> <li>L) Temperature grade</li> <li>M) Max hydraulic supply pressure</li> <li>N) Room temperature</li> <li>P) Expanding fluid</li> <li>R) WEEE Symbol</li> <li>S) Water inlet temperature</li> <li>T) Water consumption</li> <li>W) Heating unit power</li> <li>Z) Least pressure</li> </ul> |
|---|--|



### MAX ROOM TEMPERATURE (TAB.4)

Air-condenser units should not operate if room temperature is over 38°C. Above 32° C maximum output is not guaranteed.

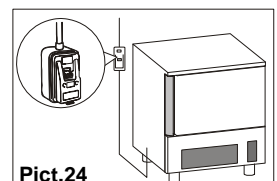
The remote condensers must be installed outdoors out of direct sunlight or in suitable rooms. Always make sure that air ventilation is present. Check that suitable covers **(pict.23)** are used.



### POSITIONING

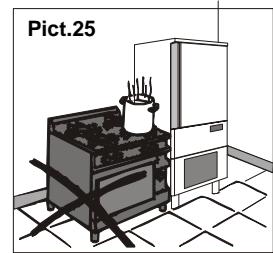
The appliance must be installed and tested in full compliance with accident-prevention regulations contained in national law and current guidelines. Installers are to comply with any current local regulations.

- An omnipolar switch is to be installed before the appliance, in compliance with the current regulations applied in the country where the appliance is installed. **(pict.24)**

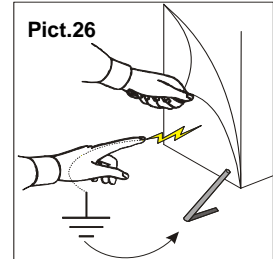


# - INSTALLATION MANUAL -

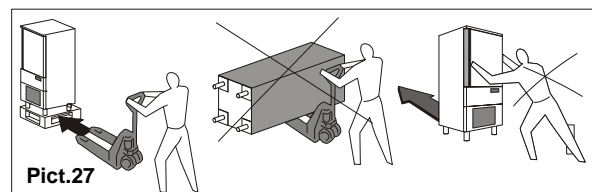
- Do not place the refrigerated compartment near heat sources. (pict.25)



- Remove pvc protective film from all over the appliance. (pict.26)

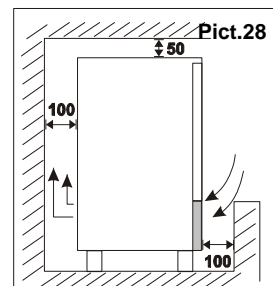


- Place the appliance onto the required working site. (pict.27)



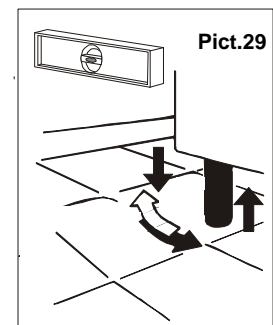
- Avoid locations with exposure to direct sunlight.
- Do not place the appliance in hot, poorly-ventilated rooms.

- Leave a min. 100-mm clearance around the appliance on the sides where air inlet and outlet are located. (pict.28)

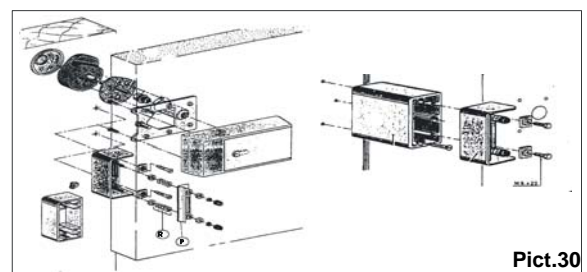


For models, depth 700, it is possible to bring the rear of the appliance closer to the wall.

- Level the appliance by means of adjustable feet. (pict.29)



- In case of 72 kg and 144 kg blast chillers, set the handle moving the washers before or after the P plate. (pict.30)
- Use suitable fork lift trucks to level heavier appliances (20-kg models onwards).

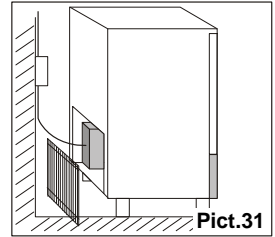


**WARNING:** If the appliance is not properly levelled the performance and condensate drain may be hampered.

# - INSTALLATION MANUAL -

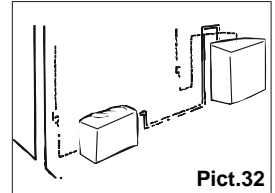
## WIRING

The connection to power supply may be carried out at the back of the appliance after removing the protection grid. (pict.31)

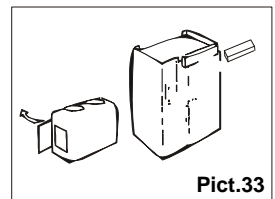


**IMPORTANT:** 10kg models are equipped with a 2-mt single-phase cable without plug. 20kg/30kg models are equipped with a 2-mt three-phase supply cable without plug. 40kg models are equipped with a 3.5m three-phase supply cable without plug.

In models with distance condenser the cabinet and the unit (pict.32) must be connected separately.



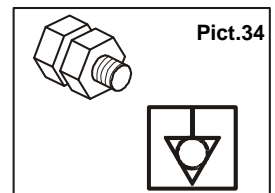
Remove the electric board panel to access the cabinet terminal board. Open the lateral panel of the electrical board (pict.33) in the condenser.



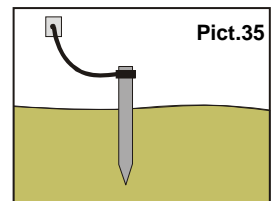
## PLEASE USE CERTIFIED APPROVED MATERIALS

All wiring cables are to comply with the ratings shown on the technical specifications.

Cables are to be connected to the equipotential terminal. (pict.34)

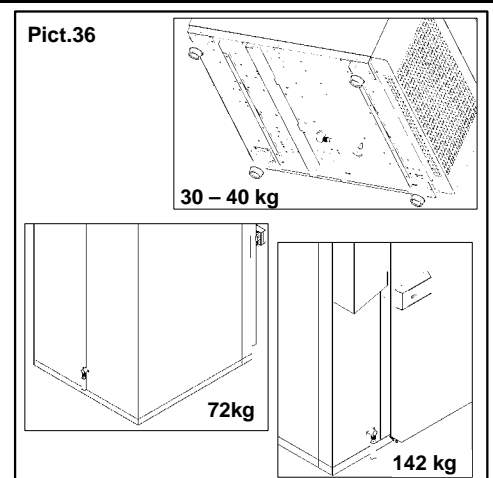


The grounding cable is to be directly connected to a good grounding system. (pict.35)



## CONNECTION TO CONDENSATE DRAIN

On certain models, a condensation discharge  $\varnothing$  30mm hose installation is necessary, "SAREL" or any similar type). The current general and local regulations as to drains are to be complied with. (pict.36)



The guarantee will cease and the Manufacturer will not be liable for any damage to appliances or operators arising from the non-compliance with the and tamperings to any part of the appliance (electric, thermodynamic or hydraulic plant).

