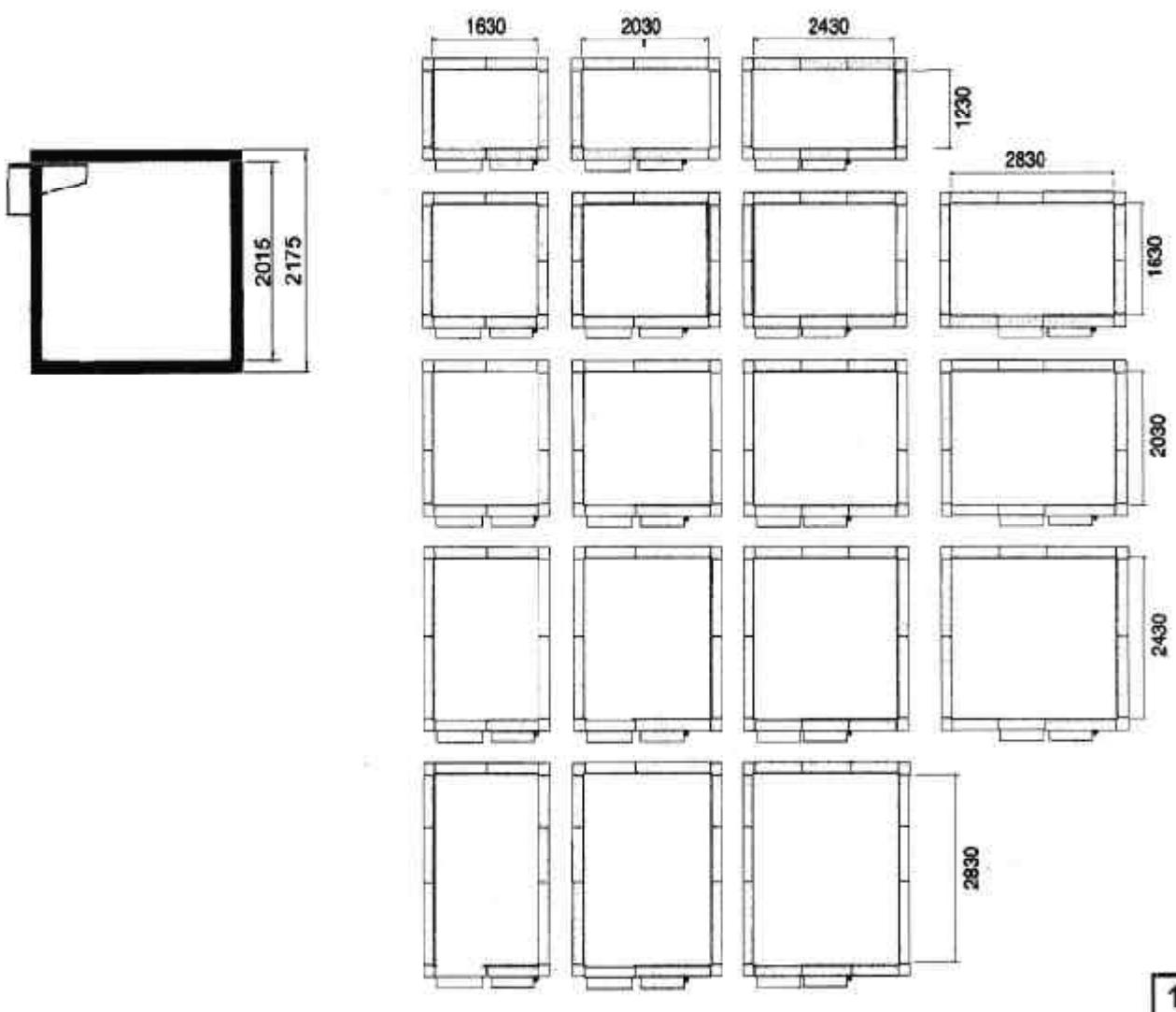

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INSTRUCTIONS FOR INSTALLATION, USE AND MAINTENANCE
INSTRUCTIONS POUR L'INSTALLATION, L'UTILISATION ET L'ENTRETIEN
INSTALLATIONS-, GEBRAUCHS- UND WARTUNGSANLEITUNGEN
INSTRUCCIONES DE INSTALACIÓN, USO Y MANTENIMIENTO
INSTRUÇÕES PARA A INSTALAÇÃO, O USO E A MANUTENÇÃO
ANVISNINGAR FÖR INSTALLATION, ANVÄNDNING OCH UNDERHÅLL
ASENNUS-, KÄYTTÖ- JA HUOLTO-OHJEET
ANVISNINGER FOR MONTERING, BRUG OG VEDLIGEHOLDELSE
VEILEDNING FOR INSTALLASJON, BRUK OG VEDLIKEHOLD
INSTRUCTIES VOOR INSTALLATIE, GEBRUIK EN ONDERHOUD
ΟΔΗΓΙΕΣ ΕΓΚΑΤΑΣΤΑΣΗΣ, ΧΡΗΣΗΣ ΚΑΙ ΣΥΝΤΗΡΗΣΗΣ

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MINI-KÜHLZELLEN CLASSIC
MINICÁMARAS CLASSIC
MINI-COMPARTIMENTOS CLASSIC
MINIKYLRRUM CLASSIC
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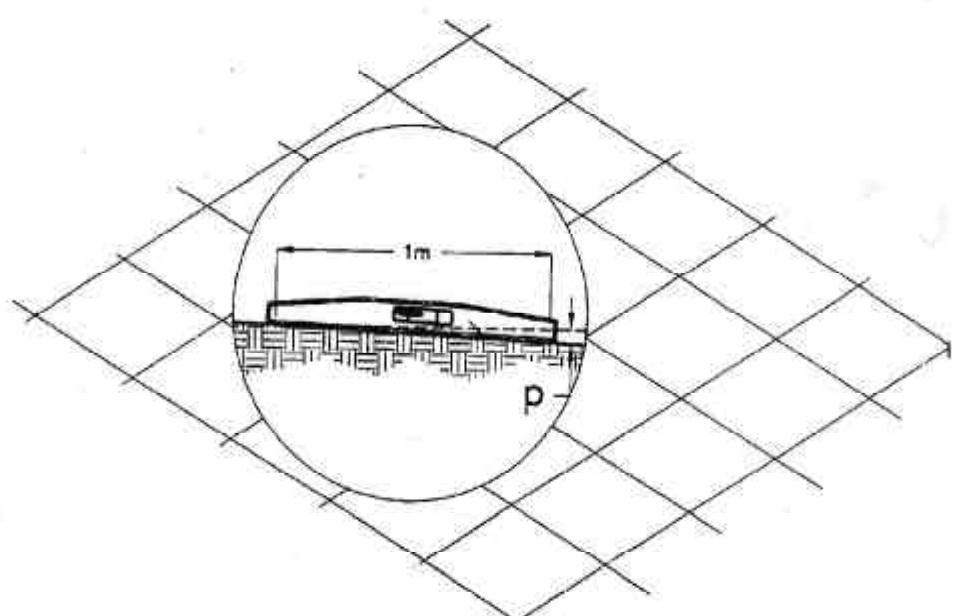
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GB	Page	14-18
FR	Page	19-23
DE	Seite	24-28
ES	Página	29-33
PT	Página	34-38
SE	Sidan	39-43
FI	Sivu	44-48
DK	Side	49-53
NO	Side	54-58
NL	Pagina	59-63
GR	Σελίδα	64-68



DOC. NO. **5957 343 00**
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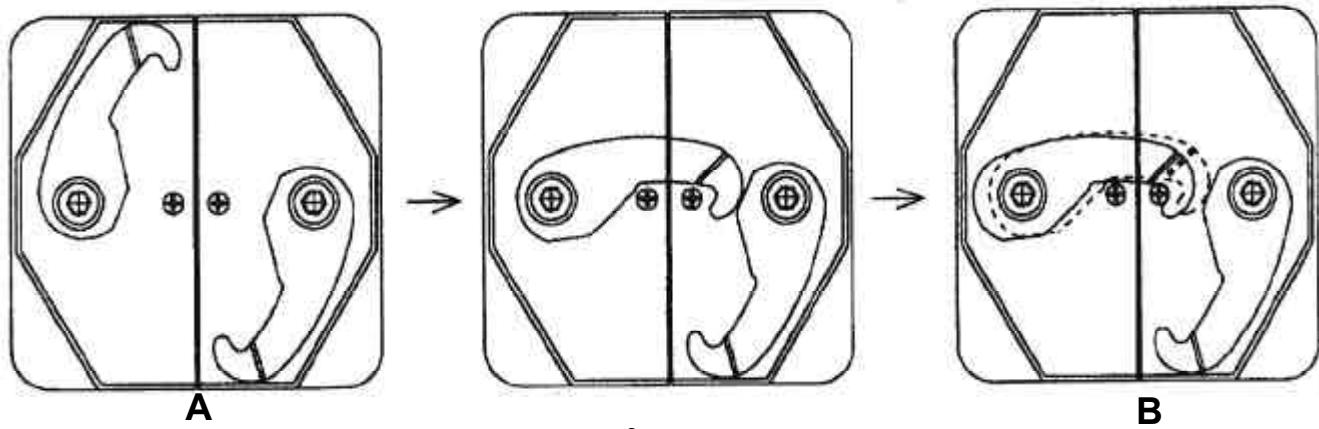
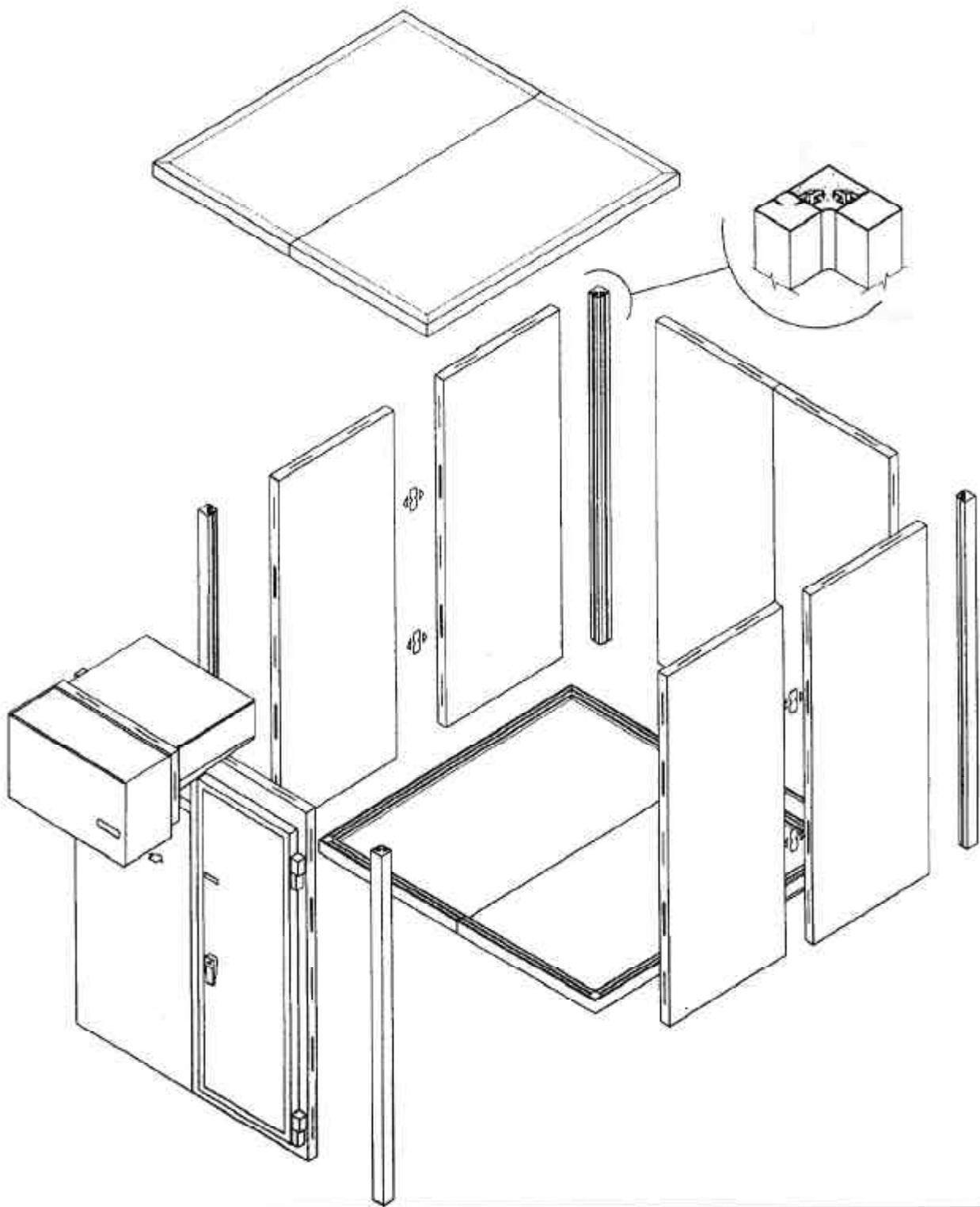


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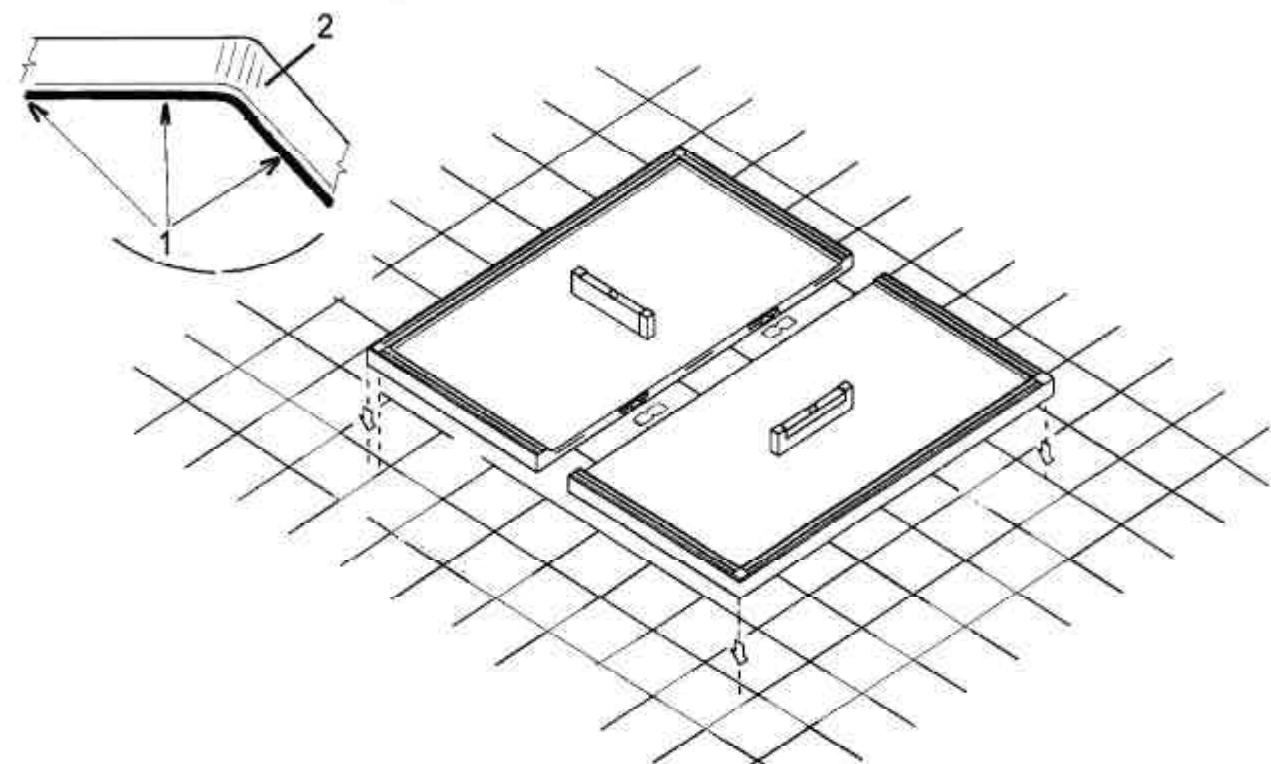


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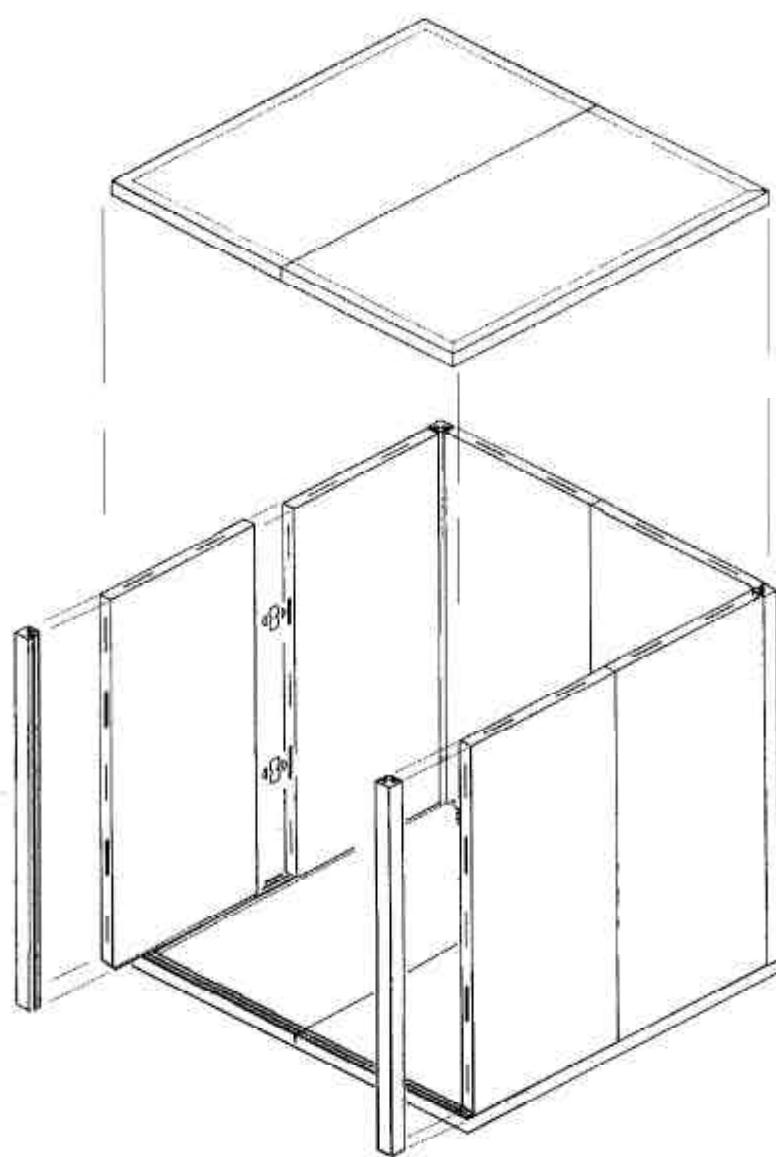
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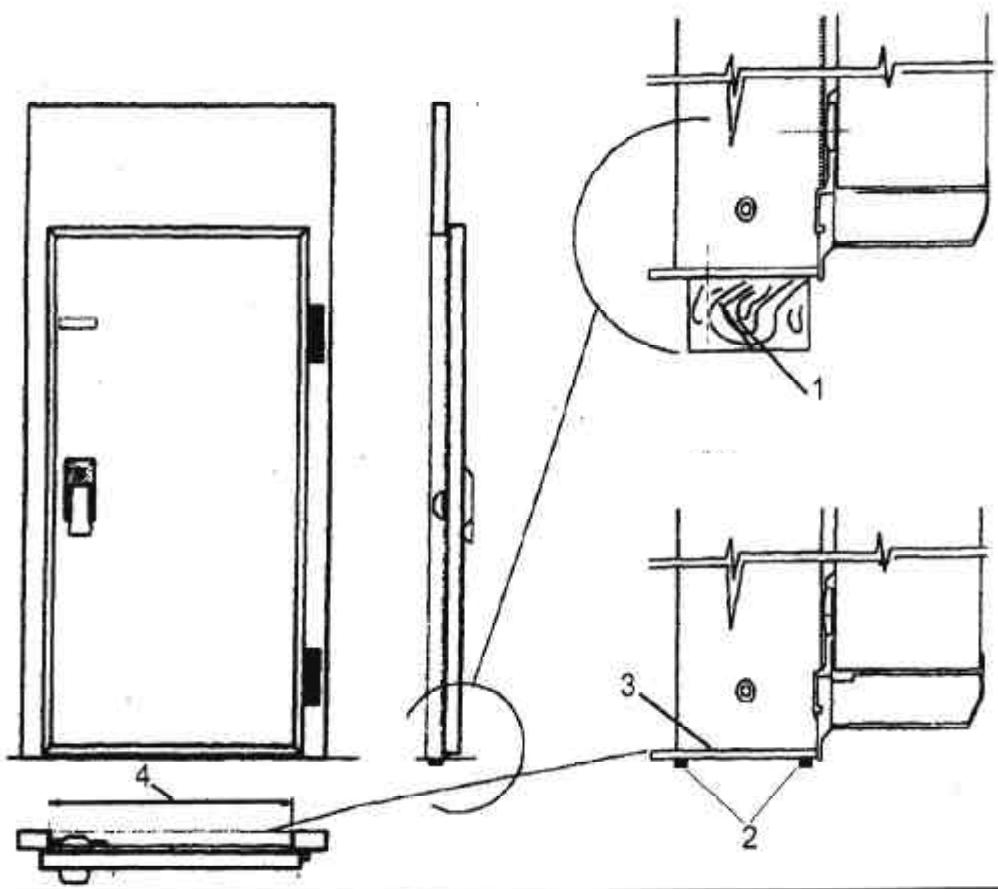


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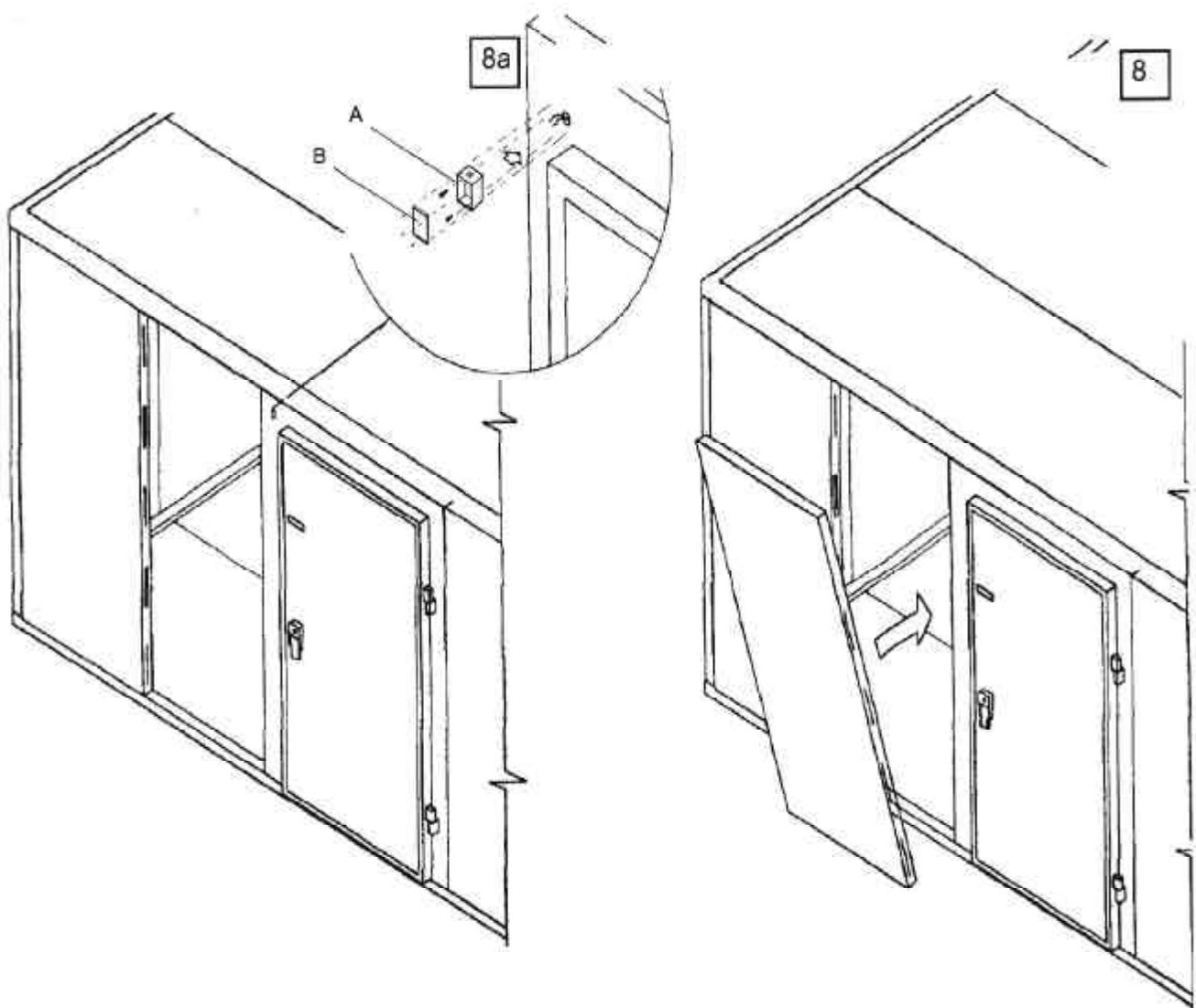