# - INSTALLATION MANUAL -



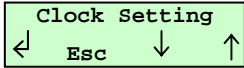

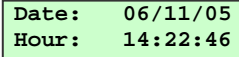

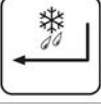

## TESTING

Carry out the following checkings:

- 1) Outside temperatures must be included between 10°C and 43°C.
- 2) Turn on the appliance and wait 30 minutes before the use if the external temperature is "low".
- 3) Check power input.
- 4) Carry out at least one full quick cooling cycle



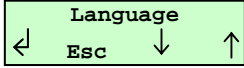
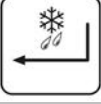
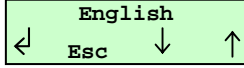

Should the appliance have been transported horizontally instead of a vertical position DO NOT START THE APPLIANCE IMMEDIATELY. WAIT FOR AT LEAST 4 HOURS BEFORE OPERATING.

## CLOCK SETTING

	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to gain access to the clock setting mode The display shows 
	Use the keys up and down to change the flashing digit
	Press enter to confirm and pass to the next value
	Press menu/esc several times to exit





## LANGUAGE



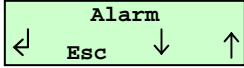


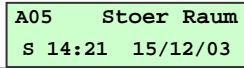

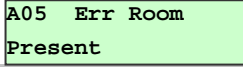


	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to display the first language available 
	Use the keys up and down to select the desired language



# - INSTALLATION MANUAL -

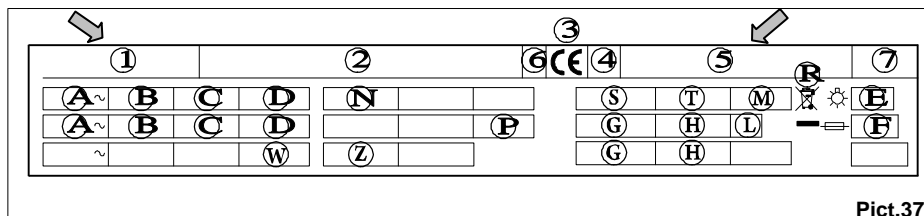
	Press enter to confirm your choice
	Press menu/esc several times to exit

## ALARMS AND FAULT ANALYSIS (TAB.5)

	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	<p>Press enter to gain access to the mode for displaying alarms</p> <p>If there are no alarms memorized, the display shows </p> <p>If there are alarms memorized, the display shows the last alarm starting time as well as the progressive number ranging from A01 to A30 </p>
	<p>Press enter to get further information about the alarm. The max. or min. temperature, the duration, call SERVICE, the alarm de-activation time or the indication that the alarm is still in progress.</p> 
	Use the keys up and down to display all the memorized alarms
	Press menu/esc several times to exit



If the fault is not corrected by following the above instructions ask for skilled assistance and avoid carrying out any other operations, especially on the electricals. When informing the servicing company of the fault, state 1 and 5 numbers (pict.37)



# - INSTALLATION MANUAL -

**TAB.5**

FAULT	CAUSE	REMEDY
No voltage on Anomalous stop	No power supply Blown fuse Loosened connections	Restore power supply Replace fuses Check connection fitting
Compressor failure	High and Low-pressure pressure-switch on Clicker on Contactor failure Compressor thermal relay on	Ask for skilled assistance Ask for skilled assistance Ask for skilled assistance Ask for skilled assistance
The compressor is working but the cabinet is not cooling	Frosted evaporator No coolant inside the refrigerating system Delivery solenoid valve failure	Open the door and carry out defrost cycle Ask for skilled assistance Ask for skilled assistance
Evaporator fans are not working	Fan failure or short-circuit Door micro failure	Ask for skilled assistance Ask for skilled assistance
The cycle cannot start	Wrong cycle programming	Check time and temperature parameters
AL High Press	Pressostat intervention	Qualified technician required
AL Room Probe	Room Probe interrupted	Qualified technician required
AL Evap Probe	Evap Probe interrupted	Qualified technician required
AL Cond Probe	Cond Probe interrupted	Qualified technician required
AL Needle Probe	Needle Probe interrupted	If a probe cycle is running, the cycle is time-controlled Qualified technician required
AL Insert Needle	Needle Probe not inserted	Check the probe inserting cone
High T Room	Room Temp above set value	If the temperature is not within the specified range, apply to a qualified technician
Low T Room	Room Temp below set value	If the temperature is not within the specified range, apply to a qualified technician
AL BlackOut	No power supply	When power is restored, check the max. temperature reached inside the room
AL Door Open	QC room door open Door micro faulty	Close the door Qualified technician required



# - INSTALLATION MANUAL -

## SERVICE

### PARAMETERS

#### DESCRIPTION OF PARAMETERS

Parameter	Description	Default (IS...)	Default (IA...)	Default (DS...)	min	MAX
<b>POSITIVE QUICK COOLING</b>						
P01	Room SetPoint in pos. quick cooling, Soft phase	-5°C	-5°C	-5°C	-30°C	30°C
P02	SetPoint cella in abbattimento Hard	-25°C	-25°C	-25°C	-40°C	30°C
P03	Needle SetPoint in pos. quick cooling , Soft phase	3°C	3°C	3°C	-30°C	30°C
P04	Needle SetPoint in Hard quick coolong	20°C	20°C	20°C	-30°C	30°C
P05	Positive quick cooling duration	90min	90min	90min	0min	900min
P06	Hard phase duration expressed as % in relation to P05	60%	60%	60%	0%	100%
P07	Room SetPoint in pos. storing	2°C	2°C	2°C	-30°C	30°C
<b>NEGATIVE QUICK COOLING</b>						
N01	Room SetPoint in neg, quick cooling	-25°C	-25°C	-25°C	-40°C	30°C
N02	Needle SetPoint in neg. quick cooling	-18°C	-18°C	-18°C	-30°C	30°C
N03	Negative quick cooling duration	240min	240min	240min	0min	900min
N04	Room SetPoint in neg. storing	-22°C	-22°C	-22°C	-40°C	30°C
<b>ALARMS</b>						
A01	Temperature alarm hysteresis	2°C	2°C	2°C	0°C	10°C
A02	High temperature limit alarm in pos. storing in relation to P07	10°C	10°C	10°C	0°C	50°C
A03	Low temperature limit alarm in pos. storing in relation to P07	-10°C	-10°C	-10°C	-50°C	0°C
A04	High temperature limit alarm in neg. storing in relation to N04	10°C	10°C	10°C	0°C	50°C
A05	Low temperature limit alarm in neg. storing in relation to N04	-10°C	-10°C	-10°C	-50°C	0°C
A06	Temperature alarm delay from storing or defrost start	60min	60min	60min	0min	300min
A07	Temperature alarm delay	30min	30min	30min	0min	300min
A08	Duration of the buzzer in the alarm mode	1min	1min	1min	0min	240min
<b>DISPLAY</b>						
D01	Temperature unit of measurement (0 Celsius; 1 Fahrenheit)	0	0	0	0	1
D02	Room probe Offset	0°C	0°C	0°C	-10°C	10°C
D03	BackLight (0 on when pressing a key; 1 always on)	1	1	1	0	1
D04	Heart probe offset	-7°C	-7°C	-7°C	-10°C	10°C
D05	Subcutaneous probe offset	-7°C	-7°C	-	-10°C	10°C
D06	External probe offset	-7°C	-7°C	-	-10°C	10°C
<b>DEFROST</b>						
S01	Performs defrost on quick cooling start 0 = No; 1 = Yes	0	0	0	0	1
S02	End-of-defrost temperature	8°C	8°C	8°C	-10°C	30°C
S03*	Defrost max. duration	15 min	15 min	15 min	1 min	90 min
S04	Interval between defrosts in storing (0=excluded)	0 ore	0 ore	0 ore	0	18 ore
S05*	Type of defrost: 0= electrical or due to compressor stop 1= hot gas 2= air	2	2	2	0	2
S06*	Dripping time	1 min	1 min	1 min	0 min	90 min
S07	Compressor activation delay with hot gas defrost	0 sec	0 sec	0 sec	0 sec	600 sec
S08	First defrost activation time from storing start (0=excluded)	0	0	0	0	90 min
S09	Ignores compressor protection delays in defrost	0	0	0	0	1



# - INSTALLATION MANUAL -

Parameter	Description	Default (IS...)	Default (IA...)	Default (DS...)	min	MAX
<b>S10*</b>	Defrost type started through keyboard: 0= electrical or due to compressor stop 1= hot gas 2= air	2	2	2	0	2
<b>CONFIGURATION</b>						
<b>C01</b>	Door input (0 de-activated; 1 activated)	1	1	1	0	1
<b>C02</b>	Door open polarity	0	0	0	0	1
<b>C03</b>	Door open alarm delay	2 min	2 min	2 min	0 min	60 min
<b>C04</b>	Activates buzzer (0 de-activated; 1 activated)	1	1	1	0	1
<b>C05</b>	Buzzer duration at the end of quick cooling cycle	10 sec	10 sec	10 sec	0	600 sec
<b>C06</b>	Temperature difference in the first phase of needle insertion test (0 = test excluded)	7°C	7°C	7°C	0	60°C
<b>C07</b>	Duration of the second phase of needle insertion test (0=test excluded)	56 sec	56 sec	56 sec	0	600 sec
<b>C08*</b>	Activates condenser probe 0 = no probe 1 = probe	1	1	1	0	1
<b>C09</b>	Compressor stop delay due to door opening	30 sec	30 sec	30 sec	0 sec	60 sec
<b>C10</b>	Pressostat alarm detection time	5 sec	5 sec	5 sec	0 sec	60 sec
<b>C11</b>	High pressure digital input polarity	0	0	0	0	1
<b>C12</b>	Resistances starting SetPoint	-5°C	-5°C	-5°C	-10°C	20°C
<b>ADJUSTMENT</b>						
<b>R01</b>	Compressor start/stop hysteresis	2°C	2°C	2°C	0°C	20°C
<b>R02</b>	Min. interval between 2 compressor starting	2 min	2 min	2 min	0 min	30 min
<b>R03</b>	Compressor start delay from card activation	0 sec	0 sec	0 sec	0 sec	300 sec
<b>R04</b>	Compressor Duty-Cycle time with faulty room probe in storing	10 min	10 min	10 min	0 min	90 min
<b>R05</b>	Compressor ON time faulty room in pos. storing	3 min	3 min	3 min	0 min	90 min
<b>R06</b>	Compressor ON time with faulty room in neg. storing	8 min	8 min	8 min	0 min	90 min
<b>R07</b>	Needle min. temperature for starting quick cooling	70°C	70°C	70°C	0°C	90°C
<b>R08</b>	Compressor inhibition temperature	90°C	90°C	90°C	0°C	100°C
<b>R09</b>	Compressor Protection function activation time	24 ore	24 ore	24 ore	0 ore	240 ore
<b>R10</b>	Pulse duration	2 sec	2 sec	2 sec	1 sec	10 sec
<b>R11</b>	Pause between pulses	4 sec	4 sec	4 sec	1 sec	10 sec
<b>R12</b>	Number of pulses	3	3	3	1	20
<b>R13</b>	Temperature at the end of the Cooling cycle	-25°C	-25°C	-25°C	-50°C	10°C
<b>STERILIZATION</b>						
<b>U01</b>	Sterilization duration	20 min	20 min	20 min	1 min	99 min
<b>FANS</b>						
<b>F01</b>	Evaporator fans activation hysteresis	2°C	2°C	2°C	0°C	20°C
<b>F02</b>	Condenser fans activation hysteresis	2°C	2°C	2°C	0°C	20°C
<b>F03</b>	Evaporator fans activation SetPoint	5°C	5°C	5°C	-50°C	50°C
<b>F04</b>	Condenser fans activation SetPoint	15°C	15°C	15°C	-50°C	50°C
<b>F05</b>	Evaporator fans during defrost 0 = fans OFF; 1 = fans ON	0	0	0	0	1
<b>F06</b>	Condenser fans during defrost 0 = fans OFF; 1 = fans ON	0	0	0	0	1
<b>F07*</b>	Fans stop time after defrost	1 min	1 min	1 min	0 min	30 min
<b>F08</b>	Condenser fans stop delay	30 sec	30 sec	30 sec	0 sec	300 sec
<b>F09</b>	Evaporator fans control during quick cooling: 0 = fans always ON 1 = fans thermostated by evaporator temperature	0	0	0	0	1
<b>F10</b>	Evaporator fans control during storing: 0 = fans in parallel with the compressor 1 = fans thermostated by evaporator temperature	0	0	0	0	1