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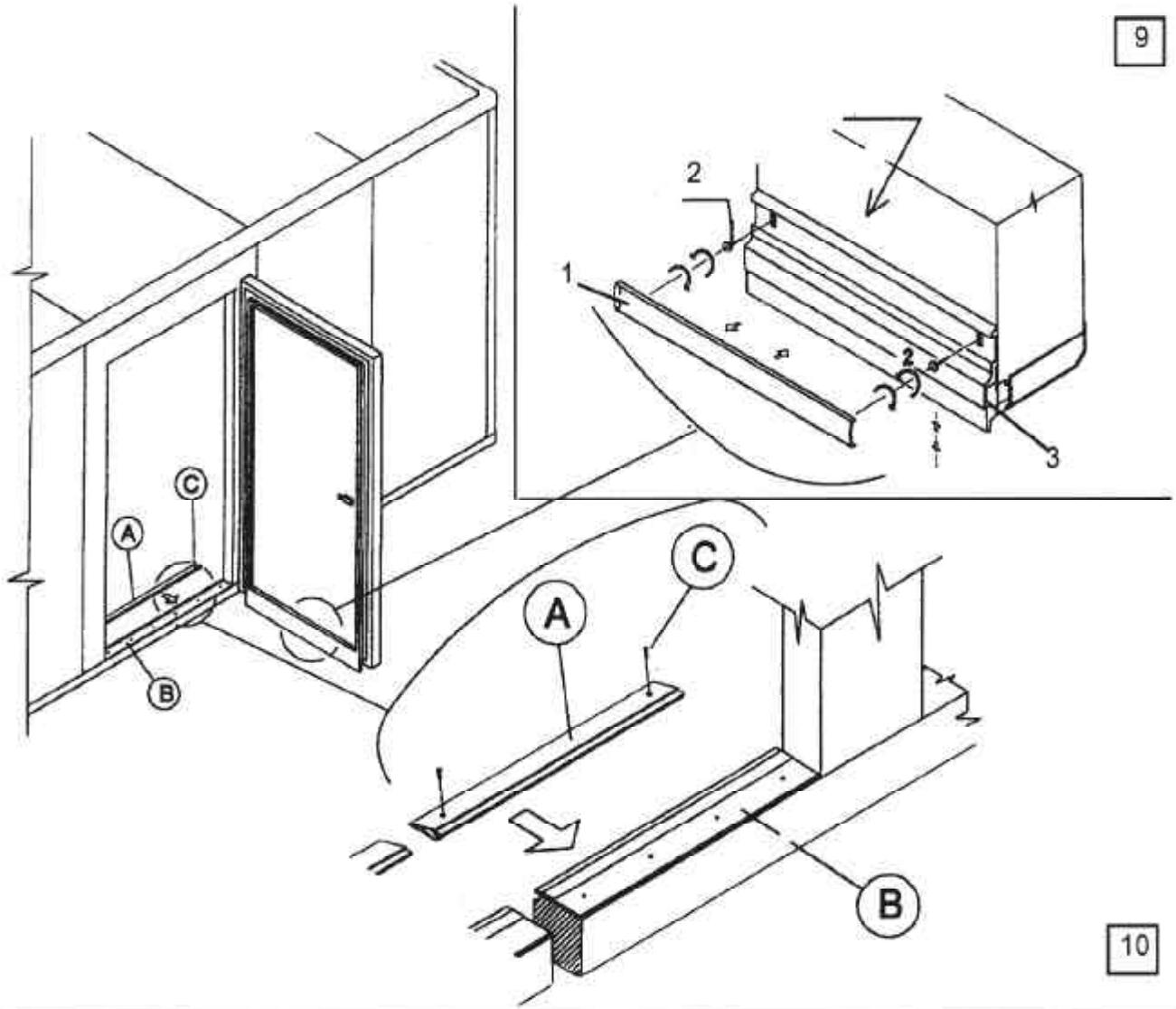
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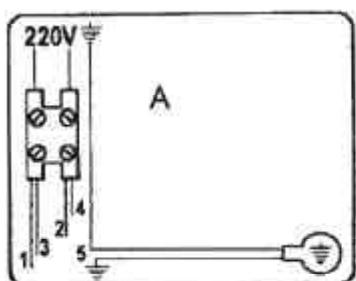
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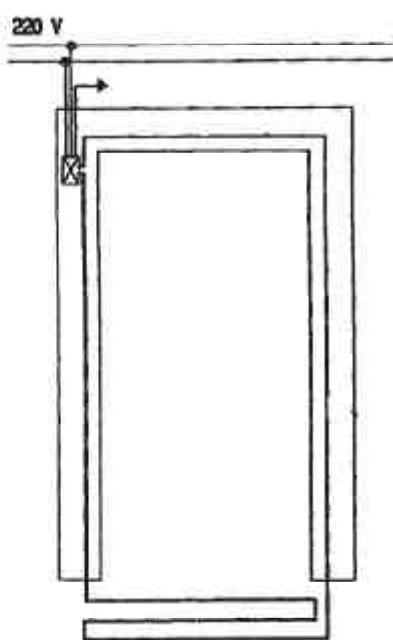
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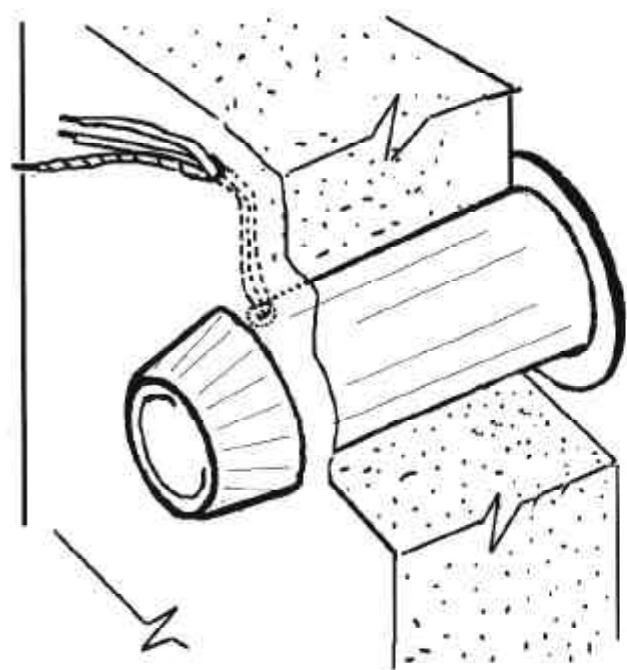
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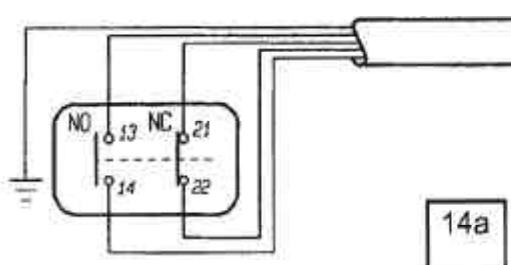
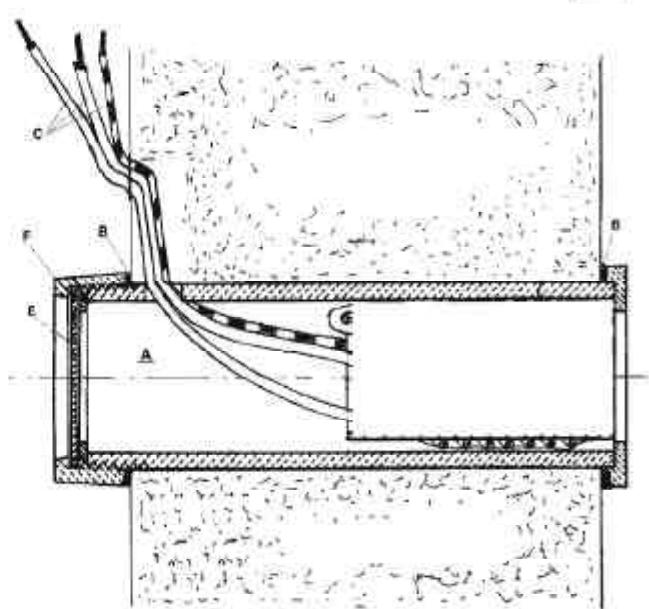
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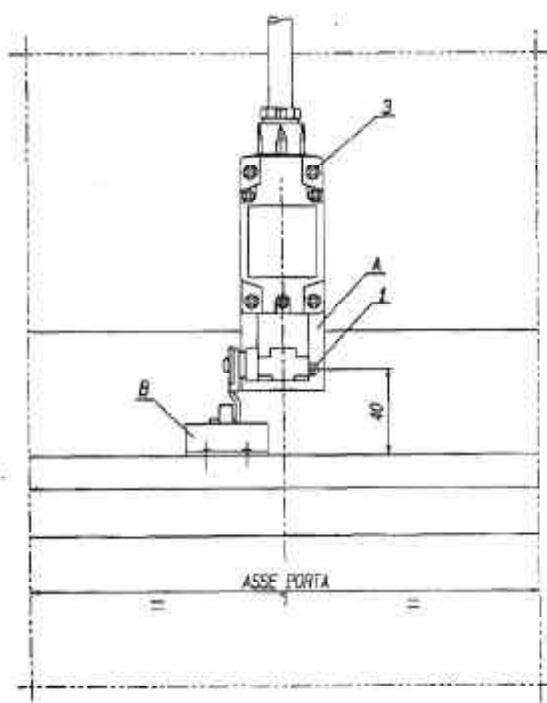
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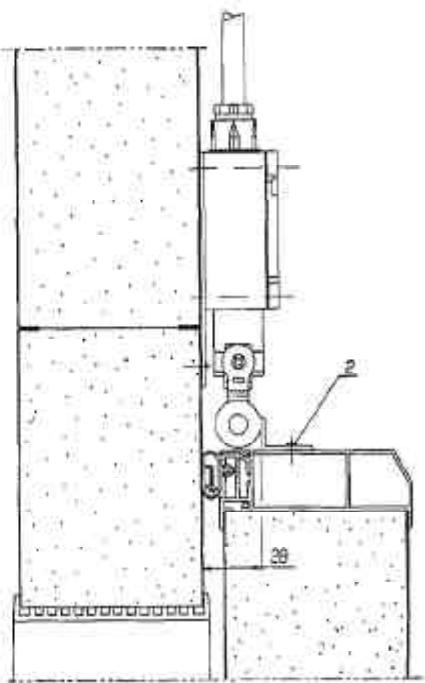
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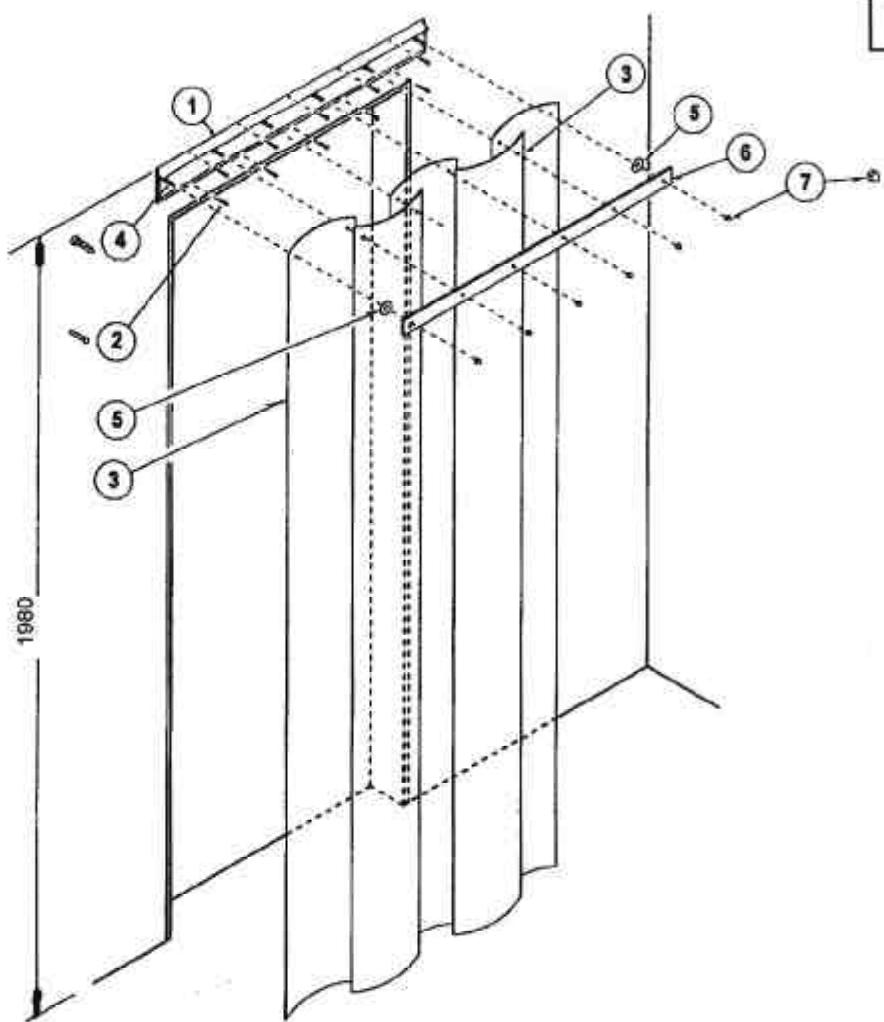
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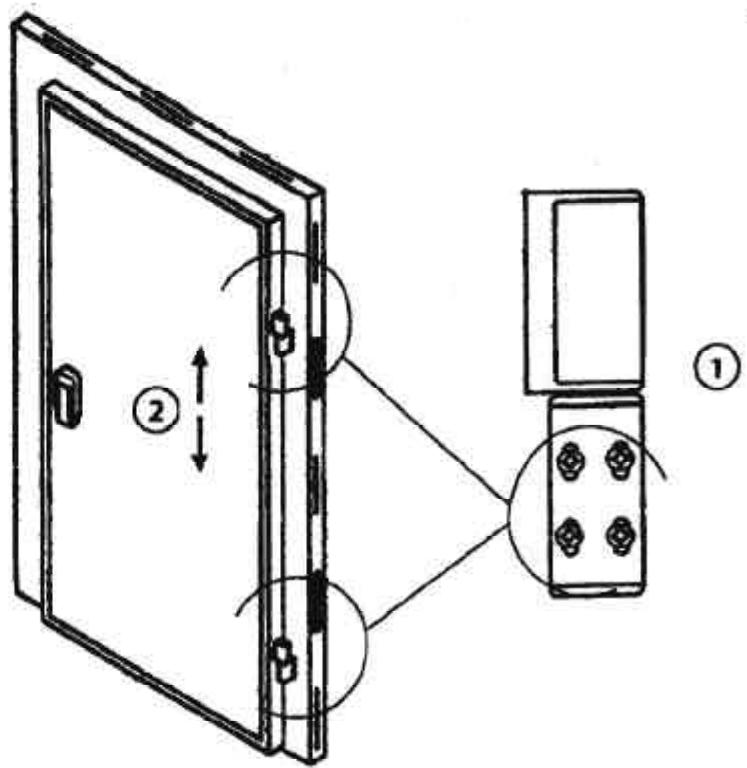
14



15



16



INDEX :

LIST OF ILLUSTRATIONS :

PAGE 2 -cold room dimensions-
PAGE 2 -note for floor installation-

PAGE 3 -exploded view of cold room-
PAGE 3 -description of fastener operation-

PAGE 4 -floor installation, applic. seal under floor panels
PAGE 4 -side and top panel assembly

PAGE 5 -description of seal application under door base
PAGE 5 -door panel assembly
PAGE 5 -junction box assembly

PAGE 6 -ramp assembly
PAGE 6 -description of door bottom seal position adjustment
PAGE 6 -door defrost cable and compens. valve (optional) electrical connections

PAGE 7 -compensation valve (optional) assembly
PAGE 7 -door microswitch (optional) assembly / electrical conn.

PAGE 8 -strip door (optional) assembly
PAGE 8 -hinge adjustment

LIST OF EXPLANATORY NOTES :

PAGE 15 -general information
PAGE 15 -technical data panels, compens. valve and door defrost cables
PAGE 15 -mechanical safety characteristics
PAGE 15 -installation
PAGE 15 -removal of packing and handling
PAGE 15 -packing disposal

PAGE 16 -general information, "fast fit" assembly system
PAGE 16 -instructions for new fastener use
PAGE 16 -cold room installation
PAGE 16 -floor panel positioning
PAGE 16 -side and top panel assembly
PAGE 16 -fitting seal under door
PAGE 16 -door panel assembly
PAGE 16 -bottom seal adjustment
PAGE 16 -door ramp assembly
PAGE 16 -notes for electrical system
PAGE 16 -junction box assembly

PAGE 17 -compensation valve (optional) assembly
PAGE 17 -door defrost cable and compens. valve electrical connections
PAGE 17 -door microswitch (optional) assembly / electrical conn.
PAGE 17 -strip curtain (optional) assembly
PAGE 17 -routine maintenance

PAGE 18 -waste disposal and demolition

A.1 GENERAL INFORMATION

A.1.1 FOREWORD

This manual is intended to provide all the necessary information for correct installation, use and maintenance of the appliance.

Carefully read the instructions in the manual before carrying out any operation.

The manufacturer declines any responsibility for operations carried out on the equipment without following the instructions given in the manual.

No part of this manual can be reproduced.

A.1.2 INTENDED USE AND LIMITATIONS

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

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

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

A.1.3 - TESTING

Our appliances have been designed and optimized with laboratory testing to give high performance and efficiency. The product is dispatched ready for use.

Passing of the tests (visual inspection - electrical test - functional test) is attested to and certified by the specific attachments.

A.2 PANEL CHARACTERISTICS

A.2.1 MATERIALS USED

- Side panels: int./ext. covering in non-toxic prepainted sheet.
- Top panels: inside wall covering in non-toxic prepainted sheet.
- Floor panels: int. covering non-skid plastic-coated sheet.

All the panels are insulated with injected polyurethane density 40 KG/M³.

Panel thickness: 80 mm

- Corners: covering in non-toxic prepainted sheet, polyurethane insulation.

A.2.2 DIMENSIONS: (FIG.1)

The dimensions given in FIG.1 are internal.

To determine the external dimensions add 160 mm to each dimension.

The range comprises:

No.18 COLD ROOMS H 2010 mm - Positive temp. (thick. 80 mm)
No.18 COLD ROOMS H 2010 mm - Negative temp. (thick. 80 mm)

A.2.3 TECHNICAL DATA

COMPENSATION VALVE (OPTIONAL)

(see paragraph on page 12)

Cold rooms thickness: 80 mm

Temp.: -30 C°

Power supply: 220 V

Power absorbed: 3.6 W

DOORDEFROSTCABLE

(door passage opening: 660 mm)

Cold room thickness: 80 mm

Temp.: -30 C°

Power supply: 220 V

Power absorbed: 115 W (23 W/mt)

A.3 MECHANICAL SAFETY CHARACTERISTICS - HAZARDS

The product does not have sharp edges or protruding parts.

B.1 INSTALLATION

To ensure correct operation of the product and to maintain safe conditions during use, carefully follow the instructions given below in this section.

B.1.1 INTEGRITY OF PACKING

Check the state of the packing and any protective materials before unpacking. Any damage should be reported immediately to the carrier. Under no circumstances should a damaged appliance be returned to the manufacturer without prior notice and without obtaining written permission.

B.1.1.1 REMOVING THE PACKING AND HANDLING

Remove the protective film, taking care not to scratch the surface if scissors or blades are used. Then remove the polystyrene padding.

Use a fork-lift truck to lift the products, inserting the forks under the pallet, and carry them to the place of installation, making sure that the load is balanced.



CAUTION: Do not push or pull the product to move it, as it may tip over.

B.1.1.2 DISPOSAL OF PACKING

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



polyethylene: outer wrapping, instructions bag

PE



polypropylene: straps

PP



polystyrene foam: corner protection

PS



fuller board: corner protection

B.1.2 "FAST FIT" ASSEMBLY SYSTEM (FIG.3) (PATENTED) (see note for FIG.3)

NOTE FOR FIG. 3-5-6



The new system (fast-fit) for assembling the modular cold rooms is based on the use of centering inserts (3) and the presence of two boxes (2) for each main side of the panel.

The operation of securing the panels together by means of fasteners (1) is facilitated by centering inserts (3) that perfectly centre the panels regarding flatness.

The system does not provide for insertion of the "fast-fit" between panel and corner piece.

Assembly of the last side wall and top panel does not allow the use of centering inserts.

IMPORTANT: the door panel does not have a fastener on the left side, therefore it must be coupled with the fasteners of the adjacent panel.

B.1.3 INSTRUCTIONS FOR USING FASTENER 2 (FIG.4)

1. The fastener 2 is a coupling device for joining panels together.
2. It is of the male-female type, i.e. it can couple and be coupled; the mechanism is with eccentric and turns the rotary movement of the key into translation movement of the hook and therefore clamping of one fastener to the opposite one.
3. Before starting the hooking operation (clockwise movement) it is essential to turn the key anticlockwise to check that the fastener is "cocked" i.e. ready for the coupling operation (position zero) -A- (FIG. 4)
4. If they have not been operated for some reason, the fasteners inside the panel are already cocked and therefore cannot turn anticlockwise.
5. During the first stage of the coupling operation (turning clockwise) the hook comes out of the box and starts to withdraw without appreciable effort (rotation approx.180°). During the second stage the hook withdraws and clamping of the opposite fastener occurs with a gradual hand effort (approx.15 N.m).

This second stage ends after a rotation of approx. 50° when the hand feels the presence of a stop (final position) - B - (FIG. 4)

IMPORTANT: if the Fastener does not "pull" remember to "cock it", turning the key anticlockwise until hearing a click.

Note) If fastener hooking does not work and position (B) (FIG.4) cannot be achieved, bring the hook to position -A- and use the fastener of the adjacent panel,

P.S. The force of 15 N.m=1.5Kg.m is modest and considerably reduces the effort in assembling a cold room compared with similar systems used.

B.2 COLD ROOM INSTALLATION

The cold room must be assembled according to the drawings given on the first pages

B.2.1 FLOOR PANEL POSITIONING (FIG. 2 and 5)

Before installing the cold room, check the following points:

- Install the cold room on a flat surface. Any difference in level must not be more than 6 mm along the length or width. To correctly assess the difference in level between the floor and the floor panel see FIG. 2 (the value of 1 m is approximate, whereas DO NOT exceed the value of 6mm regarding the difference in level). It is advisable to use self-levellers available on the market.
- There must not be any hollows in the floor where water can stagnate.
- It is advisable to leave a free space along all the sides of the cold room in order to allow air to circulate and to facilitate cleaning of the panels, while also guaranteeing longer life of the material.

IMPORTANT: (FIG.5a - side in contact with ground)

Apply the seal (1) along the entire perimeter of the floor panels.

B.2.2 SIDE PANEL ASSEMBLY (FIG. 6)

B.2.3 TOP PANEL ASSEMBLY (FIG. 6)

B.2.4 FITTING SEAL UNDER DOOR BASE (FIG. 7)

Remove the wooden strip (1) placed under the door, extend the seal (2) under the base (3) along its entire length (4).

B.2.5 DOOR PANEL ASSEMBLY (FIG.8)

The door panel must not be assembled last.

Leave the door closed during assembly until two or three sides of the door panel are hooked.

B.2.6 BOTTOM SEAL ADJUSTMENT (FIG. 9)

Remove the PVC profile (1) covering the two screws (2), undo them, adjust the position of the bottom rubber seal (3), bringing it to the ideal position of contact with the base on the floor. Then, tighten the screws and refit the PVC profile that covers the screws.

B.2.7 DOOR RAMP ASSEMBLY (FIG. 10)

Insert the access ramp (A) under the base (B). Drill holes for securing it to the floor, using a drill bit ø 4.5; fixing with two screws (C) supplied.

B.3 EXTRAORDINARY MAINTENANCE

Caution: turn off the power supply to the machine before any maintenance or cleaning operation.

Extraordinary maintenance operations must only be carried out by qualified technical personnel.

Use protection gloves when carrying out any maintenance operation.

B.3.1 NOTES FOR THE ELECTRICAL SYSTEM (FIG.11)

1) Earth connection:

the power supply must have an earth line;

2) The junction box must be fed with a separate line and protected with a 30 mA differential switch.

B.3.2 JUNCTION BOX ASSEMBLY (FIG.8a)

Fit the junction box (A) supplied with the door panels for negative cold rooms, fixing it to the door panel, removing the plastic cap covering the door defrost cable. Fix the junction box with the screws supplied, fit the rivet supplied for earthing.

CAUTION:

Turn off the power to the junction box when the refrigerating unit is off.

It is advisable to connect this box to the same power supply line as the refrigerating unit.

Therefore operate the Main Switch:

-see Built-in unit and Split Wiring diagrams

-see Built-in unit Instruction Booklet [see paragraph "Built-in unit Control Panel"]

-see Split Instruction Booklet

B.3.3 FITTING THE COMPENSATION VALVE (FIG.12-13) (optional)

Make a hole in the wall of the cold room, avoiding the wall in front of the ventilated evaporator.

The diameter of the compensation valve PVC section is 42 mm and the wall thickness is 80 mm. Then insert the assembled section (A) in the hole with a seal (B) applied as described. Pass the cables of valve (C) through the hole made in the wall, after inserting a cable gland, not supplied.

Fit the seal (B).

Place the membrane (E) on the external ring nut (F) and tighten it on the section (A).

B.3.4 DOOR DEFROST CABLE ELECTRICAL CONNECTION (FOR NEGATIVE TEMP. COLD ROOMS) (FIG.8a and 11)

B.3.5 COMPENSATION VALVE ELECTRICAL CONNECTION (FOR NEGATIVE TEMP. COLD ROOMS) (optional)

Remove cover (B) from the junction box (A).

Connect the door defrost cable to terminals 1 and 2.

Connect the compensation valve wires (identified by the connection points) to terminals 3 and 4 and the earth wire to terminal 5 already present in the junction box (A).

Finish the connection, connecting the free terminals to the power supply and the earth wire to terminal 5 already present in the junction box (A). Refit cover (B) and tighten the relevant screws.

B.3.6 DOOR MICROSWITCH ASSEMBLY/ELECTRICAL CONNECTION (FOR NEGATIVE TEMP. COLD ROOMS) (optional) (FIG.14)

- fit plate A on the cold room wall at 40 mm using 2 rivets Ø3 (1);
- fit angle piece B on the door at 28 mm from the panel using 2 rivets Ø3 (2);
- fit the microswitch, making 4 holes Ø2.5 in the cold room wall matching those already existing on the plate, using 4 screws Ø3.8x45 (3); the microswitch trip lever must be adjusted so that with the door closed the angle piece fitted to the door profile trips the contacts.

B.3.7 ELECTRICAL CONNECTION (FIG. 14a)

Remove the microswitch cover, undoing the three fixing screws; Use a cable 5x0.75 to connect the microswitch to the condensing unit electrical panel; make the connections according to the wiring diagram (21-22 contact normally closed for controlling the cold room light; 13-14 contact normally open for controlling the evaporator fans); connect the yellow-green wire to the earth screw.

B.3.8 PROTECTION

Fit the microswitch protection casing, securing it with a little silicone along the sides.

B.3.9 STRIP CURTAIN ASSEMBLY (optional) (FIG. 15)

a) Fix the aluminium support profile on the wall (1) with the rivets supplied (2) at height H indicated (holes in wall with bit Ø4).

b) To obtain greater adherence between the strips:

insert the pre-perforated strips (3) arranging them alternately, with the slight convexity on the same side, in the screws (4) arranged on the support profile.

c) Finish inserting the strips (3) with the convexity on the opposite side.

d) Fit the washer 6/24 (5) on the two external screws.

e) Insert the aluminium bar (6) and secure with the cap nuts (7).

C.1 ROUTINE MAINTENANCE

C.1.1 OPERATION ON THE COLD ROOM

In addition to ensuring adequate insulation the isothermic panels are a barrier against steam due to the presence of the coated steel sheets.

Therefore any operation on the cold room, such as drilling or making openings for tubes, cables or systems, must be done in such a way as to avoid thermal bridges or interruption of the steam barrier.

C.1.2 ACCESSORIES

Installation in the cold room of accessories not provided for by the manufacturer must be done taking into account the characteristics of the sandwich panels (sheet-polyurethane-sheet) and particularly the floor which is of treadable type and suitable for static loads only.

Any shelving other than that supplied must provide for a max. load of 100 kg per foot equal to a load of approx. 120 kg/m² distributed on the various shelves.

C.1.3 CLEANING

The cold rooms guarantee the safety and integrity of the food products preserved in them (EEC Directive 93/43), both for the materials used and the fundamental criterion of rounding the vertical and horizontal corners, thus facilitating regular cleaning with the use of biodegradable detergents.

Materials used: -Non-toxic prepainted sheet for the walls and top; -Non-toxic plastic-coated sheet for the floors.

They are compatible with foodstuffs in compliance with M.D. 21/03/1973.

Turn off the refrigerating cold room electrical power before any maintenance operation.

Wash the panels with tepid soapy water or neutral food-grade products with bactericide power.

Whatever the product used, contact times must never exceed 30 minutes, and in any case the operation must end with rinsing with clean water.

Have the equipment completely checked periodically (at least once a year). Therefore it is advisable to stipulate a maintenance contract.

C.1.4 MALFUNCTIONING - EXTRAORDINARY MAINTENANCE

Extraordinary maintenance must be carried out by specialized personnel, who can ask the manufacturer to supply a servicing manual.

C.1.5 HINGE ADJUSTMENT (FIG. 16)

1. Whenever the position of the hinges must be adjusted, loosen the fixing screws located on the inside of the part of the hinge fixed to the door frame.

2. Adjust the stopper height by sliding it to the required position.

SEE: BOTTOM SEAL ADJUSTMENT

(PAGE 11 and FIG.9)

D.1 WASTE DISPOSAL AND DEMOLITION

D.1.1 WASTE STORAGE

At the end of the product's life cycle, make sure the panels are not dispersed in the environment. Remove the doors before disposing of the panels.

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

DISMANTLING OPERATIONS MUST BE CARRIED OUT BY QUALIFIED PERSONNEL.

D.1.2 PROCEDURE REGARDING MACRO-OPERATIONS FOR DISMANTLING THE COLD ROOM

All countries have different legislation; therefore the provisions laid down by the laws and the authorized bodies of the countries where demolition takes place must be observed.

In general, the panels must be taken to specialized collection/demolition centres. Dismantle the panels grouping the components according to their chemical characteristics, bearing in mind that the compressor contains lubricant oil and coolant which can be recycled, and that the refrigerator components are classed as special waste that cannot be disposed of as urban waste.

For demolition, make the appliance unusable by removing the power supply cable and any compartment locking mechanisms to avoid the risk of someone becoming closed inside.

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INSTRUCTIONS FOR INSTALLATION, USE AND MAINTENANCE
INSTRUCTIONS POUR L'INSTALLATION, L'UTILISATION ET L'ENTRETIEN
INSTALLATIONS-, GEBRAUCHS- UND WARTUNGSANLEITUNGEN
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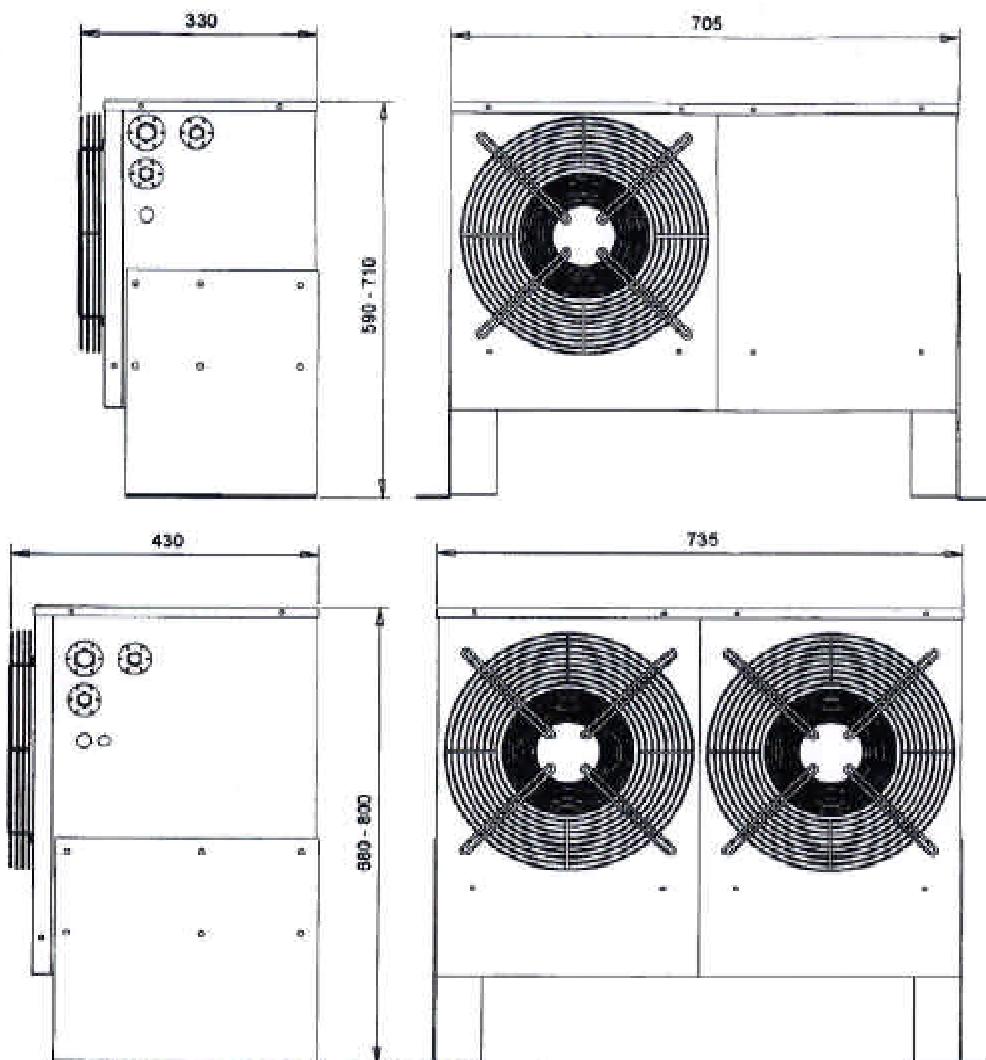
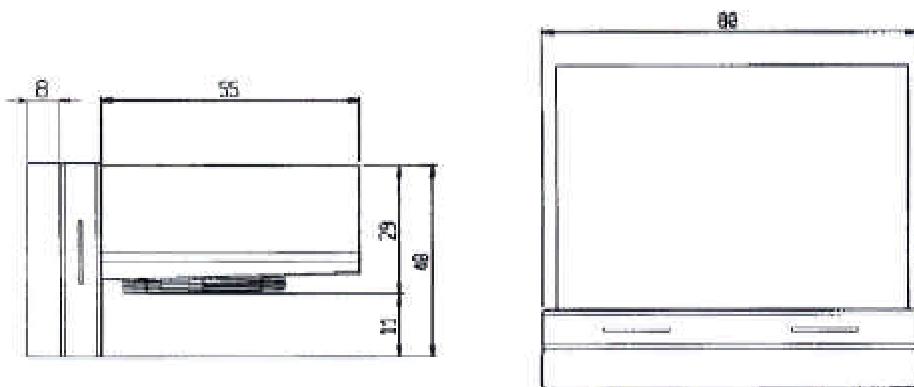
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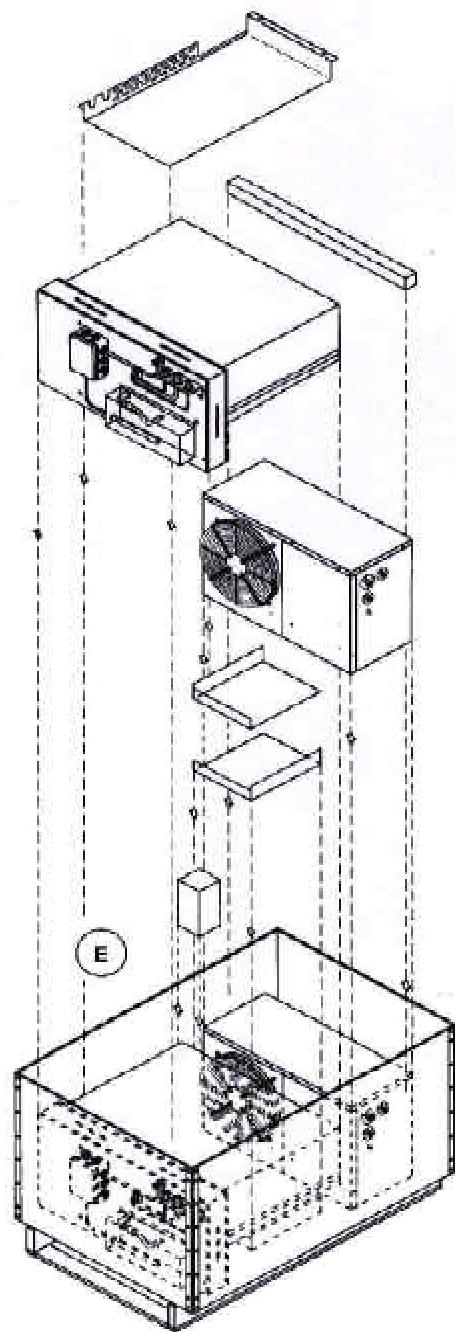
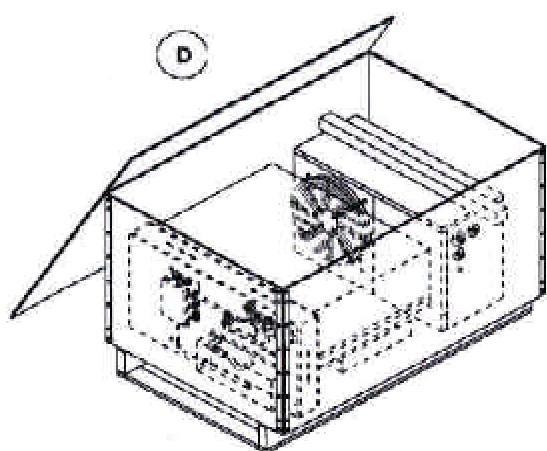
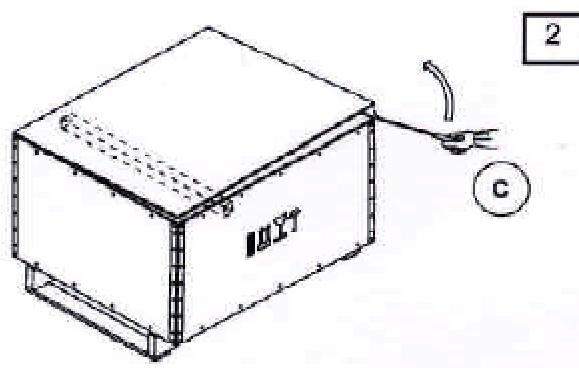
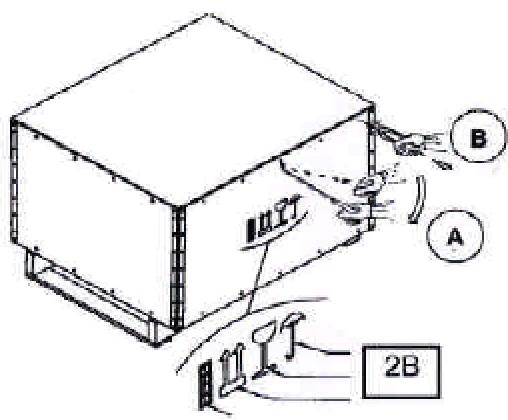
IT	Pagina	06-10
GB	Page	11-15
FR	Page	16-20
DE	Seite	21-25
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PT	Página	31-35
SE	Sidan	36-40
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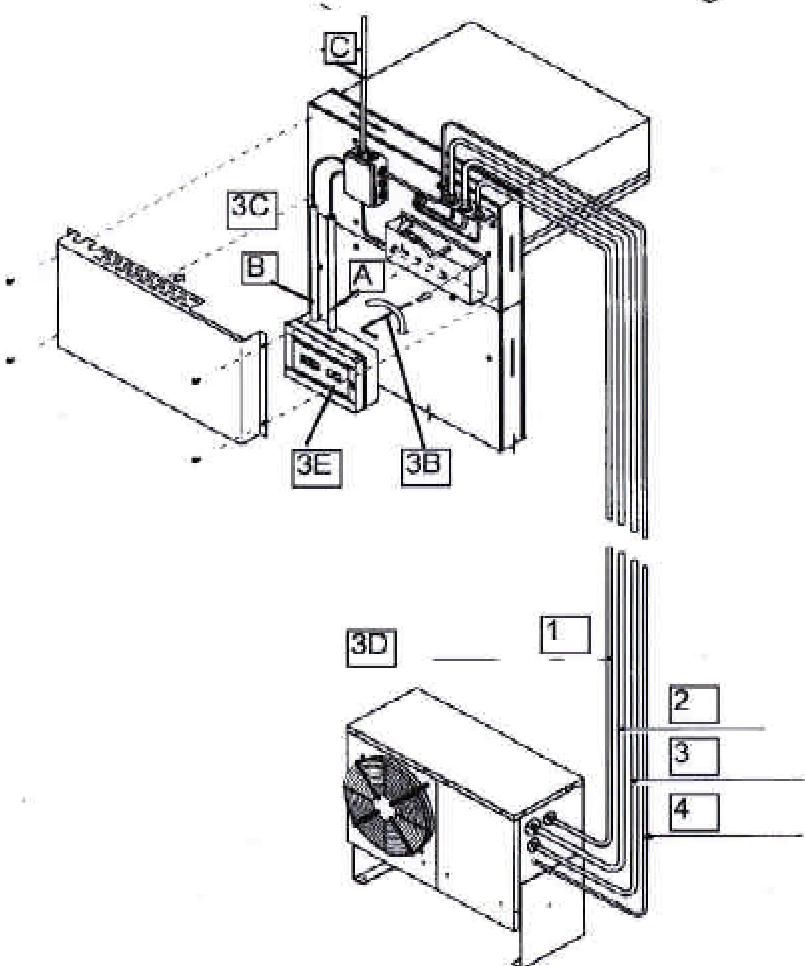
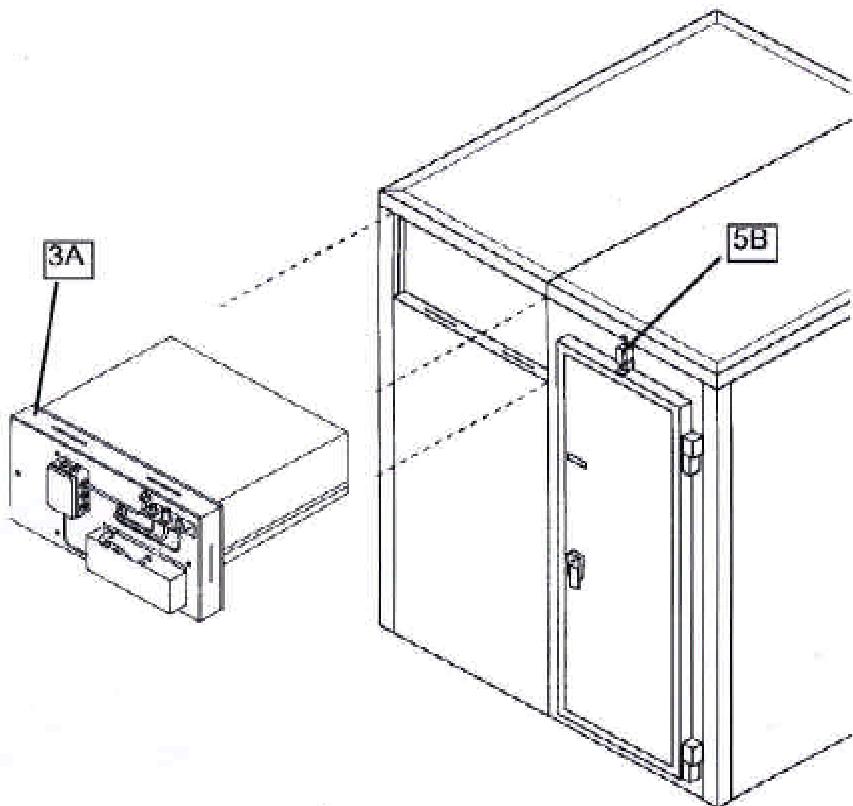


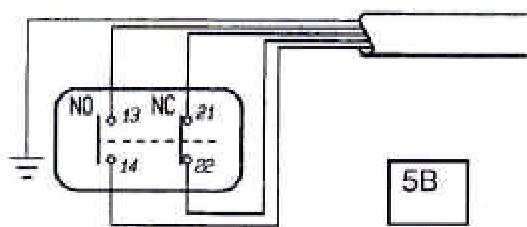
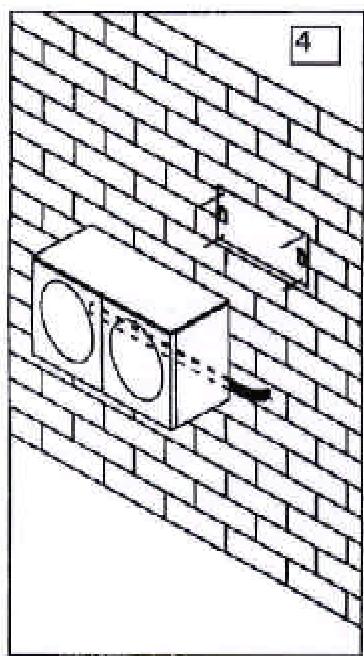
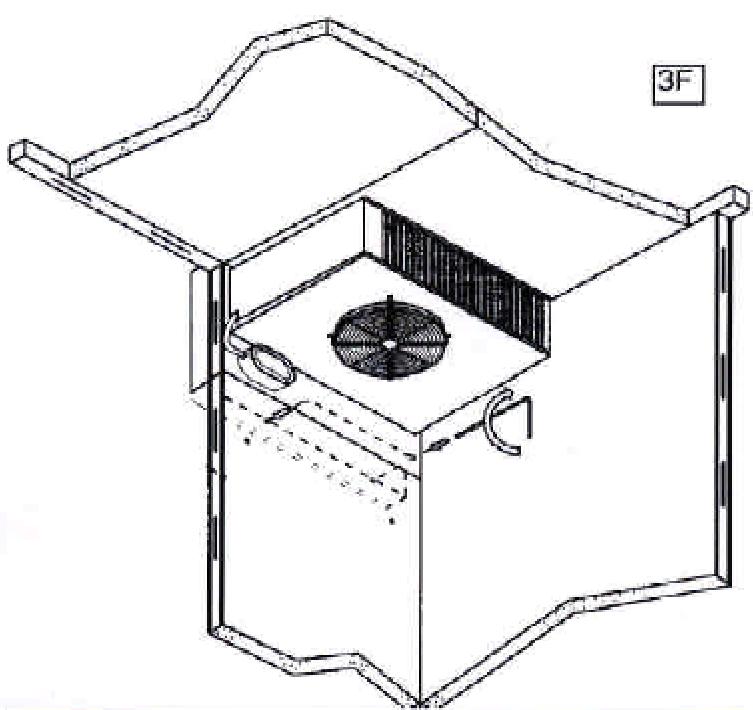
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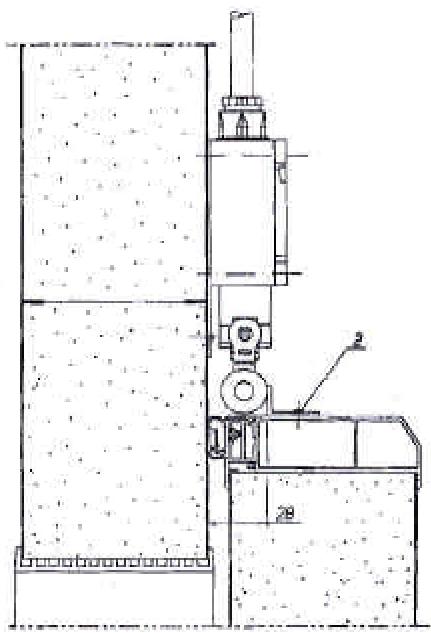
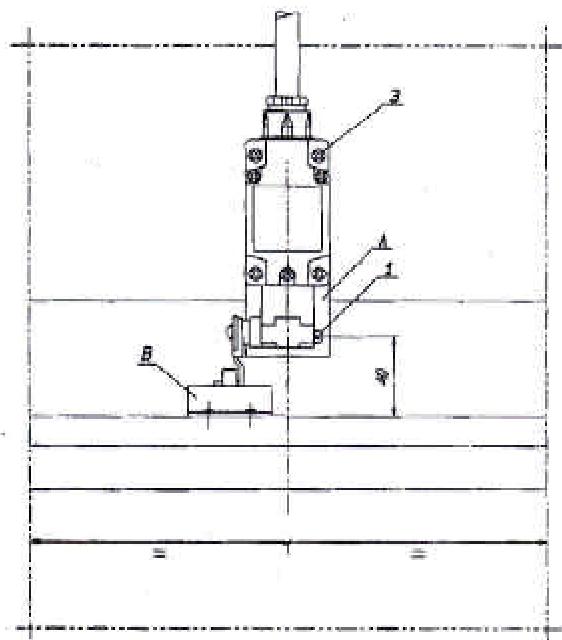








5



INDEX:

LIST OF ILLUSTRATIONS:

PAGE 2 -split unit dimensions

PAGE 3 -unpacking

PAGE 4 -split unit assembly

PAGE 5 -wall-mounting of condensing unit

PAGE 5 -door microswitch (optional) assembly / electrical conn.