# - INSTALLATION MANUAL -

Parameter	Description	Default (IS...)	Default (IA...)	Default (DS...)	min	MAX
<b>F11*</b>	Evaporator fans inhibition temperature	70°C	70°C	70°C	0°C	90°C
<b>PRINT</b>						
<b>PR1</b>	Sampling time	10 min	10 min	10 min	1 min	60 min
<b>VENTILATION SPEED (P.W.M.)</b>						
<b>CF1</b>	Evaporator fan min. speed	30	30	-	0	100
<b>CF2</b>	Evaporator fan min. speed selectable in a quick cooling cycle	50	50	-	0	100
<b>I.F.R.</b>						
<b>B01</b>	Room thermostating temperature in the first phase	-45°C	-45°C	-	-50°C	+50°C
<b>B02</b>	Subcutane T control start temperature	5°C	5°C	-	-50°C	+99°C
<b>B03</b>	First coefficient of the control relation	0	0	-	-50	+50
<b>B04</b>	Second coefficient of the control relation	0	0	-	-50	+50
<b>B05</b>	Third coefficient of the control relation	-8	-8	-	-50	+50
<b>B06</b>	Subcutane T initial value determining the end of the first phase	-1°C	-1°C	-	-50°C	+99°C
<b>B07</b>	Phase two formula coefficient	99	99	-	0	+99
<b>B09</b>	Subcutane t min. value allowed during the third phase	0	0	-	-50°C	+99°C
<b>B10</b>	End of intelligent quick cooling core temperature	4°C	4°C	-	-50°C	+99°C
<b>B11</b>	Delay from the positive result of the needle test for starting the procedure to determine the end of the first phase	60 sec	60 sec	-	0 sec	+99 sec
<b>B12</b>	First phase temperature detection time	30 sec	30 sec	-	0 sec	+99 sec
<b>B13</b>	First phase min. duration	6 min	6 min	-	0 min	+99min
<b>B16</b>	Defrost on starting intell. QC cycle (0=no 1=yes)	0	0	-	0	1
<b>B17</b>	Inhibition temperature	90°C	90°C	-	-50°C	+99°C
<b>B18</b>	Room Set point in the event of automatic switch to time or temperature mode	-7°C	-7°C	-	-50°C	+99°C
<b>B19</b>	Max. duration possible for intelligent QC process	999 min	999 min	-	1 min	999 min
<b>B20</b>	Subcutane T safety value determining the end of the first phase	-1°C	-1°C	-	-50°C	+99
<b>B21</b>	First coefficient of the room thermostating curve (third phase)	10	10	-	-90	+99
<b>B22</b>	Second coefficient of the room thermostating curve (third phase)	-50	-50	-	-90	+99
<b>B23</b>	Storing activation at the end of intell. QC cycle (0 = no; 1 = yes)	1	1	-	0	1
<b>B24</b>	Room thermostating Set-point in storing	2°C	2°C	-	-90°C	+90°C
<b>B26</b>	Core temperature limit for the timer start	999	999	-	0	+999
<b>B27</b>	Adjuster of fans speed in the third phase	99	99	-	0	+99
<b>B28</b>	Cold pulse adjuster	10	10	-	0	+99
<b>COMMUNICATION</b>						
<b>ADD</b>	Device Address	1	1	1	1	147
<b>SC</b>	Serial Control : 0 = not activated 1 = print 2 = ModBus (RS485)	1	1	1	0	2
<b>MB1</b>	BaudRate: 0 = 2400; 1 = 4800; 2 = 9600; 3 = 18200	2	2	2	0	3
<b>MB2</b>	Parity: 0 = no parity; 1 = odd; 2 = even	2	2	2	0	2
<b>TYPE OF CYCLE</b>						
<b>G01</b>	Positive QC cycles only : 0 = Positive and Negative 1 = Positive only	0	0	0	0	1



\* In IS models... with remote assembly, replace the default value of the following parameters:



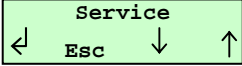

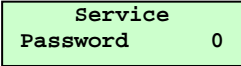


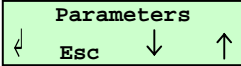

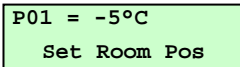





**C08 = 0;**

In **ISR201R** and **ISR202R** models, replace the default value of the following parameters:

**S03 = 30 min.; S05 = 0; S06 = 7 min.; S10 = 0; C08 = 0; F07 = 5 min.; F11 = 65°C**

# - INSTALLATION MANUAL -



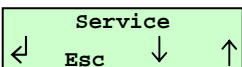
## **CHANGING PARAMETERS**

	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to confirm your choice. The display shows  (only the 1st time)
	Use the keys up and down to select the password “-19”
	Press enter to confirm your choice. The display shows 
	Press enter to gain access to the parameter programming mode The first parameter is displayed 
	Use the keys up and down to scroll all the controller parameters
	Press enter to confirm your choice
	Use the keys up and down to select the new value of the parameter
	Press enter to confirm your choice
	Press menu/esc several times to exit



## RESET MEMORY

*This function cancels the memorised data, but not the memorised user's programmes.*

	Press menu/esc to select the desired menu
	Use the keys up and down to display 

# - INSTALLATION MANUAL -

	Press enter to confirm your choice. The display shows <span style="border: 1px solid black; padding: 2px;">Service Password 0</span> (only the 1st time)
	Use the keys up and down to select the password “-19”
	Press enter to confirm your choice. The display shows <span style="border: 1px solid black; padding: 2px;">Parameters Esc ↓ ↑</span>
	Use the keys up and down to display <span style="border: 1px solid black; padding: 2px;">Reset Memory Esc ↓ ↑</span>
	Press enter to gain access to the mode for cancelling the data stored in the memory The display shows <span style="border: 1px solid black; padding: 2px;">Reset Memory? Ok No</span>
	Press Enter to cancel the whole memory
	Press menu/esc several times to exit

## RESTORE



*This function restores the original parameters.*

**ATTENTION:** should you use the device with the “RESTORE” option, available on the card, please apply to the manufacturer for proper setting of the electronic controller configuration parameters.