LIST OF EXPLANATORY NOTES:

PAGE 12 -general information

PAGE 12/13 -technical data

PAGE 13 -mechanical safety characteristics

PAGE 13 -installation

PAGE 13 -removing the packing and handling

PAGE 13 -packing disposal

PAGE 14 -split unit assembly

PAGE 14 -electrical connections

PAGE 14 -split unit control panel

PAGE 14 -start-up

PAGE 14 -maintenance

PAGE 14 -rules for good system operation

PAGE 15 -anomalies

PAGE 15 -waste disposal and demolition

A.1 GENERAL INFORMATION

A.1.1 FOREWORD

This manual is intended to provide all the necessary information for correct installation, use and maintenance of the equipment. **Carefully read the instructions in the manual before carrying out any operation.**

The manufacturer declines any responsibility for operations carried out on the equipment without following the instructions given in the manual.

No part of this manual can be reproduced.

A.1.2 INTENDED USE AND LIMITATIONS

This equipment is designed for preserving food. Any other use is to be considered improper.

ATTENTION: the cold rooms are not suitable for installation outdoors and/or in places exposed to atmospheric agents (rain, direct sunlight, etc.). Check that the ambient temperature near the condensing unit is not higher than 43°C and lower than -5°C.

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

A.1.3 TESTING

Our equipment is designed and optimized with laboratory testing to give high performance and efficiency.

Passing of the tests (visual inspection - electrical test - functional test) is guaranteed and certified by the specific attachments. (test sheet and operation diagram).

A.1.4 GENERAL SAFETY RULES

The equipment is manufactured in compliance with European low-voltage Directives 73/23-93/88-97/23/EEC, and electromagnetic compatibility according to standards EN 55014; EN 61000-3-2; EN 61000-3-3; (89/336/EEC). 

A.1.5 CUSTOMER RESPONSIBILITIES

The customer must provide an earthed electrical socket of suitable capacity for the absorption specified on the dataplate, and a high sensitivity differential thermal magnetic switch with manual reset.

A.2 TECHNICAL DATA

A.2.1 STANDARD CHARACTERISTICS: materials

- Structure in epoxy powder painted phosphatized sheet
- Hermetic compressors
- Condenser and evaporator in copper and aluminium

- Hot gas defrost with thermostatic control and end of defrost
- Capillary feed
- Gas: R404A

CONDENSING UNIT

TYPE	Power (Watt)	HP nom.	Watt absorp.	Amp. absorp.	Volt Hz.50
102254	980	0.5	930	2.8	230
102255					
102259	1085	0.5	950	3	230
102277					
102256					
102257					
102258					
102273					
102274	1395	0.75	1000	3.2	230
102275					
102278					
102279					
102282					
102276					
102280					
102281					
102282					
102283					
102284					

REFRIGERATING DIFFUSER

TYPE	Surface m ³	No. Fans	Air m ³ /h
102254	3.1	1x250	550
102255			
102259	3.8	1x250	500
102277			
102256			
102257			
102258			
102273			
102274			
102275			
102278			
102279			
102282			
102276			
102280			
102281			
102282			
102283			
102284			

- Hot gas defrost with thermostatic control and end of defrost
 - Thermostatic valve feed
 - Gas: R 404A

CONDENSING UNIT

TYPE	Power (Watt)	HP nom.	Watt absorp.	Amp. absorp.	Volt Hz.50
102314	1025	1.2	1300	3.1	230
102315					
102316					
102317					
102319	1470	1.7	1550	4.8	230
102331					
102332					
102335					
102336					
102318					
102333					
102334					
102337					
102338	1840	2.2	1600	2.3	380-400/3
102339					
102351					
102352					
102353					

REFRIGERATING DIFFUSER

TYPE	Surface m³	No. Fans	Air m³/h
102314	3.8	1x250	500
102315			
102316			
102317			
102319	5.6	1x300	950
102331			
102332			
102335			
102336			
102318			
102333			
102334			
102337			
102338	8.4	1x300	850
102339			
102351			
102352			
102353			

AMBIENT TEMP.: 43°C

A	COLD ROOM TEMP.			B	COLD ROOM TEMP.	
	6+8°C Watt	2+4°C Watt	-2+2°C Watt		-18-20°C Watt	-23-25°C Watt
102254	1127	999	913	102314	921	691
102255				102315		
102259	1252	1111	1015	102316		
102277				102317		
102256				102319		
102257				102331		
102258				102332		
102273				102335		
102274	1607	1425	1301	102336		
102275				102318		
102278				102333		
102279				102334		
102282				102337		
102276				102338		
102280				102339		
102281	2283	2025	1848	102351		
102282				102352		
102283				102353		
102284						

A.3 MECHANICAL SAFETY CHARACTERISTICS - HAZARDS

The appliance has no sharp or protruding parts.
The guards for moving and live parts are screwed to the cabinet
to prevent accidental access.

B.1 INSTALLATION

To ensure correct operation of the equipment and safe operating conditions, carefully follow the instructions given below in this section.

B.1.1 INTEGRITY OF PACKING

Check the state of the packing and any protection materials before unpacking. Any damage must be reported immediately to the carrier. Under no circumstances should a damaged appliance be returned to the manufacturer without prior notice and without obtaining written permission.

B.1.1.1 REMOVAL, DISPOSAL OF PACKING AND HANDLING (FIG.2)

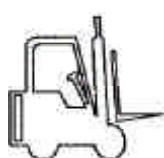
To correctly carry out unpacking, proceed according to the order (A-D) using the following tools: nail puller and pincers.
(See detail E - FIG.2 for correct removal of the components from the packing box).



Detail Fig. 2B:

CAUTION! Make sure the weight is balanced.

Use a fork-lift truck to lift the equipment, inserting the forks under the pallet, and carry it to the place of installation, making sure that the load is balanced.



B.1.1.2 DISPOSAL OF PACKING

B.1.1.2. DISPOSAL OF PACKAGING
Packing materials must be disposed of in accordance with current regulations in the country where the equipment is used.

A

Temp. Introduc.	Fresh products	25°C
Daily handling	of products	30kg/m ³
Daily operation		18 hours

B

Temp. Introduc.	Fresh products	-14°C
Daily handling	of products	35kg/m ³
Daily operation		18 hours

B.1.2.1 EVAPORATOR ASSEMBLY (FIG. 3A)

Fit the panel in the empty cold room compartment and secure the fasteners with the Allen key supplied (FIG.3B-3F). When fitting the electrical panel in the position shown in FIG.3C, pass the two electrical cables coming out of the junction box in the right tube (A), and the feed cable in the left tube (B). (Ref.C connection from mains)

B.1.2.2 CONDENSING UNIT WALL MOUNTING (FIG. 4)

Fit the wall bracket by means of the 4 plugs M6x50 supplied and hook the condensing unit placing the 3x10 adhesive packing (supplied) between the unit and the wall.

B.1.2.3 ASSEMBLY OF PRECHARGED TUBES (FIG. 3D)

Screw the tubes on the relative rapid connections on evaporator side and condensing unit side, taking care not to invert the liquid tube and the hot gas tube.

Shape the tubes along their path avoiding any sharp bends that would affect good operation of the system.

(1-hot gas/2-suction
3-liquid/4-electrical connection)

C.1 ELECTRICAL CONNECTION

1. Installation operations must only be carried out by qualified personnel in compliance with current regulations.
2. The power supply must be through a cable of section 3x2.5 for single-phase systems and 5x5.1 for three-phase systems with a thermal magnetic switch with min. contact opening of 3 mm, or polarized plug; in both cases the disconnecting device must be located in a visible position.

C.1.1 ELECTRICAL PANEL ASSEMBLY (FIG. 3E)

Fit the electrical panel on the wall using the four screws supplied. If using a different position to the standard one provided for in Fig. 3C, protect the electrical cables with the plastic tubes and bends supplied.

Make the electrical connections, connecting the 3-core cable of the sensors and the 7-core cable of the evaporator, the cable coming from the condensing unit and the power supply cable (see Split Unit Wiring Diagrams).

C.1.2 DOOR MICROSWITCH (optional) ASSEMBLY/ELECTRICAL CONNECTION (FOR NEGATIVE TEMP. COLD ROOMS) (FIG. 5)

- Fit plate A on the cold room wall at 40mm using 2 rivets Ø3(1);
- Fit angle piece B on the door at 28mm from the panel using 2 rivets Ø3(2);
- Fit the microswitch making 4 holes Ø2.5 in the wall of the cold room matching those already existing in the plate, using 4 screws Ø3.8x45 (3); the trip lever of the microswitch must be adjusted so that with the door closed the angle piece assembled on the door profile trips the contacts.

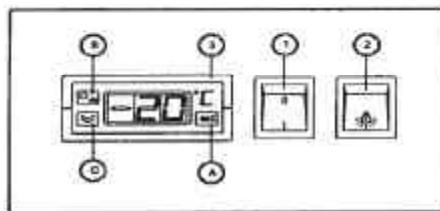
ELECTRICAL CONNECTION (FIG. 5B)

Remove the microswitch cover undoing the three fixing screws. Use a cable 5x0.75 to connect the microswitch to the condensing unit electrical panel; make the connections according to the wiring diagram (21-22 contact normally closed for controlling the cold room light; 13-14 contact normally open for controlling the evaporator fans); connect the yellow-green wire to the earth screw.

PROTECTION

Fit the microswitch protection casing, securing it with a little silicone along the edges.

D.1 DESCRIPTION AND OPERATION OF CONTROL PANEL



1. COMPRESSOR SWITCH

Starts the compressor, signalled by the built-in green indicator light.

2. COLD ROOM LIGHT SWITCH

Switches on the cold room light, signalled by the built-in green indicator light.

3. MICROPROCESSOR INSTRUMENT

Press and release the SET button (A) to display the set point temperature; operate the UP (B) and DOWN (C) buttons to change it. During this phase the SET LED flashes.

Press UP button (B) for more than 5 seconds to activate a defrost. During the defrost cycle the DEF LED flashes. The COMP LED lights up when the compressor is working.

IMPORTANT: The instrument is already programmed for optimal system operation; if specialized personnel wish to change the work parameters, see the "Control Panel Settings Table".

E.1 START-UP

Set the work SET POINT (working temperature) on the instrument. Turn on the power by operating the compressor switch (1); lighting up of the green indicator signals that the unit is working.

F.1 MAINTENANCE

CAUTION: turn off the power to the machine before any maintenance or cleaning operation.

Extraordinary maintenance operations must only be carried out by qualified technical personnel.

Use protection gloves when carrying out any maintenance operation.

Clean the condenser every 2 or 3 months. This operation must be carried out with the unit turned off; use a brush with long bristles to remove dust deposited on the fins.

If the lamp is burnt out or faulty, turn off the power to the system and replace with one of equal power.

G.1 RULES FOR GOOD SYSTEM OPERATION

The SPLIT units are designed to preserve fresh or frozen products, therefore follow these instructions:

G.1.1 DOOR OPENING

Program goods handling in order to reduce the number of times the door is opened without concentrating openings in time.

G.1.2 GOODS HANDLING

Do not exceed 30/35 kg/m³ of cold room per day.

G.1.3 STRIP CURTAIN

With low temperature cold rooms it is always advisable to install a strip curtain to prevent excessive outside air from entering. It is indispensable in the case of frequent door opening.

G.1.4 LOAD LIMITS

The goods stored in the cold room must not exceed the lower limit of the refrigerating diffuser.

G.1.5 AMBIENT CONDITIONS

Make sure the system is not exposed to direct sunlight. Check that the ambient temperature near the condensing unit is not higher than **43°C** and lower than **-5°C**.

G.1.6 LOW TEMPERATURE COLD ROOMS

A compensation valve must be fitted.

H.1 ANOMALIES

H.1.1 COMPRESSOR BLOCKED

An abnormal temperature rise in the cold room is noted. The compressor has a safety device that stops it in the case of the following danger conditions:

- Poor operation of condenser fan.
 - Condenser dirty
 - Voltage rashes in power supply
 - Ambient temperature too high (inadequate air exchange)
- Remember that after stopping the compressor restarts automatically, but it is advisable to eliminate the cause of stopping. Have the problem checked by a technician if it persists.

H.1.2 FORMATION OF ICE ON THE EVAPORATOR

Possible causes can be:

- Incorrect thermostat setting (for positive SPLIT units)
- Too frequent opening of cold room door
- Introduction of foodstuffs at a higher temperature than that provided for (not above 18-20 °C for positive cold rooms, not above -9 °C for low temperature cold rooms).
- Insufficient defrosting. Carry out a manual defrost.
If this is still insufficient, call a technician.

During the defrost phase the temperature rises. This is provided for in order to allow the evaporator to free itself of frost or ice.

Defrosting is signalled by the microprocessor DEF LED lighting up.

I.1 WASTE DISPOSAL AND DEMOLITION

I.1.1 WASTE STORAGE

At the end of the product's life cycle, make sure the panels are not dispersed in the environment. Remove the doors before disposing of the panels.

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

I.1.2 PROCEDURE REGARDING MACRO-OPERATIONS FOR DISMANTLING THE EQUIPMENT

All countries have different legislation, therefore the provisions laid down by the laws and the authorized bodies of the countries where demolition takes place must be observed.

In general, the panels must be taken to specialized collection/demolition centres. Dismantle the panels, grouping the components according to their chemical characteristics, bearing in mind that the compressor contains lubricant oil and coolant, which can be recycled, and that the refrigerator components are classed as special waste that cannot be disposed of as urban waste.

Make the equipment unusable by removing the power supply cable and removing any compartment locking mechanisms to avoid the risk of someone becoming closed inside.

DISMANTLING OPERATIONS MUST BE CARRIED OUT BY QUALIFIED PERSONNEL.

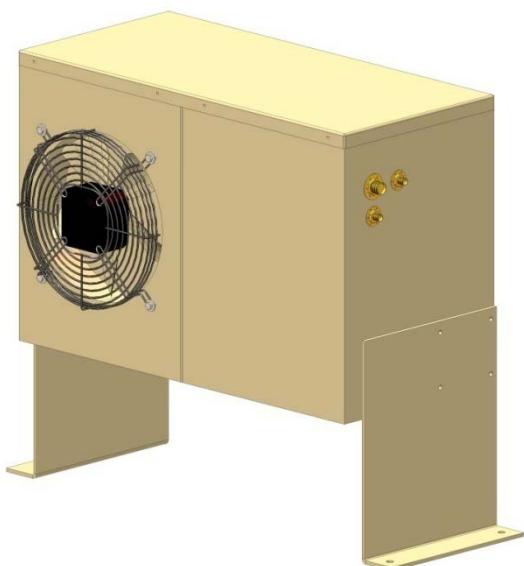
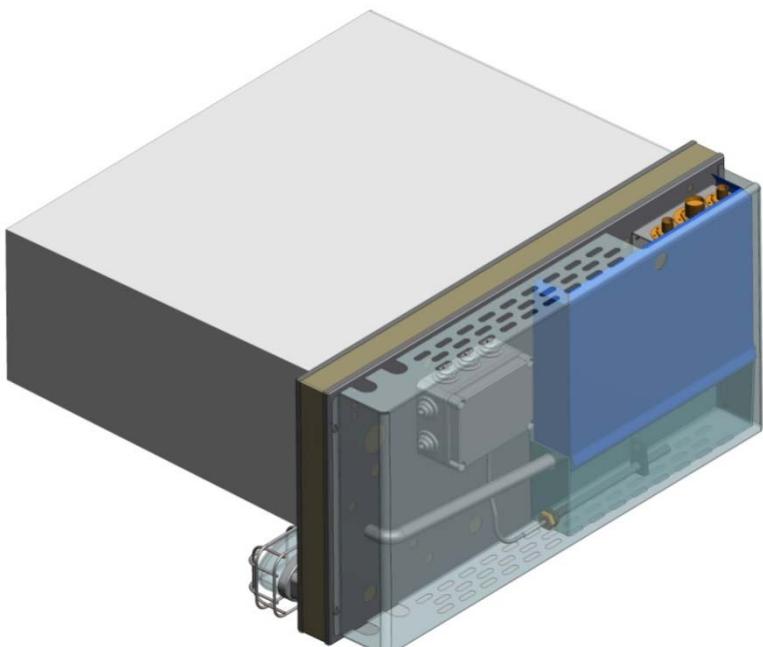
ISTRUZIONI PER L'INSTALLAZIONE, USO E MANUTENZIONE
INSTRUCTION FOR THE INSTALLATION, USE AND MAINTENANCE
INSTALLATIONS, GEBRAUCHS UND WARTUNGSANLEITUNG
MODE D'EMPLOI POUR L'INSTALLATION, L'UTILISATION E L'ENTETRIEN

IMPIANTO
UNIT
ANLAGE
SYSTEME

MSG

MSG 4P	MSG 6N
MSG 7P	MSG 13N
MSG 13P	MSG 20N
MSG 16P	
MSG 18P	

INDICE pag. 2
INDEX pag. 10
INHALT seite 18
SOMMAIRE pag. 26



INDICE:**ELENCO ILLUSTRAZIONI:**

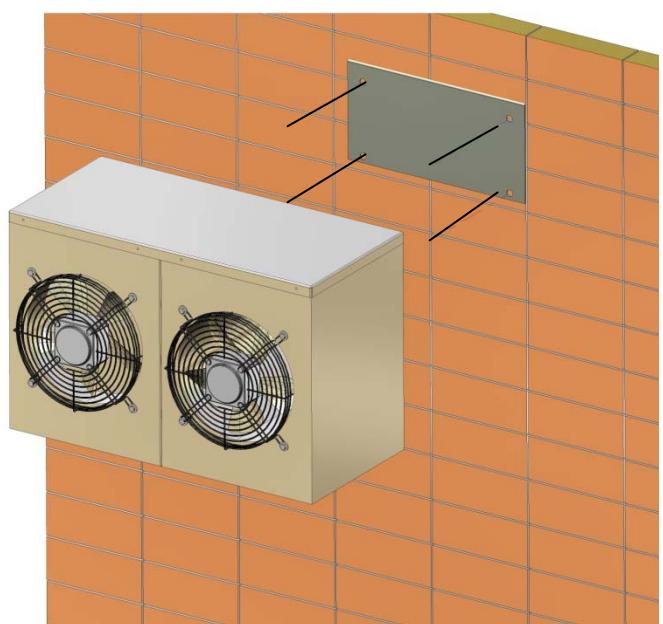
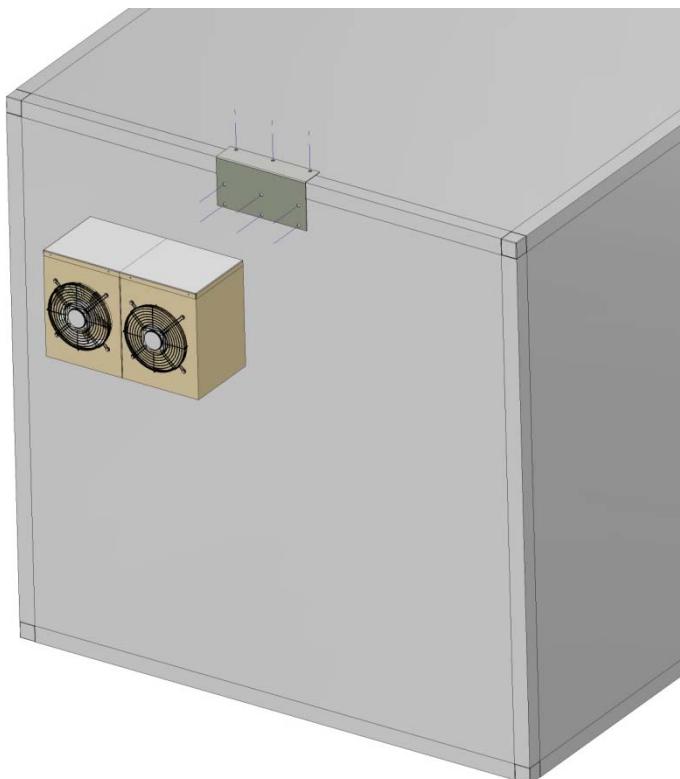
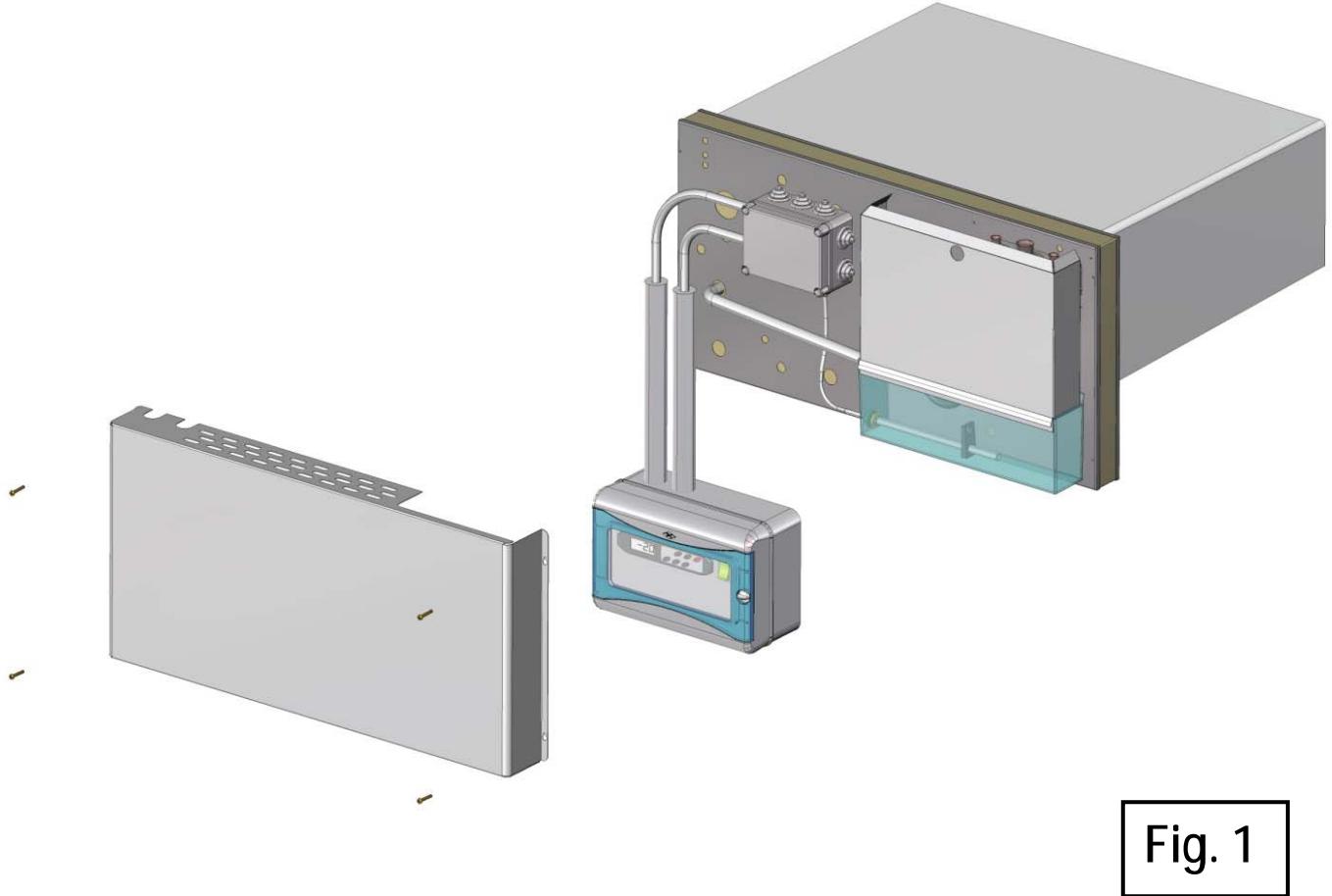
Fig.1 - MONTAGGIO EVAPORATORE	3
Fig.2 - MONTAGGIO UNITA' CONDENSANTE SULLA CELLA	3
Fig.3 - MONTAGGIO UNITA' CONDENSANTE A MURO	3
Fig.4 - STRUMENTAZIONE QUADRO ELETTRICO	4
Fig.5 - MONTAGGIO UNITA' CONDENSANTE INCASTELLATA	4
Fig.6 - DIMENSIONI UNITA' CONDENSANTE	35
Fig.7 - DIMENSIONE QUADRO ELETTRICO	36
Fig.8 - DIMENSIONE UNITA' EVAPORANTE	36
Fig.9 - POSIZIONI PARTI DI RICAMBIO MSG 4P-7P-13P-16P	42
Fig.10 - POSIZIONI PARTI DI RICAMBIO MSG 6N-13N	44
Fig.11 - POSIZIONI PARTI DI RICAMBIO MSG 18P-20N	46