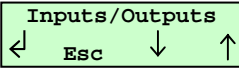
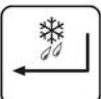


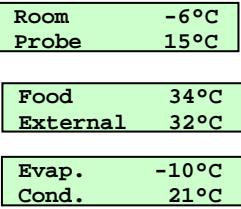




	Press menu/esc to select the desired menu
	Use the keys up and down to display <span style="border: 1px solid black; padding: 2px;">Service Esc ↓ ↑</span>
	Press enter to confirm your choice. The display shows <span style="border: 1px solid black; padding: 2px;">Service Password 0</span> (only the 1st time)
	Use the keys up and down to select the password “-19”
	Press enter to confirm your choice. The display shows <span style="border: 1px solid black; padding: 2px;">Parameters Esc ↓ ↑</span>
	Use the keys up and down to display <span style="border: 1px solid black; padding: 2px;">Restore Esc ↓ ↑</span>
	Press enter to gain access to the mode for cancelling the data stored in the memory The display shows <span style="border: 1px solid black; padding: 2px;">Restore? Ok No</span>

# - INSTALLATION MANUAL -

	Press Enter to cancel the whole memory
	Press menu/esc several times to exit

## INPUTS/OUTPUTS

	Press menu/esc to select the desired menu
	Use the keys up and down to display 
	Press enter to gain access to the mode for displaying inputs and outputs The display shows 
	Use the keys up and down to scroll the data to display  Room and Needle temperature values Rod temperature value Evaporator and Condenser temperature values Outputs state 1 = relay activated 0 = relay de-activated  Digital inputs state and evaporator fan speed
	Press menu/esc several times to exit

<b>C</b>	Compressor	<b>R</b>	Door resistance
<b>D</b>	Defrost	<b>A</b>	Alarm
<b>FE</b>	Evaporator fan	<b>DI1</b>	Inputs state micro
<b>FC</b>	Condenser fan	<b>DI2</b>	Inputs state thermostat
<b>L</b>	Sterilisation	<b>FAN</b>	Evaporator fan speed

## STERILIZATION LAMP INSTALLATION

**The sterilization lamp kit is not supplied as standard equipment.**  
Should you purchase the kit, please follow the installation instructions to install.

## PRINTER INSTALLATION

**The printer is not supplied as standard equipment .**  
Should you purchase the printer, please follow the installation instructions to install.

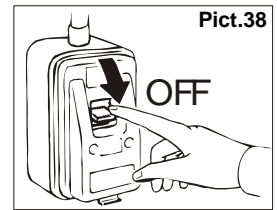


# - INSTALLATION MANUAL -

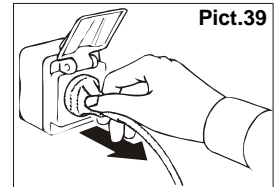
## MAINTENANCE OF PANEL BOARD

The following operations are to be carried out by skilled staff only.

Turn the mains switch OFF. (**pict.38**)



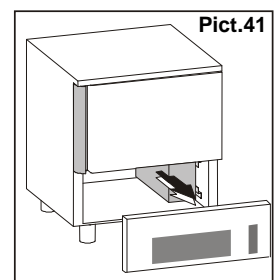
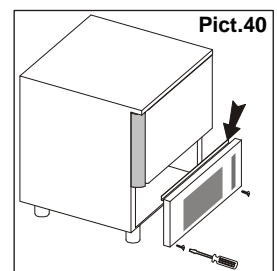
Disconnect the plug. (**pict.39**)



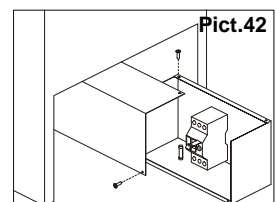
To be able to access the electric picture:

*Mod. 10Kg*

Remove the front panel (**pict.40**) with a tool and move the electric board box (**pict.41**) along the slides

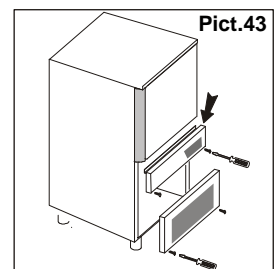


Remove the electrical board cover with a tool to access the internal components.  
Two delayed fuses are inserted in the power supply line.  
For replacement remove the cover by unscrewing the fixing screws, extract the blown fuse and replace it with a fuse having the same characteristics. (**pict.42**)

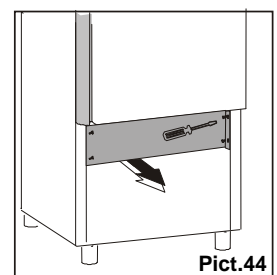


*Mod. 20Kg-30Kg-40Kg*

Remove the front panel (**pict.43**) and the control panel by means of a suitable tool.

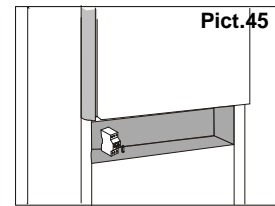


Remove the cover to have access to the components using a suitable tool (**pict.44**).



# - INSTALLATION MANUAL -

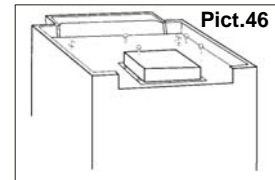
Two delayed fuses are inserted in the power supply line; extract the blown fuse and replace it with a fuse having the same characteristics. (pict.45)



Mod. 72Kg-144Kg

Remove the electrical board cover with a tool to access the internal components from above.

Two delayed fuses are inserted in the power supply line. For replacement remove the cover by unscrewing the fixing screws, extract the blown fuse and replace it with a fuse having the same characteristics. (pict.46)



## WIRING DIAGRAM PLATE

The diagram is shown on pict.47.

## CONTROL AND SAFETY SYSTEMS

The following information concerns skilled staff only:

- **Door micro-switch:** Prevents the appliance from working when the door is open
- **Overall protection fuses:** Protect the whole power circuit from and short-circuits and overloads
- **Compressor thermal relay:** Operates in case of an overload or working failures
- **Motor-fan thermal relay:** Operates in case of an overload or working failures
- **Safety pressure-switch:** Operates in case of coolant over-pressure
- **Cabinet temperature control:** Is run by NTC probe through the relevant electronic card
- **Core temperature control:** Is run by PT100 probe through an electronic card
- **Controlled substances leakage:** appliances with a content of coolant exceeding 3 kg should be checked for leakage yearly



## DISPOSAL

### WASTE STORAGE

At the end of the product life, avoid release to the environment. The doors should be removed before disposal. Temporary storage of special waste is permitted while waiting for disposal by treatment and/or final collection. Dispose of special waste in accordance with the laws in force with regard to protection of the environment in the country of the user.