ELENCO SCHEMI ELETTRICI:

SCHEMA ELETTRICO PER MSG MONOFASE	39
SCHEMA ELETTRICO PER MSG TRIFASE	40

ELENCO TESTI DI COMMENTO:**ISTRUZIONI USO E MANUTENZIONE**

A) INFORMAZIONI GENERALI	5
A.1 PREMESSA	5
A.2 DESTINAZIONE D'USO E RESTRIZIONI	5
B) INSTALLAZIONE	5
B.1 DISIMBALLO E MOVIMENTAZIONE DEL PRODOTTO	5
B.1.1 IMMAGAZZINAMENTO E TRASPORTO	5
B.1.2 INTEGRITA' DELL'IMBALLO	5
B.1.3 RIMOZIONE DELL'IMBALLO E MOVIMENTAZIONE	5
B.1.4 SMALTIMENTO DELL'IMBALLO	5
B.2 MONTAGGIO DELL'UNITA' SPLIT	5
B.2.1 MONTAGGIO EVAPORATORE	5
B.2.2 MONTAGGIO DELL'UNITA' CONDENSANTE SULLA CELLA	5
B.2.3 MONTAGGIO DELL'UNITA' CONDENSANTE A MURO	5
B.2.4 MONTAGGIO DELL'UNITA' CONDENSANTE INCASTELLATA	5
B.2.5 MONTAGGIO DEI TUBI PRECARICATI	6
B.3 MONTAGGIO DEL QUADRO ELETTRICO	6
B.4 COLLEGAMENTO ELETTRICO	6
C) AVVIAMENTO DELL'IMPIANTO	6
D) USO DELL'IMPIANTO	6
D.1 DESCRIZIONE E FUNZIONAMENTO DEL QUADRO DI COMANDO	6
D.1.2 SEGNALAZIONE DI ALLARME	7
D.1.2.1 SEGNALAZIONE DI ALLARME DERIVANTE DA SONDE GUASTE	7
D.2 IMPOSTAZIONE PARAMETRI STRUMENTO	7
D.3 COPY CARD	7
D.4 NORME PER LA BUONA CONDUZIONE DELL'IMPIANTO	7
E) MANUTENZIONE	9
E.1 MANUTENZIONE ORDINARIA	9
E.2 MANUTENZIONE STRAORDINARIA	9
F) ANOMALIE DI FUNZIONAMENTO	9
G) SMALTIMENTO RIFIUTI E DISMISSIONE	9
DATI TECNICI	34
SCHEMI ELETTRICI	37
PARTI DI RICAMBIO	41
DICHIAZAZIONE DI CONFORMITA'	50



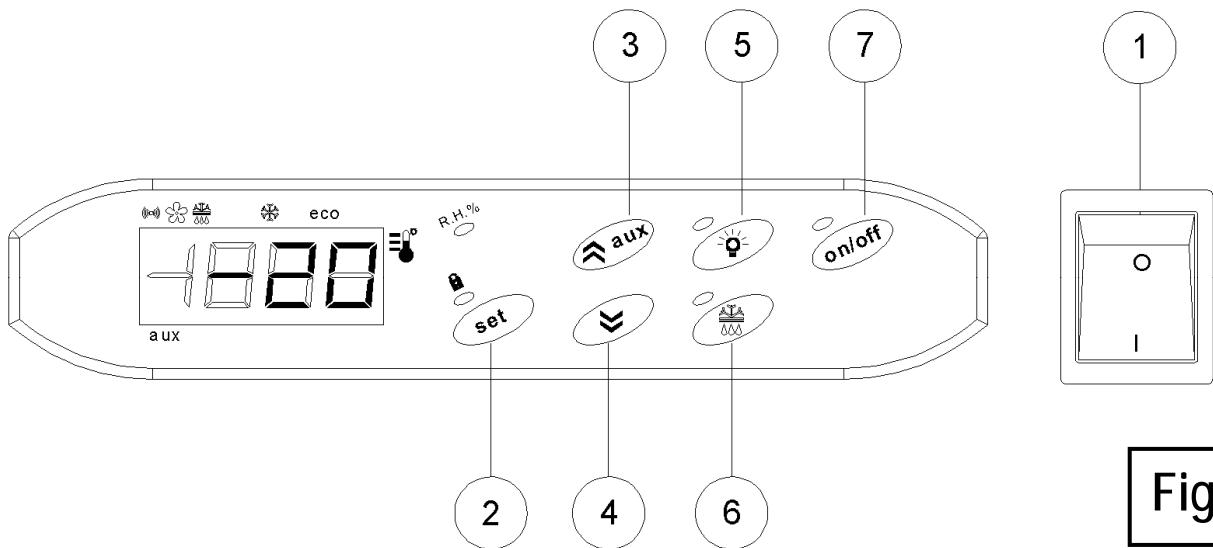


Fig. 4

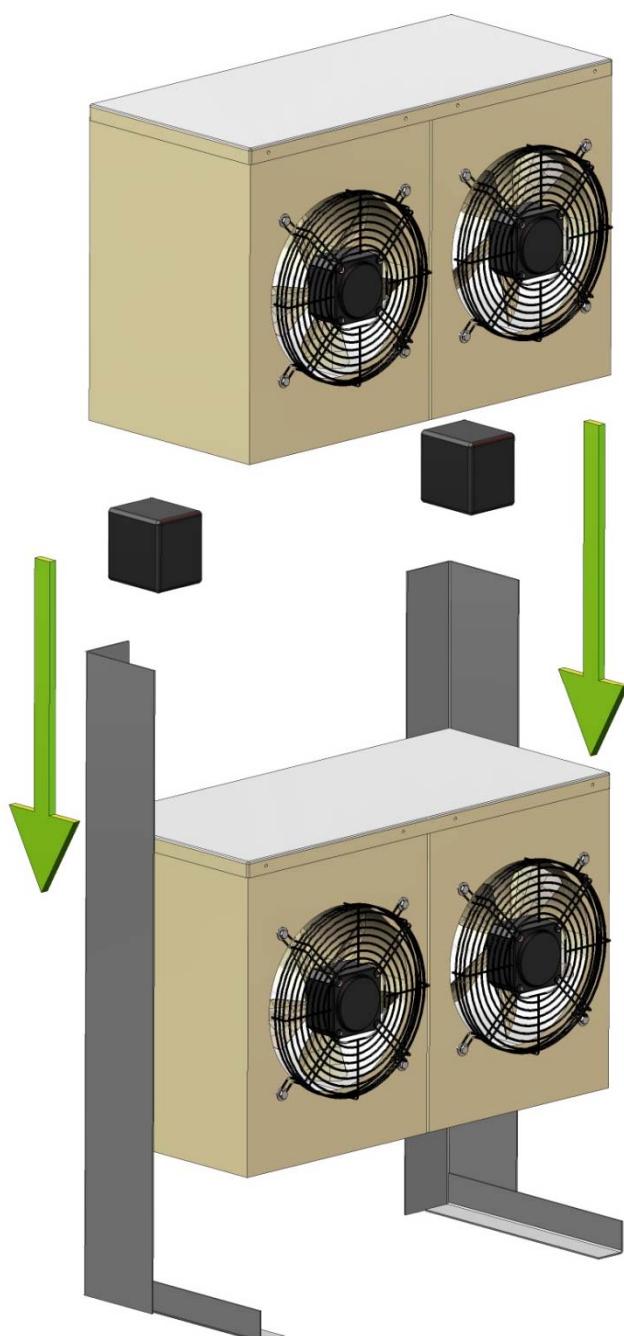


Fig. 5

A) INFORMAZIONI GENERALI

A.1 PREMESSA

Il presente manuale ha lo scopo di fornire tutte le informazioni necessarie per effettuare correttamente l'installazione, l'uso e la manutenzione dell'impianto. Esso costituisce parte integrante ed essenziale del prodotto e dovrà essere consegnato all'utilizzatore.

Prima di ogni operazione leggere attentamente le istruzioni qui contenute.

Il costruttore declina ogni responsabilità per qualsiasi operazione effettuata sull'impianto trascurando le indicazioni qui contenute.

A.2 DESTINAZIONE D'USO E RESTRIZIONI

L'impianto MSG è stato progettato e costruito per essere installato su celle destinate alla refrigerazione e conservazione di prodotti alimentari. Ogni altro utilizzo è da ritenersi improprio e quindi pericoloso. Si raccomanda di proteggere l'apparecchio da un utilizzo improprio che possa costituire un pericolo.

Il costruttore declina ogni responsabilità per danni causati a persone o cose derivati da errori di installazione ed uso improprio e comunque da inosservanza delle istruzioni fornite dal costruttore.

B) INSTALLAZIONE

Per assicurare un corretto funzionamento del prodotto ed il mantenimento delle condizioni di sicurezza durante l'utilizzo seguire scrupolosamente le istruzioni riportate di seguito in questo paragrafo.

L'installazione dell'impianto deve essere realizzata in conformità alle norme vigenti inerenti la progettazione, l'installazione e la manutenzione degli impianti frigoriferi e deve essere eseguita da personale professionalmente qualificato secondo le istruzioni del costruttore. L'impianto elettrico di alimentazione delle unità dovrà essere realizzato secondo le norme CEI e nel rispetto delle Leggi n. 186/68 e DM 37/2008.

Un'errata installazione può causare danni a persone o cose, nei confronti dei quali il costruttore non può essere considerato responsabile.

ATTENZIONE: Non avviare l'impianto fintanto non sia stato collegato l'impianto di messa a terra.

B.1 DISIMBALLO E MOVIMENTAZIONE DEL PRODOTTO

B.1.1 IMMAGAZZINAMENTO E TRASPORTO

Immagazzinare la macchina all'asciutto ed al riparo dalle intemperie nell'imballo originale. La temperatura di immagazzinamento deve essere compresa tra -20 °C e 60°C. Durante il trasporto utilizzare l'imballo originale ed evitare scosse ed urti.

B.1.2 INTEGRITÀ DELL'IMBALLO

Prima di procedere al disimballo del prodotto verificare l'integrità dello stesso e delle eventuali protezioni. Eventuali danni devono essere tempestivamente segnalati al vettore. In nessun caso comunque alcun apparecchio danneggiato potrà essere reso al costruttore senza preavviso e senza averne ottenuta preventiva autorizzazione scritta.

B.1.3 RIMOZIONE DELL'IMBALLO E MOVIMENTAZIONE



L'imballo dell'impianto è predisposto per essere movimentato tramite un carrello a forche. Al fine di non graffiare le lamiere si consiglia di movimentare l'impianto tramite il suo pallet fino in prossimità della zona di installazione. Per rimuovere l'imballo svitare le viti poste nella parte inferiore e sollevare lo stesso.

B.1.4 SMALTIMENTO DELL'IMBALLO

Lo smaltimento degli imballi deve essere fatto in conformità alle norme vigenti nel paese di utilizzo del prodotto.

I componenti in materiale plastico soggetti ad eventuale smaltimento con riciclaggio sono contrassegnati nei seguenti modi:



polietilene: sacchetto istruzioni



polistirolo espanso: protezioni



cartone pressato: protezioni

B.2 MONTAGGIO DELL'UNITÀ SPLIT

B.2.1 MONTAGGIO EVAPORATORE

Sollevarre l'evaporatore e posizionarlo nell'apposito vano di alloggio predisposto sulla cella. Tirare i Fastener presenti sul pannello di supporto per mezzo della chiave fornita nell'imballo.

Qualora si decida di montare il quadro elettrico nella posizione indicata nella FIG.1., far passare i due cavi uscenti dalla scatola di derivazione nel tubo di destra, ed il cavo di alimentazione nel tubo di sinistra.

B.2.2 MONTAGGIO DELL'UNITÀ CONDENSANTE SULLA CELLA

Montare la staffa angolare con N°9 rivetti ø 4 x 9,5 come indicato nella FIG.2.

Agganciare l'unità condensante interponendo la guarnizione adesiva 3 x 10 fra l'unità stessa e la cella.

B.2.3 MONTAGGIO DELL'UNITÀ CONDENSANTE A MURO

Montare la staffa a muro tramite N° 4 tasselli M6 x 50 come indicato nella FIG.3

Agganciare l'unità condensante interponendo la guarnizione adesiva 3 x 10 fra l'unità stessa e il muro.

B.2.4 MONTAGGIO DELL'UNITÀ CONDENSANTE INCARTELLATA

Eseguire le seguenti operazioni come indicato in FIG.5:

- 1.) Eseguire l'assieme piede-montante con le N°6 viti e dadi M8 in dotazione
- 2.) Posizionare la prima unità condensante e bloccarla con le viti M8 in dotazione
- 3.) Posizionare i N°2 distanziali in legno agli angoli dell'unità già montata e appoggiare la seconda unità. I N°6 fori di fissaggio coincideranno adesso perfettamente e si potrà bloccare l'unità con le viti M8. Rimuovere i due distanziali

e ripetere l'operazione nel caso di incastellatura di una terza unità

- 4.) A questo punto bloccare a terra l'assieme creato usufruendo dei N°4 fori presenti sui piedi dopo aver preparato un'area d'appoggio perfettamente livellata.
- 5.) In caso di incastellature promiscue di unità condensanti trifase e monofase, avvalersi per le monofase dei distanziali in alluminio e delle viti più lunghe fornite allo scopo (set fornito in opzione).

B.2.5 MONTAGGIO DEI TUBI PRECARICATI

ATTENZIONE: L'ATTACCO RAPIDO FEMMINA ED IL MASCHIO CORRISPONDENTE DEVONO ESSERE PERFETTAMENTE ALLINEATI PRIMA D'INIZIARE IL SERRAGGIO, IN MODO DA EVITARE DI ROVINARE LA FILETTATURA.

IL SERRAGGIO DELL'ATTACCO RAPIDO FEMMINA NEL MASCHIO DEVE AVVENIRE IN MODO RAPIDO E COMPLETO AFFINCHE' LE GUARNIZIONI CREINO LA GIUSTA TENUTA. UN SERRAGGIO PARZIALE DELL'ATTACCO PUO' CAUSARE LA PERDITA DEL GAS DELL'IMPIANTO

Avvitare i tubi sui relativi attacchi rapidi lato evaporatore e lato unità condensante, avendo cura di non invertire il tubo del liquido ed il tubo del gas caldo.

Sagomare i tubi lungo il loro percorso avendo cura di piegarli con un raggio adeguato ed evitare strozzature che pregiudichino il buon funzionamento dell'impianto

B.3 MONTAGGIO DEL QUADRO ELETTRICO

Montare il quadro elettrico sulla parete cella mediante le quattro viti in dotazione. Una volta serrate le viti applicare i N°4 tappi nell'apposita sede della vite al fine di garantire il grado di protezione IP65.

Se si sceglie una posizione diversa da quella standard prevista in FIG.1, fare in modo di proteggere i cavi elettrici con i tubi in plastica e le curve in dotazione.

Eseguire le connessioni elettriche collegando il cavo delle sonde ed il cavo a 7 poli dell'evaporatore, il cavo proveniente dall'unità condensante ed il cavo di alimentazione.

B.4 COLLEGAMENTO ELETTRICO

L'alimentazione deve essere eseguita con un cavo di sezione 3 x 2,5 per gli impianti monofase e 5 x 1,5 per gli impianti trifase attraverso interruttore magnetotermico con apertura dei contatti minimo 3 mm, oppure spina polarizzata; in entrambi i casi l'ubicazione del dispositivo di sezionamento deve essere in posizione visibile.

ATTENZIONE: La sicurezza elettrica dell'apparecchio è assicurata soltanto quando lo stesso è correttamente collegato ad un efficace impianto di messa a terra, eseguito come previsto dalle vigenti norme di sicurezza.

Verificare che la tensione di linea corrisponda alla tensione indicata sulla targa matricola. La tolleranza consentita è di +/- 10% del valore nominale.

Le operazioni di installazione devono essere effettuate esclusivamente da personale qualificato in conformità alle normative vigenti.

C) AVVIAMENTO DELL'IMPIANTO

Dare tensione agendo sull'interruttore compressore ① di FIG.4.

Impostare la temperatura di esercizio della cella, qualora si voglia variare quella già impostata. Per visualizzare il set point premere e rilasciare il tasto "set". Apparirà il label "set"; premere nuovamente il tasto set per visualizzare il valore impostato. Per variare il valore del set-point agire, entro 15 secondi, sui tasti e .

ATTENZIONE: Nel caso di impianti di refrigerazione in bassa temperatura si raccomanda di portare la cella alla temperatura di funzionamento gradualmente in modo da non creare eccessive pressioni che potrebbero danneggiare la cella.

D) USO DELL'IMPIANTO

ATTENZIONE: Tutti gli impianti MSG sono progettati in modo tale che l'utilizzatore può accedere a tutte le funzioni senza intervenire in nessun modo all'interno dell'impianto. Il costruttore declina ogni responsabilità da danni recati a cose o persone dovuti a interventi di personale non specializzato all'interno dell'impianto.

L'utilizzatore nell'espletare le funzioni di monitoraggio e variazioni dei parametri di funzionamento deve agire esclusivamente sulla strumentazione esterna del quadro di comando rappresentato in FIG.4.

D.1 DESCRIZIONE E FUNZIONAMENTO DEL QUADRO DI COMANDO

Le funzioni del quadro di comando a bordo cella rappresentato in FIG. 4 sono:

① - Interruttore generale

L'accensione viene segnalata dal pulsante luminoso verde.

② - Tasto SET

Tenuto premuto per 5 secondi si accede alla programmazione dello strumento.

③ - Tasto UP

Tasto per l'incremento dei valori impostabili.

④ - Tasto DOWN

Tasto per il decremento dei valori impostabili.

⑤ - Tasto LUCE CELLA

L'accensione è segnalata dalla luce incorporata.

⑥ - Tasto ESC (uscita)

Tasto di uscita dal menù.

Tenuto premuto per 2 secondi provoca uno sbrinamento supplementare.

⑦ - Tasto ON / OFF

Tasto per accendere o spegnere lo strumento. In modalità OFF tutte le funzioni dell'impianto sono disabilitate tranne il tasto luce cella

- Led di segnalazione: Sulla parte superiore del display sono presenti i seguenti led con i simboli e il significato sotto riportato:

Compressore o Relé 1: ON per compressore acceso; lampeggiante per ritardo, protezione o attivazione bloccata.

Sbrinamento: ON per sbrinamento in corso;

lampeggiante per attivazione manuale.

Allarme: ON per allarme attivo; lampeggiante per allarme tacitato.

Ventole: ON per ventola in funzione.

IMPORTANTE: Lo strumento elettronico di controllo viene programmato direttamente dal costruttore secondo i parametri ottimali di funzionamento; si consiglia pertanto di non modificare tali parametri senza aver preventivamente consultato i Nostri Uffici al fine di non provocare una diminuzione delle prestazioni dell'impianto e dei malfunzionamenti.

Per accedere ai parametri di funzionamento dello strumento da parte di personale specializzato avvalersi delle istruzioni indicate al quadro elettrico.

D.1.2 SEGNALAZIONE DI ALLARME

Lo strumento prevede la possibilità di impostare e segnalare sul display alcune condizioni di allarme.

D.1.2.1 SEGNALAZIONE DI ALLARME DERIVANTE DA SONDE GUASTE

Vengono direttamente evidenziate sul display dello strumento:

E1 – Sonda cella guasta

E2 – Sonda sbrinamento guasta

La sostituzione della sonda guasta dovrà essere effettuata da personale tecnico specializzato nel più breve tempo possibile.

D.2 IMPOSTAZIONE PARAMETRI STRUMENTO

Lo strumento è programmato con i valori indicati nella tabella che segue. Per interventi di personale specializzato volti a variare i parametri di funzionamento, si rimanda alla consultazione del foglio tecnico allegato al seguente libretto.

D.3 COPY CARD

La Copy Card è una scheda opzionale che si collega direttamente allo strumento tramite l'uscita seriale TTL. Accedendo tramite tastiera ai parametri della cartella FPr sarà possibile registrare nella Copy Card il settaggio dei parametri dello strumento ovvero scaricare dalla Copy Card le informazioni in un altro strumento. Nella cartella FPr infatti sono contenute due operazioni:

1. UPLOAD (UL): inserimento parametri di programmazione (da strumento a Copy Card)
2. DOWNLOAD (DL): inserimento parametri di programmazione (da Copy Card a strumento)

Sul display comparirà "Y" se l'operazione è andata a buon fine oppure "n" in caso contrario.

D.4 NORME PER LA BUONA CONDUZIONE DELL'IMPIANTO

Gli impianti MSG sono progettati per la conservazione di merci fresche (0/+8°C) o congelate (-18/-25°C) pertanto occorre attenersi alle seguenti prescrizioni:

1 - Aperture porte

Programmare i movimenti merce in modo da ridurre il numero di aperture della porta e di non concentrarle nel tempo.

2 - Movimento merce giornaliero

Non superiore a 30/35 kg per metro cubo di cella al giorno.

3 - Porta a strisce

Sulle celle a bassa temperatura è sempre consigliabile l'installazione di una porta a strisce che eviti eccessiva immissione di aria esterna. E' indispensabile nel caso di aperture di porta frequenti.

4 - Limiti di carico

La merce stivata in cella non deve superare il limite inferiore del frigidifusore.

5 - Condizioni ambientale:

Verificare che l'impianto non sia esposto direttamente ai raggi solari.

Verificare che la temperatura ambiente, in prossimità dell'unità condensante non superi 45°C e non sia inferiore a -0°C.

6 - Celle a bassa temperatura

ATTENZIONE: è indispensabile montare una valvola di compensazione

7 - Quadro elettrico bordo cella (FIG.4):

Evitare getti d'acqua diretti sul quadro elettrico quando lo sportello non è perfettamente chiuso: solo a sportello chiuso è garantito il grado di protezione IP65.

STRUMENTO ELIWELL / VALORI IMPOSTATI

IWC 750 LX

	Descrizione/ description	MSG P	MSG N	
Set	Set point di regolazione	0	-21	
CP	diF Differenziale di intervento	3	3	
	HSE Massimo valore impostabile set point	8	-10	
	LSE Minimo valore impostabile set point	-2	-21	
	OSP Offset sul set point	0	0	
	Cit Tempo minimo attivazione uscita compressore	0	0	
	CAt Tempo massimo attivazione uscita compressore	0	0	
	Ont Tempo ON compressore in caso di sonda regolazione guasta	0	0	
	OFT Tempo OFF compressore in caso di sonda regolazione guasta	0	0	
	dOn Ritardo attivazione uscita compressore dalla chiamata	0	0	
	dOF Ritardo attivazione uscita compressore dallo spegnimento	0	0	
DEF	dbi Ritardo tra due accensioni consecutive compressore	2	2	
	OdO Ritardo attivazione uscite all'accensione	0	0	
	dtY Tipo di sbrinamento	1	1	
	dit Intervallo tra gli sbrinamenti	6	4	
	dCt Modo conteggio intervallo sbrinamento	1	1	
	dOH Ritardo attivazione ciclo di sbrinamento dalla chiamata	0	0	
	dEt Time out sbrinamento	30	30	
FAn	dPO Sbrinamento all'accensione	n	n	
	dSt Temperatura di fine sbrinamento	10	10	
	FSt Temperatura blocco ventole evaporatore	15	8	
	Fad Differenziale di intervento ventole evaporatore	2	2	
	Fdt Tempo ritardo ventole evaporatore dopo ciclo di sbrinamento	4	4	
	dt Tempo di sgocciolamento	2	2	
	dFd Esclusione ventole evaporatore durante lo sbrinamento	y	y	
AL	FCO Stato ventole evaporatore attive in caso di fermo compressore	n	n	
	Fod Stato ventole evaporatore in caso di porta aperta	n	n	
	FdC Ritardo spegnimento ventole evap. dopo la disattivazione del compres	0	0	
	Fon Tempo di On ventole evaporatore in modalità regolatore ciclico	0	0	
	FoF Tempo di Off ventole evaporatore in modalità regolatore ciclico	0	0	
	Att Modalità parametro HAL e LAL	0	0	
	Afd Differenziale di intervento allarme	2	2	
Lit	HAL Soglia allarme di massima	50	50	
	LAL Soglia allarme di minima	-50	-50	
	PAO Esclusione allarmi all'accensione	4	4	
	dAO Tempo esclusione allarmi di temperatura dopo un ciclo di sbrinamento	180	180	
	OAO Tempo esclusione allarmi di alta e bassa temperatura dopo la chiusura	1	1	
	tdO Tempo esclusione allarme di porta aperta	10	10	
	tAO Tempo di ritardo segnalazione allarmi di temperatura	30	30	
Add	dAt Segnalazione allarme di defrost terminato per time out	n	n	
	EAL Allarme esterno blocca i regolatori	n	n	
	AOP Polarità uscita allarme	1	1	
diS	dSd Abilitazione relè luce da micro porta	y	y	
	OFL Abilitazione spegnimento luce cella da tasto durante il ritardo impostato	y	y	
	dOd Abilitazione spegnimento utenze su attivazione del micro	y	y	
	dAd Ritardo attivazione ingressi digitali	0	0	
Add	dEA Indirizzo dispositivo	0	0	
	FAA Indirizzo famiglia	0	0	
diS	LOC Abilitazione blocco tastiera	n	n	
	PA1 Valore Password	0	0	
	ndt Visualizzazione con punto decimale	n	n	
	CA1 Calibrazione sonda cella	0	0	
	CA2 Calibrazione sonda evaporatore -	0	0	
	ddL Blocco risorse alla fine dello sbrinamento	0	0	

	dro	Selezione °C / °F	0	0		
CnF	H06	Tasto o ingresso digitale ausiliario/ luce attivi a strumento in Off	y	y		
	H11	Configurabilità e polarità ingresso digitale	3	3		
	H21	Configurabilità uscita digitale 1 (A)	1	1		
	H22	Configurabilità uscita digitale 2 (B)	2	2		
	H23	Configurabilità uscita digitale 3 (C)	3	3		
	H24	Configurabilità uscita digitale 4 (D)	4	4		
	H25	Configurabilità uscita digitale 5 (E)	5	5		
	H26	Configurabilità uscita digitale 6 (Buzzer)	4	4		
	H31	Configurabilità tasto UP	1	1		
	H32	Configurabilità tasto DOWN	0	0		
	H33	Configurabilità tasto ESC	1	1		
	H34	Configurabilità tasto Free	2	2		
	H42	Presenza sonda evaporatore	y	y		

E) MANUTENZIONE

E.1 MANUTENZIONE ORDINARIA

ATTENZIONE: L'utente non deve per nessun motivo aprire l'impianto MSG. Il costruttore declina ogni responsabilità per danni a cose o persone e per malfunzionamenti causati da interventi effettuati da personale non specializzato.

Si raccomanda per il buon funzionamento dell'impianto di pulire ogni 2 o 3 mesi le alette del condensatore; ad impianto fermo questa operazione può effettuarsi con un getto di aria compressa o con una spazzola a setole lunghe senza aprire in alcun modo l'impianto MSG.

Assicurarsi, nel caso in cui l'impianto MSG sia installato in un ambiente chiuso, che sia sempre garantito un opportuno ricambio d'aria.

In caso di guasto della lampada, sostituirla con una di pari potenza togliendo prima tensione all'impianto.

E.2 MANUTENZIONE STRAORDINARIA

ATTENZIONE: Tutte le operazioni di manutenzione straordinaria devono essere effettuate da personale qualificato secondo le modalità descritte in questo libretto di istruzioni.

IMPORTANTE: Prima di qualsiasi operazione di manutenzione o pulizia, togliere tensione alla macchina.

In caso di danneggiamento del cavo di alimentazione sugli apparecchi monofasi, sostituire con un cavo con terminali faston 6.3 mm più coprifaston e terminale a occhiello sul cavo conduttore di terra.

F) ANOMALIE DI FUNZIONAMENTO

1 - Blocco del compressore

Si denota con un innalzamento anomale della temperatura della cella. Il compressore è dotato di un dispositivo di sicurezza che ne arresta la marcia quando si verificano condizioni di pericolo come le seguenti:

- Cattivo funzionamento del ventilatore del condensatore
- Condensatore sporco (vedi punto E.1)
- Sbalzi di tensione elevati nella rete di alimentazione
- Temperatura ambiente eccessiva (insufficiente ricambio di aria)

Si ricorda che dopo l'arresto il compressore riparte automaticamente ma è opportuno rimuovere la causa che ne ha provocato l'arresto. Far intervenire un tecnico se l'inconveniente persiste.

2 – Formazione di ghiaccio sull'evaporatore

Possibili cause possono essere:

- Errata impostazione del termostato (per MSG positivi)
- Troppo frequenti aperture della porta della cella (vedi punto D.4)
- Introduzione di derrate a temperatura superiore a quella prevista (non superiore a 20°C per celle positive, non superiore a -14°C per celle a bassa temperatura).

ATTENZIONE: Durante la fase di sbrinamento si verifica un rialzo della temperatura. Ciò è previsto per permettere all'evaporatore di liberarsi da formazioni di brina o ghiaccio.

Lo sbrinamento è segnalato dall'accensione del Led  dello strumento elettronico.

G) SMALTIMENTO RIFIUTI E DISMISSIONE

Alla fine del ciclo di vita dell'impianto, evitare che il gas refrigerante R404A e l'olio POE vengano dispersi nell'ambiente.

ATTENZIONE: Le operazioni di smontaggio devono comunque essere eseguite da personale qualificato.

Smontare l'impianto raggruppando i componenti secondo la loro natura chimica.

E' ammesso uno stoccaggio provvisorio dei rifiuti speciali in attesa di uno smaltimento mediante trattamento e/o stoccaggio definitivo.

Vanno comunque osservate le leggi vigenti nel paese dell'utilizzatore in materia di tutela dell'ambiente. Nei vari paesi sono in vigore legislazioni differenti, pertanto si devono osservare le prescrizioni imposte dalle leggi e dagli enti preposti dai Paesi dove avviene la demolizione.

CONTENTS:**LIST OF FIGURES:**

Fig. 1 - ASSEMBLY OF EVAPORATOR	11
Fig. 2 - ASSEMBLY OF CONDENSING UNIT ON CELL	11
Fig. 3 - ASSEMBLY OF CONDENSING UNIT ON WALL	11
Fig. 4 - SWITCHBOARD INSTRUMENTS	12
Fig. 5 - ASSEMBLY OF CONDENSING UNIT ON FRAMEWORK	12
Fig. 6 - DIMENSIONS OF CONDENSING UNIT	35
Fig. 7 - DIMENSION OF SWITCHBOARD	36
Fig. 8 - DIMENSIONS OF EVAPORATING UNIT	36
Fig. 9 - POSITIONS OF SPARE PARTS MSG 4P-7P-13P-16P	42
Fig. 10 - POSITIONS OF SPARE PARTS MSG 6N-13N	44
Fig. 11 - POSITIONS OF SPARE PARTS MSG 18P-20N	46

LIST OF WIRING DIAGRAMS:

WIRING DIAGRAMS FOR SINGLE-PHASE MSG	39
WIRING DIAGRAMS FOR THREE-PHASE MSG	40

LIST OF COMMENT TEXTS:**INSTRUCTIONS FOR USE AND MAINTENANCE**

A) GENERAL INFORMATION	13
A.1 INTRODUCTION	13
A.2 SCOPE AND RESTRICTIONS	13
B) INSTALLATION	13
B.1 PRODUCT UNPACKING AND HANDLING	13
B.1.1 STORAGE AND TRANSPORT	13
B.1.2 PACKAGE INTEGRITY	13
B.1.3 PACKAGE REMOVAL AND HANDLING	13
B.1.4 PACKAGE DISPOSAL	13
B.2 ASSEMBLY OF THE SPLIT UNIT	13
B.2.1 ASSEMBLY OF EVAPORATOR	13
B.2.2 ASSEMBLY OF CONDENSING UNIT ON CELL	13
B.2.3 ASSEMBLY OF CONDENSING UNIT ON WALL	13
B.2.4 ASSEMBLY OF CONDENSING UNIT FRAMEWORK	13
B.2.5 ASSEMBLY OF PRE-CHARGED TUBES	14
B.3 ASSEMBLY OF SWITCHBOARD	14
B.4 ELECTRIC CONNECTION	14
C) SYSTEM STARTUP	14
D) SYSTEM USE	14
D.1 DESCRIPTION AND OPERATION OF CONTROL BOARD	14
D.1.2 ALARM SIGNALS	14
D.1.2.1 ALARM SIGNALS ORIGINATED FROM FAULTY PROBES	14
D.2 SETTING OF INSTRUMENT PARAMETERS	15
D.3 COPY CARD	15
D.4 RULES FOR PROPER SYSTEM OPERATION	15
E) MAINTENANCE	17
E.1 ROUTINE MAINTENANCE	17
E.2 EXTRAORDINARY MAINTENANCE	17
F) OPERATION FAULTS	17
G) WASTE DISPOSAL AND DISMISSAL	17
TECHNICAL DATA	34
WIRING DIAGRAMS	37
SPARE PARTS	41
CONFORMITY STATEMENT	50

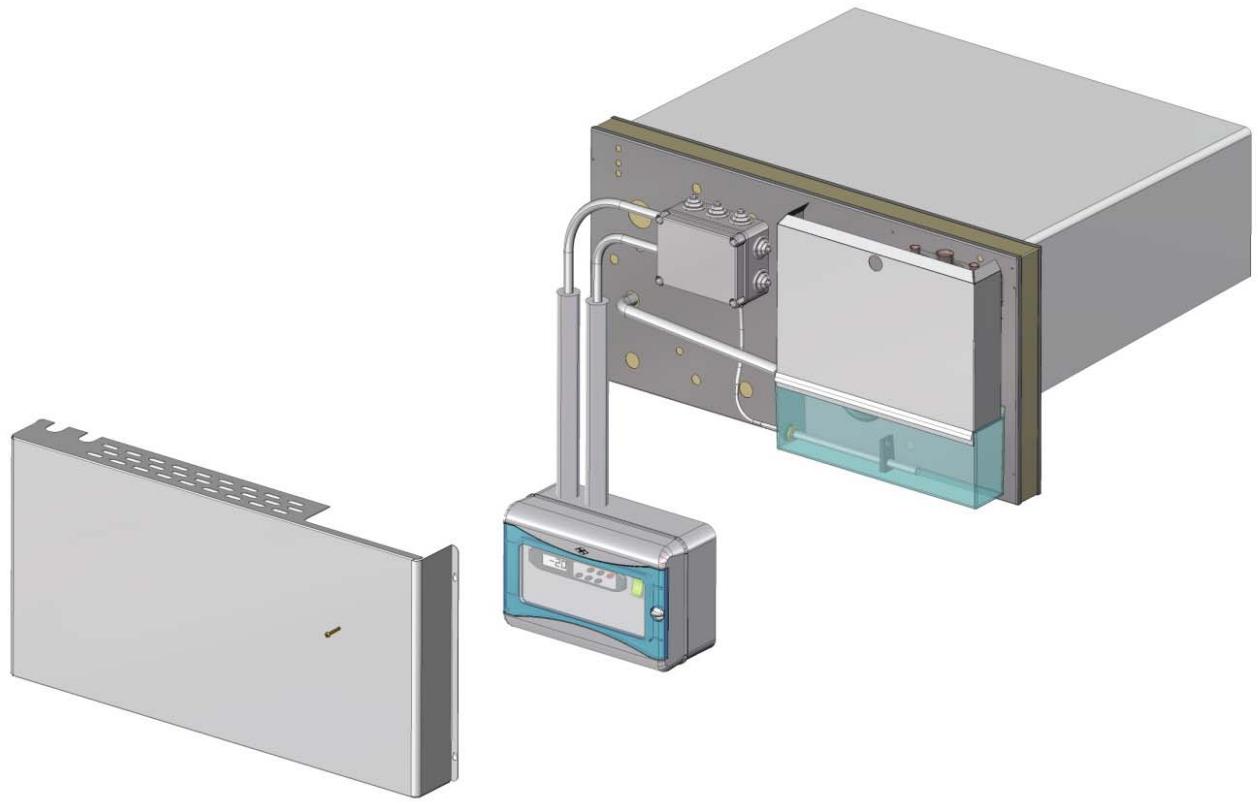


Fig. 1

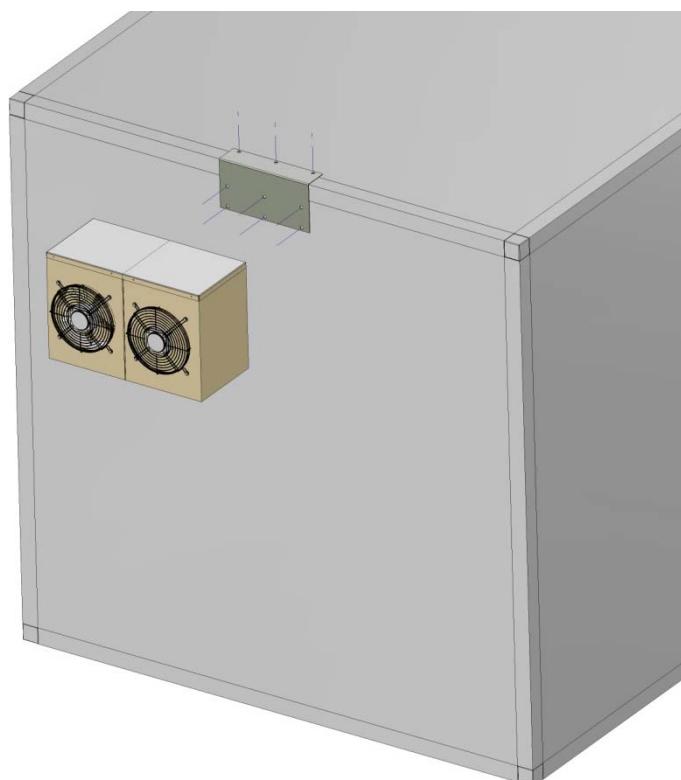


Fig. 2

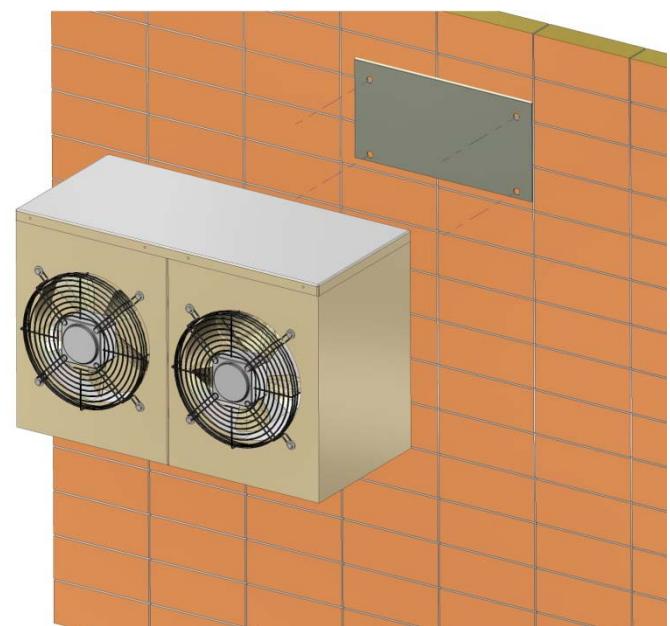


Fig. 3

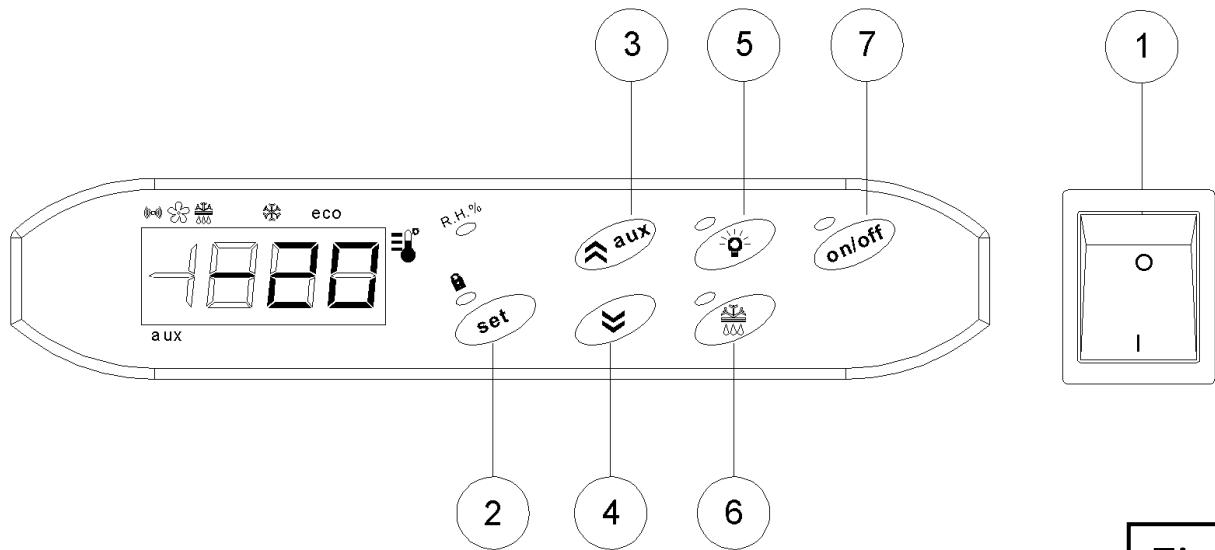


Fig. 4

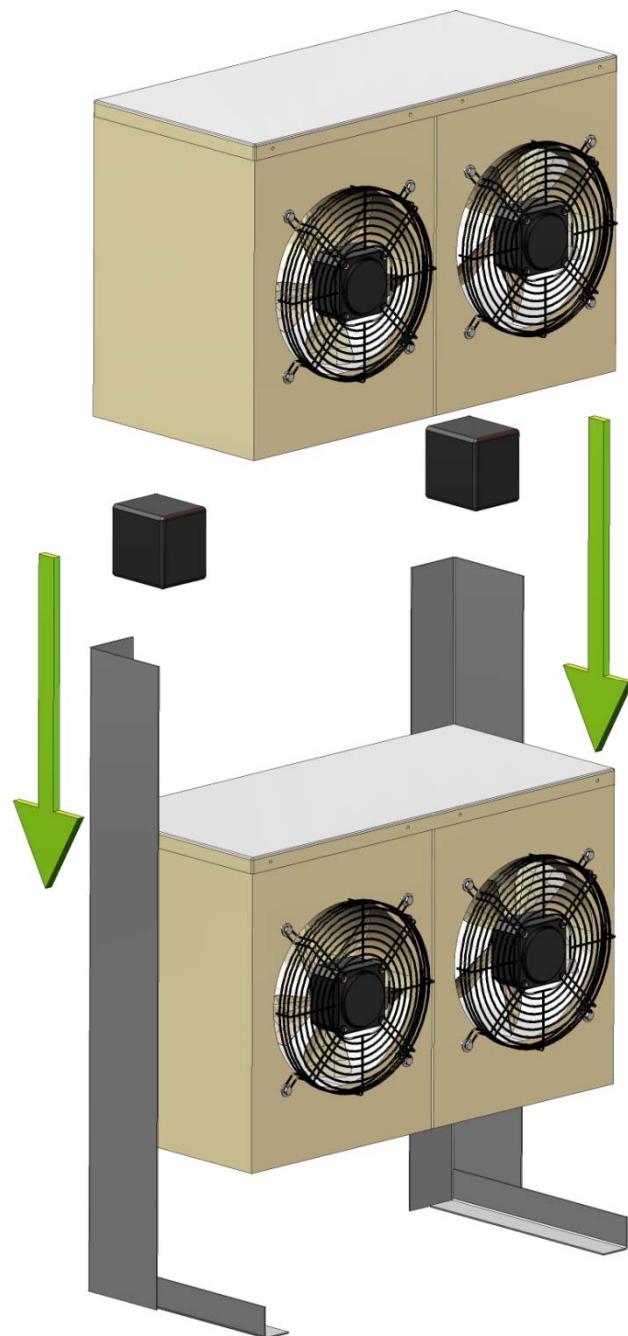


Fig. 5

A) GENERAL INFORMATION

A.1 INTRODUCTION

This manual has the objective of supplying all necessary information to correctly effectuate the installation, use and maintenance of the unit. It constitutes an integral and essential part of the product and must be handed to the user. Before starting any operation, carefully read the contained instructions herewith.

The manufacturer declines any responsibility for any operation effectuated on the unit disregarding the instructions contained herewith.

A.2 DESTINATION OF USE AND RESTRICTIONS

The MSG unit has been designed and constructed to be installed in refrigeration cells destined for the refrigeration and conservation of food products.

Any other use is to be considered improper and therefore dangerous. It is recommended to protect the unit from improper use that could constitute a danger.

The manufacturer declines any responsibility for damage caused to persons or things deriving from installation errors, use and the lack of observance of the instructions supplied by the manufacturer.

A.3 TESTING

Our products have been designed and optimised by laboratory tests with the objective of obtaining high performance and an end-of-line test, the report of which is attached.

B) INSTALLATION

To ensure the correct functioning of the product and the maintaining of safety conditions during use, scrupulously follow the instructions described in the following paragraph.

The installation of the unit must be realised in conformity with the norms in force regarding the design, installation and maintenance of refrigeration installations and must be carried out by professionally qualified personnel according to the instructions of the manufacturer. The electrical feed installation of the units must be realised according to the CEI norms and in respect of the laws nr: 186/68 and DM 37/2008.

An incorrect installation can cause damage to persons or things for which the manufacturer cannot be held responsible.

ATTENTION: Do not switch on the unit until it has been earthed.

B.1 UNPACKING AND MOVEMENT OF THE PRODUCT

B.1.1 STORAGE AND TRANSPORTATION

Store the unit in its original packing in a dry place and undercover from the weather. The storage temperature must be between -20°C and 60°C. During transportation, utilise the original packing and avoid shocks and knocks.

B.1.2 INTEGRITY OF THE PACKING

Before proceeding with the unpacking of the product, check the integrity of the cartons and any protection. Any damage must be quickly advised to the transporters'. In no case can any damaged equipment be returned to the manufacturer without prior warning and without having obtained prior written authorisation.

B.1.3 REMOVAL OF THE PACKING AND MOVEMENT



The packing of the MSG is predisposed to be moved by a fork lift truck. With the scope of not scratching the sheet metal it is recommended to move the unit on its own pallet until the unit is in proximity to the installation zone. Unscrew the lower part and lift up in order to remove the packing.

ATTENTION: On the upper wall of the unit in proximity to the fan is a buttonhole for lifting and positioning the unit in the compartment predisposed on the refrigeration cell.

B.1.4 DISPOSAL OF THE PACKING

The disposal of the packing materials must be done in conformity with the norms in force in the country of utilisation of the product.

The components in plastic material subject to eventual disposal by recycling are marked in the following way:



Polyethylene: polybag



Expanded polystyrene: protections



Pressed cardboard: protections

B.2 ASSEMBLY OF SPLIT UNIT

B.2.1 ASSEMBLY OF EVAPORATOR

Lift the evaporator and place it in its housing on the cell. Tighten the Fastener on the support panel with the wrench supplied in the packaging.

If it is decided to assemble the switchboard in the position indicated in FIG. 1, route the two cables coming out of the pull box in the right-hand tube and the power supply cable in the left-hand tube.

B.2.2 ASSEMBLY OF CONDENSING UNIT ON CELL

Install the angle bracket with 9 rivets Ø 4 x 9.5, as shown in FIG. 2.

Place a self-stick gasket 3 x 10 between the condensing unit and the cell, and connect the condensing unit.

B.2.3 ASSEMBLY OF CONDENSING UNIT ON WALL

Install the bracket on the wall through 4 M6x50 anchors, as shown in FIG. 3.

Place a self-stick 3x10 gasket between the condensing unit and the wall, and connect the condensing unit.

B.2.4 ASSEMBLY OF MOUNTED CONDENSING UNIT

Perform the following operations, as shown in FIG. 5:

- 1.) Assemble the foot-upright unit with the 6 M8 screws and nuts provided with the unit;
- 2.) Position the first condensing unit and lock it with the M8 screws provided with the unit;
- 3.) Position the 2 wooden spacers on the corners of the unit already installed and rest the second unit. The 6 anchoring holes should now perfectly coincide and it is possible to lock the unit with the M8 screws. Remove the two spacers and repeat the operation in the case a third unit is mounted.

- 4.) At this point, fix the assembly just created on the ground with the 4 holes on the feet, after a perfectly leveled support area has been prepared.
- 5.) In the case of promiscuous mounting of three-phase and single-phase condensing units: for single-phase units, use the aluminum spacers and longer screws specifically supplied with the unit (set supplied as an option by Misa).

B.2.5 ASSEMBLY OF PRE-LOADED TUBES

NOTICE: THE FEMALE QUICK CONNECTOR AND CORRESPONDING MALE CONNECTOR MUST BE PERFECTLY ALIGNED BEFORE STARTING TIGHTENING, IN ORDER TO AVOID DAMAGING THE THREAD.

TIGHTENING OF THE FEMALE QUICK CONNECTOR IN THE MALE CONNECTOR MUST BE DONE QUICKLY AND COMPLETELY, SO THAT GASKETS CREATE THE RIGHT SEALING. PARTIAL TIGHTENING OF THE CONNECTOR CAN CAUSE GAS LEAKAGE FROM THE SYSTEM

Screw the pipes on the corresponding quick connectors on evaporator side and condensing unit side, and make sure that the fluid pipe and hot gas pipe are not inverted.