### PROCEDURE FOR ROUGH DISMANTLING THE APPLIANCE

All countries have different legislation; provision laid down by the laws and the authorised bodies of the countries where the demolition takes place are therefore to be observed. A general rule is to deliver the appliance to specialised collection and demolition centres. Dismantle the refrigerator grouping together the components according to their chemical nature. The compressor contains lubricating oil and refrigerant, which may be recycled. The refrigerator components are considered special waste, which can be assimilated with domestic waste. Make the appliance totally unusable by removing the power cable and any door locking mechanisms in order to avoid the risk of anyone being trapped inside.


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

**THE SAFE DISPOSAL OF WASTE FROM ELECTRICAL AND ELECTRONIC EQUIPMENT (WEEE DIRECTIVE 2002/96/EC)**

**Do not dump pollutant material in the environment. Dispose of it in compliance with the relevant laws.**

# - INSTALLATION MANUAL -

Under the WEEE (Waste Electrical and Electronic Equipment) Directive 2002/96/EC, when scrapping equipment the user must dispose of it at the specific authorised disposal centres, or reassign it, still installed, to the original seller on purchase of new equipment.

All equipment which must be disposed of in accordance with the WEEE Directive 2002/96/EC is marked with a special symbol .

**The improper disposal of Waste Electrical and Electronic Equipment is liable to punishment under the relevant laws in the countries where the offence is committed.**

**Waste electrical and Electronic Equipment may contain hazardous substances with potential harmful effects on the environment and human health. You are urged to dispose of them properly.**

## REFRIGERANT MATERIAL SAFETY DATA SHEET

### 1) **R404a**: fluid components

- |                     |            |     |
|---------------------|------------|-----|
| • trifluoroethane   | (HFC 143a) | 52% |
| • pentafluoroethane | (HFC 125)  | 44% |
| • tetrafluoroethane | (HFC 134a) | 4%  |

GWP = 3750

ODP = 0

### 2) Hazard identification

Overexposure through inhalation may cause anaesthetic effects. Acute overexposure may cause cardiac rhythm disorders and sudden death. Product mists or sprays may cause ice burns of eyes and skin.

### 3) First aid procedures

- *Inhalation*: keep injured person away from exposure, warm and relaxed. Use oxygen, if necessary. Give artificial respiration if respiration has stopped or is about to stop. In case of cardiac arrest give external cardiac massage. Seek immediate medical attention.
- *Skin*: use water to remove ice from affected areas. Remove contaminated clothes.  
CAUTION: clothes may adhere to skin in case of ice burns.  
In case of contact with skin, wash with copious quantities of lukewarm water. In case of symptoms (irritation or blisters) seek medical attention.
- *Eyes*: immediately wash with ocular solution or fresh water, keeping eyelids open for at least 10 minutes. Seek medical attention.
- *Ingestion*: it can cause vomit.. If conscious, rinse mouth with water and drink 200-300 ml of water. Seek medical attention.

*Other medical treatment*: symptomatic treatment and support therapy when indicated. Do not administer adrenaline or sympatheticomimetic drugs after exposure, due to the risk of arrhythmia and possible cardiac arrest.

### 4) Environmental data

Persistence and degradation

- *HFC 143a*: slow decomposition in lower atmosphere (troposphere). Duration in atmosphere is 55 years.
- *HFC 125*: slow decomposition in lower atmosphere (troposphere). Duration in atmosphere is 40 years.
- *HFC 134a*: relatively rapid decomposition in lower atmosphere (troposphere). Duration in atmosphere is 15.6 years.
- *HFC 143a, 125, 134a*: does not affect photochemical smog (not included in volatile organic components – VOC – as established in the UNECE agreement). Does not cause ozone rarefaction.

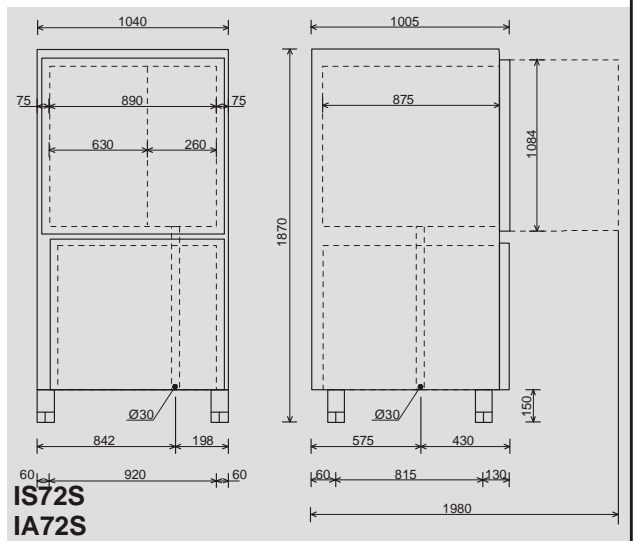
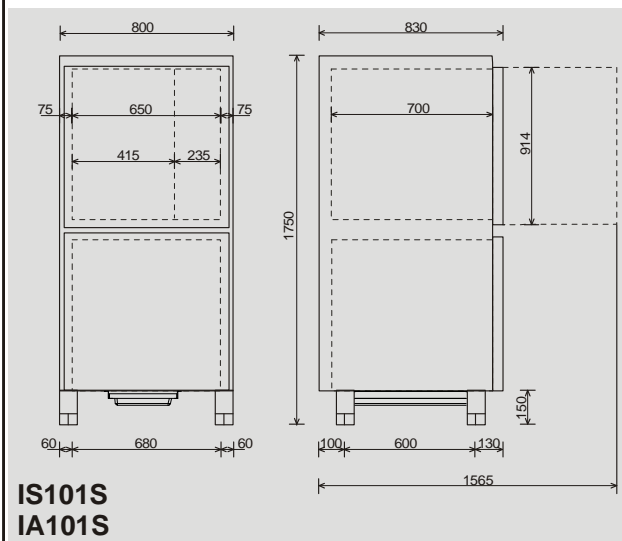
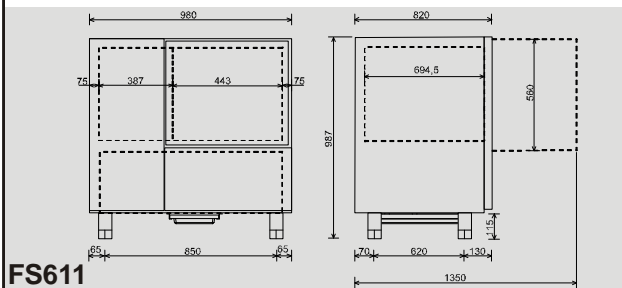
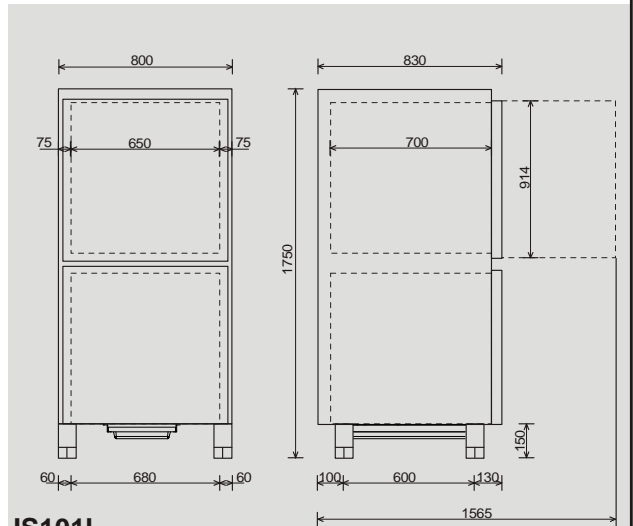
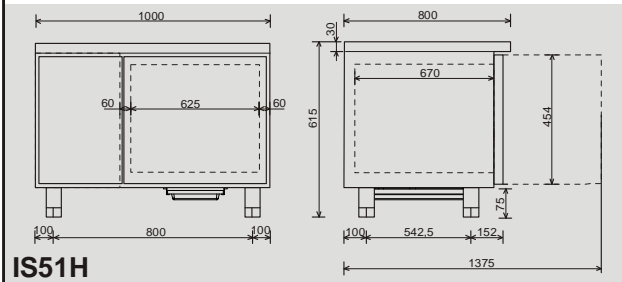
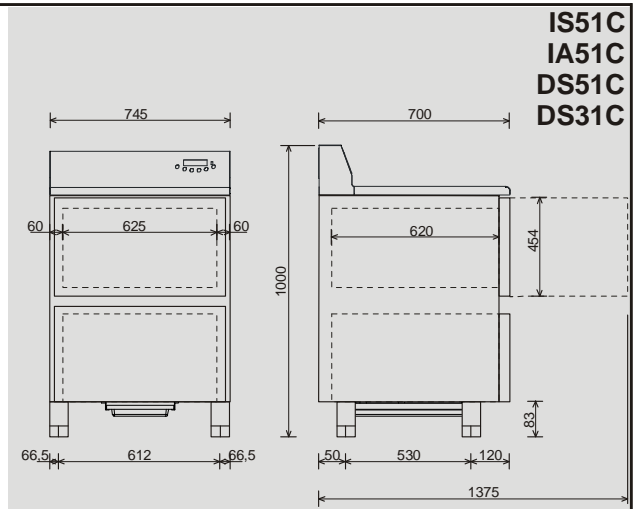
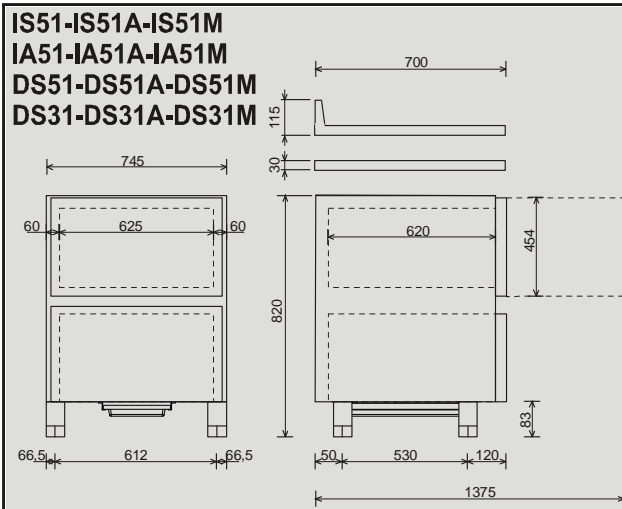
Product exhausts released in the atmosphere do not cause long-term water contamination.



# - INSTALLATION MANUAL -

## DIMENSIONS

Please refer to the dimensions of your own appliance.





# - INSTALLATION MANUAL -

## ANNEXES

TAB.1a

Model	IS51-IS51A IS51M-IS51C (10Kg)	IS51H (10Kg)	FS611 (20Kg)	IS101L (20Kg L)	IS101S (20Kg S)	IS72S (30Kg)	IS102S (40Kg)	IS102SR (40Kg R)	ISR201R (72Kg)	ISR202R ISP202R(*) (144Kg)
<b>Gross weight</b>	125	125	195	220	220	250	320	320	380	500
<b>Net weight</b>	115	115	180	195	195	220	290	290	280	360
<b>Dimensions</b>	745x700x820 /850/935/1000	1000x860 x615	980x820 X987	800x830 x1750	800x830 x1750	1040x1005 x1870	1040x1005 x1870	1040x1005 x1750	1050x1310 x2260	1400x1310 x2260 (*)1400x1470 x2260
<b>Capacity</b>										
Mass /cycle [kg]	10	10	20	20	20	25	40	40	72	144
Internal volume [l]	90	90	190	195	195	480	480	480	1900	2800
Rails	GN1/1 600x400	GN1/1 600x400	GN1/1 600x400	GN1/1 600x400	GN1/1 600x400	GN2/1 600x800	GN2/1 600x800	GN2/1 600x800	GN1/1 600x400	GN1/1 600x400
Trays	5	6	6	10	10	10	10	10	20	20
<b>Power supply</b>										
Voltage [V]	230 ~	230 ~	400 3N	400 3N	400 3N	400 3N	400 3N	400 3N	230 ~	230 ~
Frequency [Hz]	50	50	50	50	50	50	50	50	50	50
Intensity [A]	6,2	6,2	8	6	6	6,5	10	10	4	5,4
Power input [W]	1350	1350	1968	3200	3200	3600	5500	5500	850 [3000]	1200 [4500]
<b>Refrigerating unit</b>										
Refrigerating power [W]	617	617	600	2011	2011	2011	2400	2400	5070	9710
Evaporation temperature [°C]	-30	-30	-30	-30	-30	-30	-30	-30	-30	-30
Cooling temperature [°C]	+90÷+3	+90÷+3	+90÷+3	+90÷+3	+90÷+3	+90÷+3	+90÷+3	+90÷+3	+90÷+3	+90÷+3
Cooling time [min]	90	90	90	90	90	90	90	90	90	90
Freezing temperature [°C]	+90÷-18	+90÷-18	+90÷-18	+90÷-18	+90÷-18	+90÷-18	+90÷-18	+90÷-18	+90÷-18	+90÷-18
Freezing time [min]	240	240	240	240	240	240	240	240	240	240
Condensation temperature [°C]	+54,5	+54,5	+45	+54,5	+54,5	+54,5	+54,5	+54,5	+54,5	+54,5
Max room temperature [°C]	+32	+32	+32	+32	+32	+32	+32	+32	+43	+43
Compressor type	Ermetic	Ermetic	Semiermetic	Ermetic	Ermetic	Ermetic	Ermetic	Ermetic	Ermetic	Ermetic
Coolant	R404a	R404a	R404a	R404a	R404a	R404a	R404a	R404a	R404a	R404a
Coolant qty [g]	1400	1400	2700	2000	2000	2300	3500	3500	1000	2000
Condensation air	Air	Air	Air	Air	Air	Air	Air	Air	Air	Air
Noise [dB] (A)	65	65	72	72	72	72	72	72	72	72
<b>IFR</b>	•	•	•	•	•	•	•	•	•	•
<b>Multi-detector probe</b>	•	•	•	•	•	•	•	•	•	•