Shape the pipes along their route and make sure they are bent with an appropriate radius, and avoid chokes, which may affect proper system operation.

B.3 ASSEMBLY OF THE SWITCHBOARD

Assemble the switchboard on the cell wall through the four screws supplied. After the screws have been tightened, apply the 4 plugs in the specific screw housing to ensure the IP65 protection degree.

If any position other than the standard position indicated in FIG. 1 is selected, make sure power cables are protected with supplied plastic tubes and elbows.

Perform the electric connections by connecting the cable of probes and the seven-core cable of the evaporator, the cable coming from the condensing unit, and supply cable.

B.4 ELECTRIC CONNECTION

Power supply shall be operated with a 3 x 2.5 section cable for single-phase plants and 5 x 1.5 for three-phase plants through a magnetothermic switch with minimum 3 mm opening of contacts, or polarized plug; in both cases, the sectioning device must be in a visible location.

NOTICE: Electric safety of the system is only ensured when the system is properly connected with an effective grounding system installed in accordance with current safety standards. Check that the line voltage corresponds to the voltage indicated on the nameplate. The maximum allowance is +/- 10% of rated value.

Installation operations shall only be performed by qualified staff in accordance with current laws and standards.

C) SYSTEM STARTUP

Energize the system by acting on the compressor switch ① shown in FIG. 4.

Set the operating temperature of the refrigeration cell as desired. To visualise the set point, press and release the "set" key. The label "set" appears; press the "set" key again to visualise the value set. To change the value of the set point, act on the up and down arrow keys within 15 seconds.

ATTENTION: In the case of low-temperature refrigeration installations, it is recommended to bring the refrigeration cell

to the operating temperature gradually so as not to create excessive pressures that could damage the cell.

D) USE OF THE UNIT

ATTENTION: All FREEBLOCK units are designed so that the user can gain access to all functions without intervening in any way inside the unit. The manufacturer declines any responsibility for damage caused to persons or things due to interventions carried out by non-specialised personnel inside the unit.

The user in carrying out the functions of monitoring and changing functioning parameters must act exclusively on the external instrumentation of the control panel represented in Fig. 4.

D.1 DESCRIPTION AND FUNCTION OF THE CONTROL PANEL

The functions of the control panel on board the cell shown in FIG. 4 are:

① - Main switch

Switching on is indicated by the green light button.

② - SET Button

Keeping pressed for 5 seconds, it is possible to access the instrument programming.

③ - UP Button

Button to increase settable values.

④ - DOWN Button

Button to decrease settable values.

⑤ - CELL LIGHT Button

Switching on is indicated by the inbuilt light.

⑥ - ESC Button

Button to exit the menu.

Keeping pressed for 2 seconds, it provokes an additional defrosting.

⑦ - ON / OFF Button

Button to switch the instrument on or off. In OFF mode, all system functions are disabled, except the cell light button.

- Indication LED: The following LEDs with the symbols and meaning indicated below are on the upper part of the display:

Compressor or Relay 1: ON for compressor switched on; flashing for delay, protection, or startup locked.

Defrosting: ON for defrosting in progress; flashing for manual startup.

Alarm: ON for active alarm; flashing for stopped alarm.

Fans: ON for fan operating.

IMPORTANT: The electronic control instrument is set directly by the manufacturer according to optimal operation parameters. Therefore, it is recommended to avoid changing these parameters without previously consulting Our Offices, in order to avoid provoking a decrease in system performances and malfunctioning.

To enter instrument operation parameters, specialized staff should refer to the instructions attached to the switchboard.

D.1.2 ALARM SIGNALS.

The instrument included the possibility of setting and signalling some alarm conditions on the display.

D.1.2.1 ALARM SIGNALS ORIGINATED FROM FAULTY PROBES

They are directly shown on the instrument display:

E1 – Faulty cell probe

E2 – Faulty defrosting probe.

Any faulty probe shall be replaced by specialized technical staff as soon as possible.

D.2 SETTING OF INSTRUMENT PARAMETERS

The instrument is set with the values indicated in the following table. For any changes of operation parameters performed by specialized staff, read the technical instructions attached to this manual.

D.3 COPY CARD

The Copy Card is an optional card connected directly with the instrument through a serial TTL outlet. By entering the parameters of the FPr folder through the keyboard, it will be possible to register the setting of instrument parameters in the Copy Card, or download information from the Copy Card to another instrument. In fact, two operations are contained in the FPr folder:

1. UPLOAD (UL): setting parameters are entered
(from instrument to Copy Card)
2. DOWNLOAD (DL): setting parameters are entered
(from Copy Card to instrument).

"Y" will appear on the display, if the operation was successful, or "n" if it failed.

D.4 RULES FOR PROPER SYSTEM OPERATION

MSG systems are designed and engineered for preservation of fresh (0/+8°C) or frozen (-18/-25°C) products. Therefore, the following instructions must be observed:

1 – Door opening

Set goods handling in a way as to reduce the number of times doors are opened and avoid concentrating goods through time.

2 – Daily handling of goods

Not more than 30/35 kg per cubic meter of cell per day.

3 – PVC strip curtain door

On low temperature cells, it is always recommended to install a strip curtain door, which avoids excessive air entering from outside. This system is indispensable in the case of frequent door opening.

4 – Load limits

Goods stored in the cell must not exceed the lower limit of fridge-diffuser.

5 - Environmental conditions:

Check that the system is not directly exposed to sunlight.

Check that the room temperature around the condensing unit is not above 45°C or below 0°C.

6 - Low temperature cells

7 – Electric panel on the cold store (FIG. 4) : Avoid direct jets of water on the electric panel when the door is not perfectly closed : the IP65 protection degree can only be ensured when the door is closed .

ELIWELL / SET VALUES IWC 750 LX

	Description	MSG P	MGS N		
Set	Adjustment Set point	0	-21		
CP	diF Activation differential	3	3		
	HSE Maximum possible set point value	8	-10		
	LSE Minimum possible set point value	-2	-21		
	OSP Offset on set point	0	0		
	Cit Minimum compressor activation time before disabling	0	0		
	CAt Maximum compressor activation time before disabling	0	0		
	Ont Compressor activation time in the event of a faulty probe	0	0		
	OFT Compressor off time in the event of a faulty probe	0	0		
	dOn Starting delay for compressor request time elapsing	0	0		
	dOF Activation delay after compressor switching off	0	0		
dEF	dbi Delay between two consecutive compressor switch-ons	2	2		
	OdO Delay time in activating the outputs after switch-on	0	0		
dAn	dtY Type of defrost	1	1		
	dit Interval between the start of two subsequent defrosting operations	6	4		
	dCt Selection of count mode for the defrosting interval	1	1		
	dOH Defrost start delay time from start up of instrument	0	0		
	dEt Defrost time-out	30	30		
	dPO Defrosting at start-up	n	n		
	dSt Defrosting end temperature	10	10		
AL	FSt Evaporator fan lock temperature	15	8		
	Fad Fan activation intervention differential	2	2		
	Fdt Delay time at fan activation after a defrosting cycle	4	4		
	dt Dripping time	2	2		
	dFd Exclusion of the evaporator fans during defrosting	y	y		
	FCO Evaporator fans status when the compressor is OFF	n	n		
	Fod Evaporator fans status when the door is open	n	n		
	FdC Evaporator fan switch off delay time after compressor stop	0	0		
	Fon Time evaporator fans are ON per duty cycle	0	0		
	FoF Time evaporator fans are OFF per duty cycle	0	0		
Lit	Att Parameter "HAL" and "LAL" modes	0	0		
	Afd Alarm start differential	2	2		
	HAL Maximum temperature alarm	50	50		
	LAL Minimum temperature alarm	-50	-50		
	PAO Alarm exclusion after instrument is switched on	4	4		
	dAO Temperature alarm exclusion time after defrost	180	180		
	OAO High and low temperature alarm exclusion time after disabling	1	1		
	tdO Alarm exclusion time of door open	10	10		
	tAO Temperature alarm signal delay time	30	30		
	dAt Alarm signal for defrosting end due to time-out	n	n		
Add	EAL External alarm to lock controls	n	n		
	AOP Polarity of alarm output	1	1		
dis	dSd Enabling light relay by door switch	y	y		
	OFL Enabling light switching off of cell from button during set delay	y	y		
	dOd Enabling light switching off of loads upon switch activation	y	y		
	dAd Digital input activation delay	0	0		
Add	dEA Device Address	0	0		
	FAA Family Address	0	0		
dis	LOC Keyboard locking	n	n		

	PA1	Password Value	0	0		
	ndt	View with decimal point	n	n		
	CA1	Calibration of cell probe	0	0		
	CA2	Calibration of evaporator probe -	0	0		
	ddL	Locks resources at the end of defrost	0	0		
	dro	Selection °C / °F	0	0		
CnF	H06	Key or aux digital input/light door switch active when the instrument is Off	y	y		
	H11	Configuring digital inputs/polarity	3	3		
	H21	1 (A) Digital output configurability	1	1		
	H22	2 (B) Digital output configurability	2	2		
	H23	3 (C) Digital output configurability	3	3		
	H24	4 (D) Digital output configurability	4	4		
	H25	5 (E) Digital output configurability	5	5		
	H26	6 (Buzzer) Digital output configurability	4	4		
	H31	UP key Configurability	1	1		
	H32	DOWN key Configurability	0	0		
	H33	ESC key Configurability	1	1		
	H34	Free key Configurability	2	2		
	H42	Evaporator probe presence	y	y		

E) MAINTENANCE

E.1 ORDINARY MAINTENANCE

ATTENTION: The user must never open the MSG unit. The manufacturer declines any responsibility for damage to persons or things and for malfunctioning caused by interventions effectuated by unauthorised personnel.

For good functioning of the unit, it is recommended to clean the fins of the condenser positioned on the opposite side to the fans every two or three months. This must be effectuated using a jet of compressed air or with a long-haired brush and without opening the MSG unit. Ensure that there is always a sufficient exchange of air if MSG unit is installed in a closed environment.

If a fluorescent tube should burn out, substitute it with one of the same wattage and switching off the mains current to the unit beforehand.

E.2 EXTRAORDINARY MAINTENANCE

ATTENTION: All extraordinary maintenance operations must be effectuated by qualified personnel according to the methods described in this instruction manual.

IMPORTANT: Before any maintenance operation or cleaning, switch off the mains current to the machine.

In the case of damage to the feed cable on single-phase equipment, substitute it with a cable with 6.3 mm faston terminals plus the faston covers and a ring terminal on the earth cable.

F) FUNCTIONING FAULTS

1 - The compressor blocks

This denotes an abnormal rise in temperature of the refrigeration cell. The compressor is equipped with a safety device that stops the compressor when a dangerous situation is verified, such as the following:

- Poor functioning of the condenser fan
- Condenser dirty (see point E.1)
- Voltage overload in the electrical mains system

- Excessive environmental temperature (insufficient exchange of air)

It must be remembered that after stopping the compressor starts automatically but it is better to remove the problem that caused the stoppage. Call a technician if the problem persists.

2 – Formation of ice on the evaporator

Possible causes could be:

- Incorrect setting of the thermostat (for MSG positive)
- Too many openings of the cell door (see point D.4)
- Introduction of goods at a temperature more than foreseen (not more than 20°C for positive cells and not more than -14°C for low-temperature cells).

ATTENTION: There is a rise in temperature during the defrosting phase. This allows the evaporator to free itself of formations of ice or frost. Defrosting is signalled by the switching on of the LED  of the electronic instrument.

G) DISMANTLING AND DISPOSAL

At the end of the life cycle of the unit, avoid dispersing the refrigerant gas R404A and the POE oil in the environment.

ATTENTION: Dismantling operations must be carried out by qualified personnel.

Dismantle the unit, grouping the components according to their chemical nature.

Temporary storage of special waste materials is permitted whilst waiting for disposal by definite treatment and/or storage.

The laws in force in the country must be observed by the user with regards to environmental protection.

In the various countries, different legislations are in force, therefore the regulations imposed by the laws and authorities of the countries where the demolition occurs must be observed.

INHALT:**LISTE DER ABBILDUNGEN:**

Abb. 1 - MONTAGE VERDAMPFER	19
Abb. 2 - MONTAGE KONDENSATOREINHEIT AN DER ZELLE	19
Abb. 3 - MONTAGE HÄNGE-KONDENSATOREINHEIT	19
Abb. 4 - ARMATUR DER SCHALTTAFEL	20
Abb. 5 - MONTAGE KONDENSATOREINHEIT MIT GESTELL	20
Abb. 6 - ABMESSUNGEN KONDENSATOREINHEIT	35
Abb. 7 - ABMESSUNGEN SCHALTTAFEL	36
Abb. 8 - ABMESSUNGEN VERDAMPFEREINHEIT	36
Abb. 9 - LAGE DER ERSATZTEILE MSG 4P-7P-13P-16P	42
Abb. 10 - LAGE DER ERSATZTEILE MSG 6N-13N	44
Abb. 11 - LAGE DER ERSATZTEILE MSG 18P-20N	46

LISTE DER SCHALTPLÄNE:

SCHALTPLAN FÜR MSG MONOPHASE	39
SCHALTPLAN FÜR MSG DREIPHASE	40

LISTE DER KOMMENTARTESTE:**GEBRAUCHS- UND WARTUNGSANLEITUNGEN**

A) ALLGEMEINE INFORMATIONEN	21
A.1 VORAUSSETZUNG	21
A.2 GEBRAUCHSBESTIMMUNG BESCHRÄNKUNGEN	21
B) INSTALLATION	21
B.1 AUSPACKEN UND HANDLING DES PRODUKTS	21
B.1.1 LAGERUNG UND TRANSPORT	21
B.1.2 UNVERSEHRTHEIT DER VERPACKUNG	21
B.1.3 ENTFERNEN DER VERPACKUNG UND HANDLING	21
B.1.4 ENTSORGEN DER VERPACKUNG	21
B.2 MONTAGE DER SPLIT-EINHEIT	21
B.2.1 MONTAGE VERDAMPFER	21
B.2.2 MONTAGE DER KONDENSATOREINHEIT AN DER ZELLE	21
B.2.3 MONTAGE DER HÄNGE-KONDENSATOREINHEIT	21
B.2.4 MONTAGE KONDENSATOREINHEIT MIT GESTELL	21
B.2.5 MONTAGE DER VORGESPANNTEN SCHLÄUCHE	22
B.3 MONTAGE DER SCHALTTAFEL	22
B.4 ELEKTROANSCHLUSS	22
C) INBETRIEBNAHME DER ANLAGE	22
D) GEBRAUCH DER ANLAGE	22
D.1 BESCHREIBUNG UND FUNKTION DER STEUERTAFEL	22
D.1.2 WARNMELDUNGEN	23
D.1.2.1 WARNMELDUNGEN DURCH DEFekte SONDEN	23
D.2 EINSTELLUNG DER INSTRUMENTEN-RICHTWERTE	23
D.3 COPY CARD	23
D.4 NORMEN FÜR DEN KORREKten EINSATZ DER ANLAGE	23
E) WARTUNG	25
E.1 ORDENTLICHE WARTUNG	25
E.2 AUSSERORDENTLICHE WARTUNG	25
F) FUNKTIONSANOMALIEN	25
G) ABFALLENTSORGUNG UND AUSSERBETRIEBSSETZEN	25
TECHNISCHE DATEN	34
SCHALTPLÄNE	37
ERSATZTEILE	41
KONFORMITÄTERKLÄRUNG	50

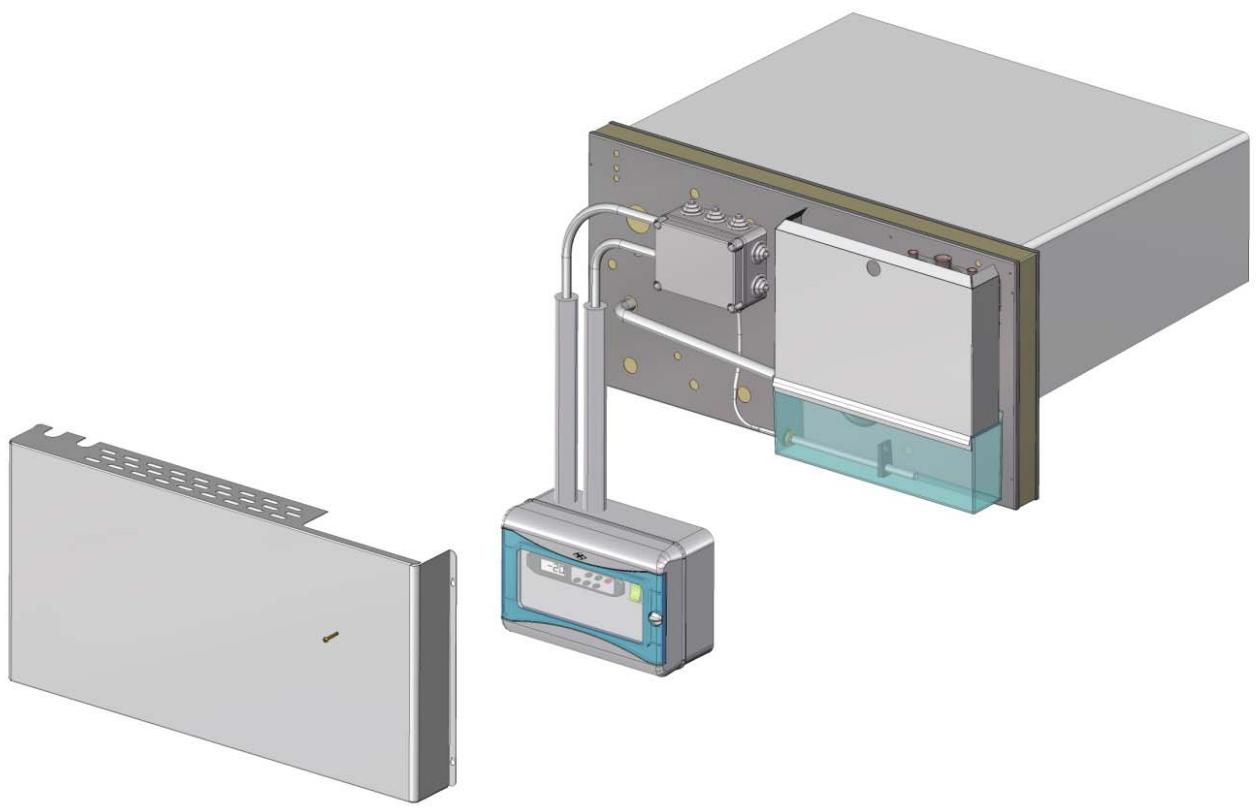


Abb. 1

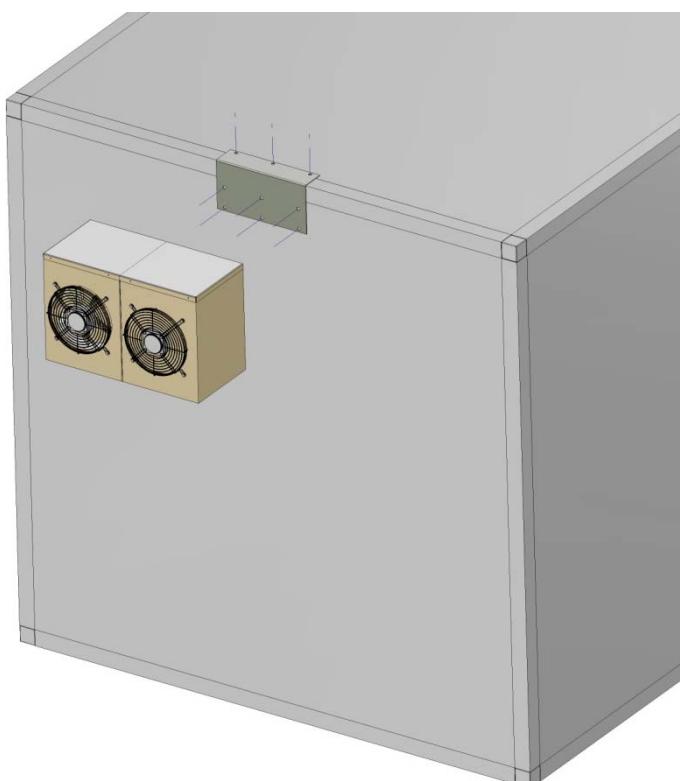


Abb. 2

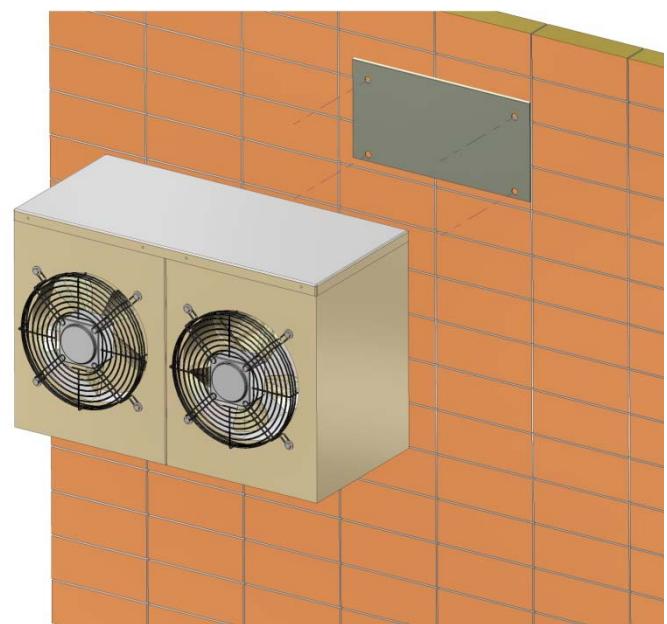


Abb. 3

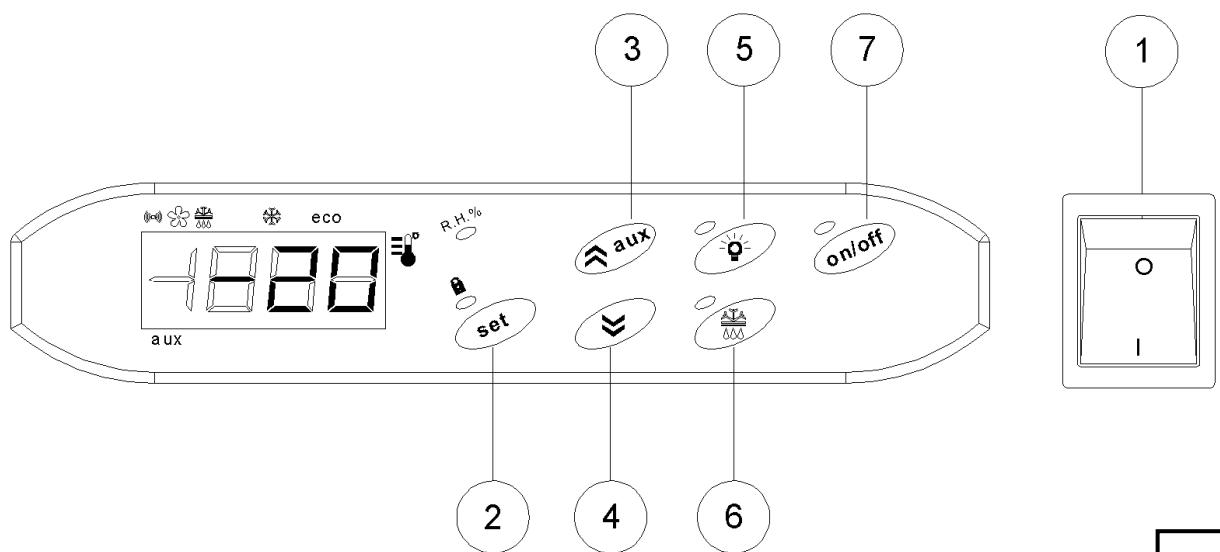


Abb. 4

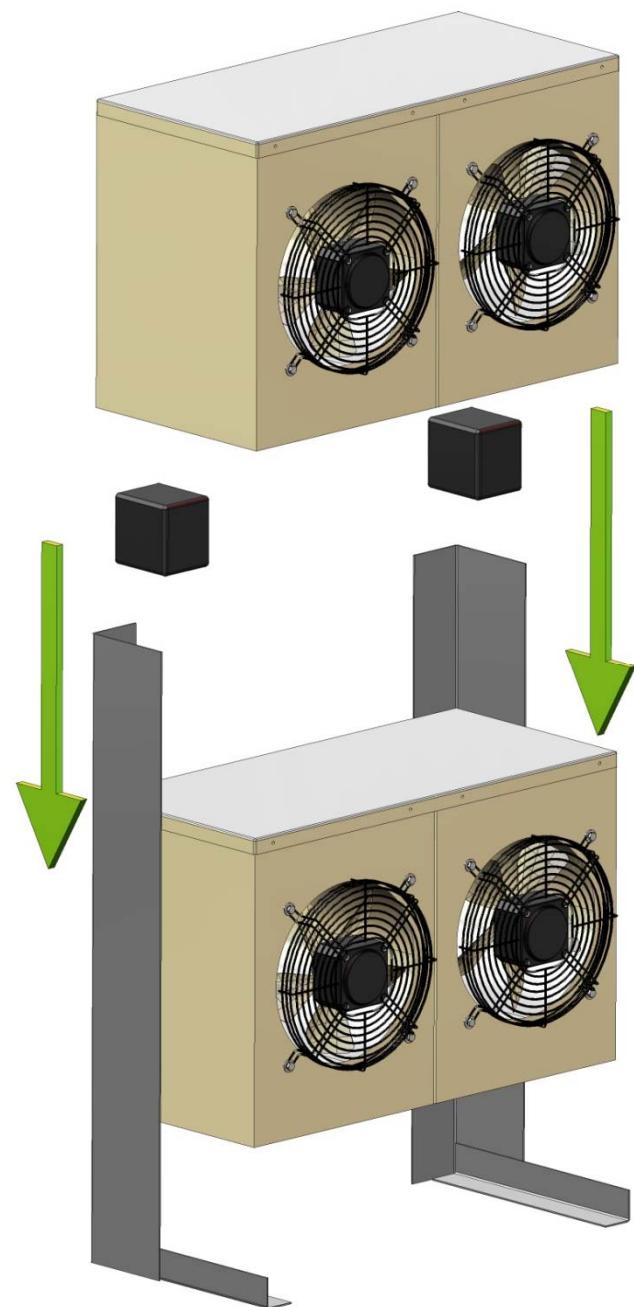


Abb. 5

A) ALLGEMEINE INFORMATIONEN

A.1 VORBEMERKUNG

Das vorliegende Handbuch hat zum Zweck, alle notwendigen Informationen zur richtigen Installation, zum Gebrauch und zur Wartung der Anlage zu liefern. Dies stellt einen vollwertigen und wesentlichen Teil des Produkts dar und muss dem Verbraucher ausgehändigt werden.