**Cooling time increases by 20% if the machine is leaning against the wall.**

# - INSTALLATION MANUAL -

**TAB.1b**

Model	IA51-IA51A-IA51M- IA51C (10Kg)	IA101L (20Kg L)	IA101S (20Kg S)	IA72S (30Kg)	DS31-DS31A-DS31M- DS31C (10Kg)	DS51-DS51A-DS51M- DS51C (10Kg)
<b>Gross weight</b>	125	220	220	250	125	125
<b>Net weight</b>	115	195	195	220	115	115
<b>Dimensions</b>	745x700x820/850/935/ 1000	800x830x1750	800x830x1750	1040x1005x1870	745x700x820/850/935/ 1000	745x700x820/850/935/ 1000
<b>Capacity</b>	10	20	20	25	10	10
Mass /cycle [kg]	90	195	195	480	90	90
Internal volume [l]	GN1/1 600x400	GN1/1 600x400	GN1/1 600x400	GN2/1 600x800	GN1/1 600x400	GN1/1 600x400
Rails	5	10	10	10	3	5
<b>Power supply</b>						
Voltage [V]	230 ~	400 3N	400 3N	400 3N	230 ~	230 ~
Frequency [Hz]	50	50	50	50	50	50
Intensity [A]	4	4,5	4,5	4,5	3,5	6,2
Power input [W]	850	2200	2200	2500	680	1350
<b>Refrigerating unit</b>						
Refrigerating power [W]	692	2245	2245	3325	577	617
Evaporation temperature [°C]	-10	-10	-10	-10	-23,3	-30
Cooling temperature [°C]	+90÷+3	+90÷+3	+90÷+3	+90÷+3	+90÷+3	+90÷+3
Cooling time [min]	90	90	90	90	90	90
Freezing temperature [°C]	-	-	-	-	+90÷-18	+90÷-18
Freezing time [min]	-	-	-	-	240	240
Condensation temperature [°C]	+54,5	+54,5	+54,5	+54,5	+54,5	+54,5
Max room temperature [°C]	+32	+32	+32	+32	+32	+32
Compressor type	Ermetic	Ermetic	Ermetic	Ermetic	Ermetic	Ermetic
Coolant	R404a	R404a	R404a	R404a	R404a	R404a
Coolant qty [g]	1000	1800	1800	2000	450	1400
Condesation air	Air	Air	Air	Air	Air	Air
Noise [dB] (A)	65	72	72	72	65	65
<b>IFR</b>	•	•	•	•		
<b>Single-detector probe</b>					•	•
<b>Multi-detector probe</b>	•	•	•	•		

**Cooling time increases by 20% if the machine is leaning against the wall.**

**TAB.4**

**Min. air circulation**

Model	Air q.ty [m <sup>3</sup> /h]
10 kg	1.100
20 kg	3.500
25 kg	4.300
40 kg	9.000
70 kg	9.000
144 kg	13.500

# - INSTALLATION MANUAL -

**Pict.47**



<b>N°</b>	<b>DESCRIPTION</b>	<b>N°</b>	<b>DESCRIPTION</b>
<b>1</b>	COMPRESSOR	<b>67B</b>	EVAPORATOR FAN RUN CAPACITOR
<b>2</b>	CONDENSER FAN	<b>69</b>	GROUND TERMINAL
<b>2A</b>	THERMOSTATED CONDENSER FAN	<b>70</b>	HIGH PRESSURE PRESSOSTAT
<b>3</b>	TERMINAL BOARD	<b>70A</b>	HIGH PRESSURE PRESSOSTAT
<b>3A</b>	TERMINAL BOARD	<b>73</b>	FUSE-HOLDER WITH UNIPOLAR FUSE
<b>9</b>	1-SPEED EVAPORATOR FAN	<b>75</b>	ELECTROVALVE
<b>9A</b>	1-SPEED EVAPORATOR FAN	<b>76</b>	MAGNETIC MICROSWITCH
<b>9B</b>	1-SPEED EVAPORATOR FAN	<b>77</b>	COMPARTMENT PROBE
<b>12</b>	DEFROST ELECTROVALVE	<b>78</b>	EVAP./DEFROST PROBE
<b>20</b>	DOOR ANTICONDENSATE RESISTANCE	<b>79</b>	NEEDLE CORE PROBE
<b>20A</b>	DOOR ANTICONDENSATE RESISTANCE	<b>79A</b>	MULTIPOINT NEEDLE CORE PROBE
<b>21</b>	DEFROST RESISTANCE	<b>80</b>	PTC RESISTANCE FOR COMPRESSOR CASING
<b>21A</b>	DEFROST RESISTANCE	<b>85A</b>	BOX WITH TERMINAL BOARD (EVAP.)
<b>21B</b>	DEFROST RESISTANCE	<b>85B</b>	BOX WITH TERMINAL BOARD (COND.)
<b>21C</b>	DEFROST RESISTANCE	<b>86</b>	CONDENSER PROBE
<b>22</b>	BOWL BOTTOM RESISTANCE	<b>97</b>	LCD QUICK COOLER CARD
<b>65</b>	CONTACTOR	<b>92</b>	THERMAL PRINTER
<b>66</b>	THERMAL RELAY	<b>94</b>	DISCONNECTOR
<b>67</b>	EVAPORATOR FAN RUN CAPACITOR	<b>97A</b>	EVAP. FAN CHOKE MODULE.
<b>67A</b>	EVAPORATOR FAN RUN CAPACITOR	<b>97B</b>	EVAP. FAN CHOKE MODULE