Vor jedem Vorgang aufmerksam die hier enthaltenen Anleitungen lesen.

Der Hersteller lehnt jede Verantwortung für Vorgänge ab, die unter Vernachlässigung der hier enthaltenen Anleitungen ausgeführt wurden.

A.2 GEBRAUCHSBESTIMMUNG UND EINSCHRÄNKUNGEN

Die Anlage MSG wurde zum Einbau in Räume mit Plus- und Minustemperaturen, die für die Kühlung und Konservierung von Lebensmitteln bestimmt sind, entworfen und gebaut.

Jede andere Verwendung wird für ungeeignet und somit für gefährlich gehalten. Es wird empfohlen, das Gerät vor einem ungeeigneten Gebrauch zu schützen, der eine Gefahr darstellen könnte.

Der Hersteller lehnt jede Verantwortung für Schäden an Personen oder Dingen ab, die durch Installations- oder Gebrauchsfehler oder durch Nichtbeachtung der vom Hersteller gelieferten Anleitungen verursacht wurden.

A.3 PRÜFUNG

Unsere Geräte wurden in Labortests entwickelt und optimiert mit dem Ziel, gehobene Leistungen und Ergebnisse zu erzielen. Die erzielten Testergebnisse der Qualitätsprüfung werden im Anhang beigefügt.

B) INSTALLATION

Um den richtigen Betrieb des Erzeugnisses und die Erhaltung der Sicherheitsbedingungen während des Gebrauchs zu gewährleisten, müssen die im Folgenden unter diesem Paragraph aufgeführten Anleitungen sehr genau befolgt werden.

Die Installation der Anlage muss entsprechend den gültigen Normen erfolgen, die Planung, die Installation und die Wartung der Kühlanlagen beinhalten. Sie muss überdies durch professionell qualifiziertes Personal gemäß den Anleitungen des Herstellers ausgeführt werden. Die elektrische Versorgungsanlage der Maschine muss nach den Normen CEI und unter Beachtung der Gesetze Nr. 186/68 und DM 37/2008 erfolgen.

Eine fehlerhafte Installation kann Schäden an Personen und Dingen anrichten, für die Hersteller nicht in die Verantwortung genommen werden kann.

ACHTUNG: Die Anlage nicht in Betrieb setzen, bevor die Anlage der Erdleitung nicht angeschlossen ist.

B.1 AUSPACKEN UND BEWEGEN DES PRODUKTS

B.1.1 LAGERUNG UND TRANSPORT

Die Maschine trocken und vor Wetterunfällen geschützt in der Originalverpackung lagern. Die Lagertemperatur muss zwischen -20 °C und 60°C liegen. Während des Transports die Originalverpackung verwenden und Stöße und Rucke vermeiden.

B.1.2 UVERSEHRTHEIT DER VERPACKUNG

Vor dem Auspacken des Produkts überprüfen, ob es samt eventueller Schutzvorrichtungen vollständig ist. Mögliche Schäden müssen umgehend dem Frachtführer mitgeteilt

werden. Auf gar keinen Fall kann ein beschädigtes Gerät dem Hersteller ohne Vorankündigung zurückgegeben werden und ohne vorher die schriftliche Genehmigung erhalten zu haben.

B.1.3 BESEITIGUNG DER VERPACKUNG UND BEWEGUNG



Die Verpackung von MSG ist dafür vorgesehen, mit einem Gabelstapler bewegt zu werden. Um das Blech nicht zu zerkratzen wird empfohlen, die Anlage mittels seiner Palette bis in die Nähe der Installationsstelle zu bewegen.

Die untere Schrauben losschrauben um die Verpackung zu entfernen.

ACHTUNG: Auf der oberen Wand der Maschine nahe dem Ventilator befindet sich ein Langloch für das Anheben und die Positionierung der Maschine in den vorgesehenen Hohlräum der Zelle.

B.1.4 ENTSORGUNG DER VERPACKUNG

Die Entsorgung der Verpackungen muss entsprechend den gültigen Gesetzen des Landes erfolgen, in dem das Produkt verwendet wird.

Die Bestandteile aus Plastik, die für eine eventuelle Entsorgung mit Recycling bestimmt sind, sind wie folgt gekennzeichnet:



Polyäthylen: Anleitungstüten



Aufgeschäumtes Styropor: Schutzvorrichtungen



Presskarton: Schutzvorrichtungen

2 MONTAGE DER SPLIT-EINHEIT

B.2.1 MONTAGE DES VERDAMPFERS

Den Verdampfer anheben und in seinen Platz in der Zelle einsetzen. Die Fasteners auf der Auflage mit dem der Verpackung beigelegten Schlüssel anziehen.

Wenn Sie dazu übergehen die SCHALTTAFEL in der in Abb. 1. angegebenen Position zu montieren, müssen die beiden von der Verteilerdose ausgehenden Kabel durch den rechten Schlauch und das Speisekabel durch den linken Schlauch durchgeführt werden.

B.2.2 MONTAGE DER KONDENSATOREINHEIT AN DER ZELLE

Den Winkelbügel wie in Abb. 2 gezeigt mit 9 Nieten ø 4 x 9,5 befestigen

Die Kondensatoreinheit einhängen, dabei die Klebedichtung 3 x 10 zwischen Einheit und Zelle anbringen.

B.2.3 MONTAGE DER HÄNGEKONDENSATOREINHEIT

Den Wandbügel wie in Abb. 3 angegeben mit 4 Dübeln M6 x 50 befestigen.

Die Kondensatoreinheit einhängen, dabei die Klebedichtung 3 x 10 zwischen Einheit und Mauer anbringen.

B.2.4 MONTAGE DER KONDENSATOREINHEIT MIT GESTELL

Die folgenden Arbeitsschritte wie auch in Abb. 5 angegeben durchführen:

- 1.) Fuß und Ständer mit den beiliegenden 6 Schrauben und Muttern M8 zusammen bauen.
- 2.) Die erste Kondensatoreinheit aufstellen und mit den beiliegenden M8 Schrauben blockieren.
- 3.) Die hölzernen 2 Abstandhalter auf die Ecken der bereits montierten Einheit legen und die zweite Einheit darauf - stellen. Die 6 Befestigungslöcher stimmen jetzt perfekt überein und die Einheit kann mit den M8 Schrauben befestigt werden. Die zwei Abstandhalter entfernen und die Operation im Fall der Aufstellung einer dritten Einheit wiederholen.
- 4.) Jetzt die gesamte Gruppe mit Hilfe der 4 Löcher an den Füßen am Boden blockieren, nachdem die Aufstellfläche vollständig nivelliert wurde.
- 5.) Wenn gemischt dreiphasige und monophasige Kondensatoreinheiten aufgestellt werden, bei den monophasigen die für diesen Zweck mitgelieferten Alu-Abstandhalter und längere Schrauben verwenden (das Kit kann optionsmäßig von der Misa geliefert werden).

B.2.5 MONTAGE DER VORGESPANNNTEN SCHLÄUCHE

ACHTUNG: DAS HOHLTEIL DER SCHNELLBEFESTIGUNG UND DER ENTSPRECHENDE ZAPFEN MÜSSEN PERFEKT AUSGERICHTET WERDEN, BEVOR DIE VERBINDUNG DURCHGEFÜHRT WIRD, UM BESCHÄDIGUNGEN DES GEWINDES ZU VERMEIDEN. DAS SPANNEN VON HOHLTEIL UND ZAPFEN DER SCHNELLBEFESTIGUNG MUSS RASCH UND VOLLSTÄNDIG DURCHGEFÜHRT WERDEN, DAMIT DIE DICHTUNGEN RICHTIG HALTEN. WIRD DIE BEFESTIGUNG NICHT RICHTIG DURCHGEFÜHRT, KANN GAS AUS DER ANLAGE AUSTRETN.

Die Schläuche mit den entsprechenden Schnellverbindungen auf der Seite von Verdampfer und Kondensatoreinheit verbinden, dabei darauf achten, dass die Schläuche für Flüssigkeit und Gas nicht verwechselt werden. Die Schläuche über den gesamten Verlauf hin anpassen, dabei darauf achten, dass sie in einem passenden Winkel gebeugt werden und nicht knicken, denn Verengungen können die Funktion der Anlage beeinträchtigen.

B.3 MONTAGE DER SCHALTTAFEL

Die Schalttafel mit Hilfe der vier beiliegenden Schrauben an der Wand der Zelle befestigen. Wenn die Schrauben angezogen sind , die 4 stopfen auf den dafür vorgesehenen Sitz auf der schraube aufsetzen , damit der schutzgrad IP65 gewährleistet ist.

Sollte eine andere als die in Abb. 1 gezeigte Standartposition gewählt werden, müssen die Elektrokabel mit den mitgelieferten Plastikschläuchen und Kurven geschützt werden.

Die elektrischen Verbindungen vornehmen, indem das Kabel der Sonden und das 7-polige des Verdampfers, das Kabel der Kondensatoreinheit und das der Speisung verbunden werden.

B.4 ELEKTOANSCHLUSS

Der Anschluss darf für die monophasigen Anlagen nur mit einem Kabel mit 3 x 2,5 Querschnitt und für die triphasigen mit einem Kabel mit 5 x 1,5 Querschnitt erfolgen, mit Thermomagnetschalter mit Mindestöffnung der Kontakte 3 mm oder einem polarisierte Stecker; in beiden Fällen muss die Trennvorrichtung an einer sichtbaren Stelle liegen.

ACHTUNG: Die elektrische Sicherheit des Geräts ist nur dann gewährleistet, wenn es korrekt mit einer effizientem

Erdungsanlage verbunden ist, die entsprechend der gültigen Sicherheitsnormen aufgebaut sein muss.

Überprüfen, ob die Leitungsspannung der auf der Teilenummerplakette angegebenen entspricht. Die zugelassene Toleranz beträgt +/- 10% des Nennwerts. Die Installationsarbeiten dürfen nur von Fachpersonal entsprechend der gültigen Normativen durchgeführt werden

C) INBETRIEBNAHME DER ANLAGE

Mit dem Kompressorschalter ① von Abb. 4 Spannung geben.

Die Betriebstemperatur der Zelle einstellen, falls eine Veränderung der Voreinstellung gewünscht wird. Um die Solltemperatur anzuzeigen, auf die Taste "set" drücken und loslassen. Es erscheint der Kennsatz "set", noch einmal die Taste drücken, um den eingestellten Wert sichtbar zu machen. Um den Wert des Sollwerts zu verändern, in 15 Sekunden auf die Tasten ↘ und ↙ drücken.

ACHTUNG: Im Fall von Kühlanlagen mit Niedrigtemperatur wird empfohlen, die Zelle schrittweise auf die Betriebstemperatur zu bringen, um nicht übermäßigen Druck auszulösen, der die Zelle beschädigen könnte.

D) BENUTZUNG DER ANLAGE

ACHTUNG: Alle Anlagen FREEBLOCK wurden so geplant, dass der Benutzer alle Funktionen ausführen kann, ohne auf irgendeine Weise in das Innere der Anlage einzudringen. Der Hersteller lehnt jede Verantwortung für Schäden an Dingen oder Personen ab, die durch Eingriffe nicht spezialisierten Personals im Innern der Anlage entstehen.

Der Benutzer muss bei der Überwachung und der Veränderung der Funktionsparameter ausschließlich auf die äußere Geräteausstattung des in ABB. 4 dargestellten Schaltpults einwirken.

D.1 BESCHREIBUNG UND FUNKTION DER STEUERTAFEL

① - Allgemeiner Schalter

Die Zündung wird angedeutet durch grüner Schaltknopf

② - Set Taste

Der Taste während 5 Sekunden drücken um weiter zu gehen mit der Programmierung des Instrumentes

③ - UP Taste

Für die Erhöhung von den programmierten Werten

④ - DOWN Taste

Für die Verminderung von den programmierten Werten

⑤ - BELEUCHTUNG Taste

Die Zündung wird durch das Licht innerhalb des Tastes angedeutet

⑥ - ESC Taste (Ausgang)

Ausgangstaste vom Menu. Wenn man den Taste während 2 Sek. drückt bekommt man eine extra Abtauung

⑦ - ON/OFF Taste

Taste für die An- und Ausschaltung.

Bei OFF sind alle Funktionen des Instrumentes ausgeschaltet außen des Tastes Beleuchtung

Die LED Zeichengebung : auf dem oberen Teil des Displays sind folgenden Led mit Zeichen und Erklärung angegeben.

✿ Kompressor oder Relais 1: ON für angestelltem Kompressor; blinkt bei Verzögerung, Schutz oder gesperrter Inbetriebnahme.

✿✿ Abtauen: ON für laufendes Abtauen; blinkt bei manueller Inbetriebnahme.

 Alarm: ON für aktiven Alarm; blinkt für abgestellten Alarm.

 Belüftung: ON für laufenden Ventilator.

WICHTIG: Das elektronische Kontrollinstrument wird direkt vom Hersteller programmiert, mit den optimalen Funktionsrichtwerten; es empfiehlt sich deshalb diese Richtwerte nicht zu ändern ohne uns vorher kontaktiert zu haben, um eine Leistungsminderung der Anlage und Funktionsstörungen zu vermeiden.

Für den Zugang zu den Funktionsrichtwerten des Instruments durch Fachpersonal bitte die der Schalttafel beiliegenden Anweisungen befolgen.

D.1.2 WARNMELDUNGEN

Das Instrument sieht vor, dass einige Alarmsbedingungen eingestellt und auf dem Display angezeigt werden können.

D.1.2.1 WARNMELDUNGEN DURCH DEFekte SONDEN

Werden direkt auf dem Display des Instruments angezeigt:

E1 – Sonde der Zelle defekt

E2 – Abtau-Sonde defekt

Die defekte Sonde muss innerhalb möglichst kurzer Zeit von Fachpersonal ausgewechselt werden.

D.2 EINSTELLUNG DER INSTRUMENTEN-RICHTWERTE

Das Instrument ist auf die in der folgenden Tabelle angegebenen Richtwerte programmiert. Sich bei Eingriffen durch Fachpersonal, mit denen die Funktionsrichtwerte geändert werden sollen an die Angaben des dem Heft beiliegenden technischen Blatts halten.

D.3 COPY CARD

Bei der Copy Card handelt es sich um eine optional erwerbbare Karte, die über den Serialausgang TTL direkt mit dem Instrument verbunden wird. Über die Tastatur hat man Zugriff auf die Richtwerte der Datei FPr und kann in der Copy Card die Einstellung der Richtwerte des Instruments speichern bzw. von der Copy Card die Informationen auf ein anderes Instrument übertragen. In der Datei FPr befinden sich die folgenden zwei Operationen:

3. UPLOAD (UL): Eingabe der Programmierungsrichtwerte (von Instrument auf Copy Card)
4. DOWNLOAD (DL): Eingabe der Programmierungsrichtwerte (von Copy Card auf Instrument)

Auf dem Display erscheint "Y" wenn die Operation einen guten Ausgang hatte, bzw. "n" wenn nicht.

D.4 NORMEN FÜR DEN KORREKten EINSATZ DER ANLAGE

Die MSG-Anlagen wurden für die Aufbewahrung von Frischware (0/+8°C) oder Tiefkühlware (-18/-25°C) entwickelt, deshalb müssen folgende Vorschriften eingehalten werden:

1 – Öffnen der Türen

Die Warenbewegung so programmieren, dass das Öffnen der Tür reduziert und nicht auf einen Zeitraum konzentriert wird.

2 - Tägliche Warenbewegung

Nicht mehr als 30/35 kg pro Kubikmeter Zelle am Tag.

3 - Streifentür

Bei Niedrigtemperaturzellen ist der Einbau einer Streifentür immer empfehlenswert, da sie verhindert, dass zu viel Außenluft eintritt. Bei häufigem Türenöffnen ist sie unabdinglich.

4 - Lastgrenzen

Die in der Zelle aufbewahrte Ware darf nicht die Untergrenze des Kühlverdampfers überschreiten.

5 - Umfeldbedingungen:

Darauf achten, dass die Anlage nicht direkter Sonnenbestrahlung ausgesetzt ist.

Darauf achten, dass die Temperatur dort, wo die Einheit aufgestellt wird nicht höher als 45°C und nicht niedriger als 0°C ist.

6 - Niedrigtemperaturzellen

ACHTUNG: es muss unbedingt ein Ausgleichventil eingebaut werden.

GERÄT ELIWELL / EINGESTELLTE WERTE

IWC 750 LX

	Descrizione/ description / Beschreibung	MSG P	MSG N	
Set	Einstellungs-Setpoint	0	-21	
CP	diF Eingriffs differenzial	3	3	
	HSE Einstellbarer Höchstwert für Setpoint	8	-10	
	LSE Einstellbarer Mindestwert für Setpoint	-2	-21	
	OSP Offset am Setpoint	0	0	
	Cit Mindestzeit Aktivierung Verdichter-Ausgang	0	0	
	CAt Maximalzeit Aktivierung Verdichter-Ausgang	0	0	
	Ont ON-Zeit Verdichter wenn Regulierfühler defekt	0	0	
	OFT OFF-Zeit Verdichter wenn Regulierfühler defekt	0	0	
	dOn Verzögerung Aktivierung Verdichter-Ausgang nach Aufruf	0	0	
	dOF Verzögerung Aktivierung Verdichter-Ausgang nach Abschalten	0	0	
dbi	Verzögerung bei zweimal aufeinander folgendem Anschalten des Verdichters	2	2	
	OdO Verzögerung Aktivierung Ausgänge nach Anschalten	0	0	
dEF	dtY Abtautyp	1	1	
	dit Intervall zwischen den Abtauvorgängen	6	4	
	dCt Zählmodus Abtauintervall	1	1	
	dOH Verzögerung Aktivierung Abtauzyklus nach Aufruf	0	0	
	dEt Time out Abtau	30	30	
	dPO Abtau bei Anlassen	n	n	
FAn	dSt Temperatur bei Abtau-Ende	10	10	
	FSt Temperatur Sperren Gebläse Verdampfer	15	8	
	Fad Eingriffs differenzial Gebläse Verdampfer	2	2	
	Fdt Tempo Verzögerung Gebläse Verdampfer nach Abtauzyklus	4	4	
	dt Abtropfzeit	2	2	
	dFd Ausschluss Gebläse Verdampfer während des Abtaus	y	y	
	FCO Zustand Gebläse Verdampfer bei Verdichter-Ausgang	n	n	
	Fod Zustand Gebläse Verdampfer bei offener Tür	n	n	
	FdC Verzögerung Ausschalten Flügelr. Verd. nach Deaktivierung des Kompr.	0	0	
	Fon On-Zeit Gebläse Verdampfer in Modus Zyklusregulierer	0	0	
AL	FoF Off-Zeit Gebläse Verdampfer in Modus Zyklusregulierer	0	0	
	Att Modalität Parameter HAL und LAL	0	0	
	Afd Eingriffs differenzial Alarm	2	2	
	HAL Alarmschwelle bei Höchstwert	50	50	
	LAL Alarmschwelle bei Mindestwert	-50	-50	
	PAO Alarm-Ausschluss beim Anschalten	4	4	
	dAO Zeit Ausschluss Temperaturalarme nach einem Abtauzyklus	180	180	
	OAO Zeit Ausschluss Höchst- und Mindesttemperaturalarm nach dem Schließen	1	1	
	tdO Zeit Ausschluss Alarm offene Tür	10	10	
	tAO Verzögerungszeit Signalisierung Temperaturalarme	30	30	
	dAt Signalisierung Alarm Defrost wenn Time Out beendet	n	n	
	EAL Externer Alarm für Reglersperrung	n	n	
Lit	AOP Polarität Ausgang Alarm	1	1	
	dSd Freigabe Lichtrelais durch Tür-Mikro	y	y	
	OFL Freigabe mit Taste Zellenbeleuchtung löschen, während eingestellter Verzögerung	y	y	
	dOd Freigabe Ausschalten Abnehmer durch Aktivierung des Mikro	y	y	
Add	dAd Verzögerung Aktivierung Digitaleingänge	0	0	
	dEA Vorrichtungsadresse	0	0	
diS	FAA Gruppenadresse	0	0	
	LOC Freigabe Tastatursperre	n	n	
	PA1 Passwort Wert	0	0	
	ndt Angabe mit Dezimalpunkt	n	n	
	CA1 Kalibrierung Zellenfühler	0	0	
	CA2 Kalibrierung Verdampferfühler -	0	0	

	ddL	Sperrung der Umgebung am Ende des Abtauvorgangs	0	0		
	dro	Auswahl °C / °F	0	0		
CnF	H06	Taste oder digitaler Hilfseingang / Licht aktiv bei Instrument in Off	y	y		
	H11	Konfigurierbarkeit und Polarität Digitaleingang	3	3		
	H21	Konfigurierbarkeit digitaler Eingang 1 (A)	1	1		
	H22	Konfigurierbarkeit Digitaleingang 2 (B)	2	2		
	H23	Konfigurierbarkeit digitaler Eingang 3 (C)	3	3		
	H24	Konfigurierbarkeit Digitaleingang 4 (D)	4	4		
	H25	Konfigurierbarkeit Digitaleingang 5 (E)	5	5		
	H26	Konfigurierbarkeit Digitaleingang 6 (Buzzer)	4	4		
	H31	Konfigurierbarkeit UP-Taste	1	1		
	H32	Konfigurierbarkeit DOWN-Taste	0	0		
	H33	Konfigurierbarkeit ESC-Taste	1	1		
	H34	Konfigurierbarkeit Free-Taste	2	2		
	H42	Verdampfer-Fühler vorhanden	y	y		

E) WARTUNG

E.1 ORDENTLICHE WARTUNG

VORSICHT: Der Benutzer darf unter keinen Umständen den MSG öffnen. Der Hersteller lehnt jede Verantwortung für Schäden an Dingen oder Personen ab und für Fehlfunktionen, die durch Eingriffe von nicht spezialisiertem Personal ausgeführt werden.

Für einen guten Betrieb der Anlage wird empfohlen, 2 oder 3 mal im Monat die Klappen des Kondensators zu reinigen, der sich auf der Entgegengesetzten Seite der Ventilatoren befindet; dies muss durch einen komprimierten Luftstrahl oder mit einer Bürste mit langen Borsten erfolgen und ohne in irgendeiner Weise den MSG zu öffnen.

Falls der MSG in einem geschlossenen Raum installiert wurde, muss sichergestellt werden, dass stets ein angemessener Luftaustausch gewährleistet ist.

Im Fall eines Schadens an der Lampe, sie durch eine mit derselben Stärke ersetzen und vorher die Spannung aus der Anlage entfernen.

E.2 AUSSERORDENTLICHE WARTUNG

VORSICHT: Alle außerordentlichen Wartungsvorgänge müssen von Fachpersonal gemäß den in diesem Bedienungshandbuch beschriebenen Modalitäten ausgeführt werden.

WICHTIG: Vor jedem Wartungs- oder Reinigungsvorgang die Spannung aus dem Gerät entfernen.

Im Fall der Beschädigung des Versorgungskabels der einphasigen Geräte durch ein Kabel mit Steckhülsenenden (Faston) von 6.3 mm und Steckhülsendeckeln (Deckel-Faston) ersetzen und das Erdungsleitkabel versehen mit Ösenklemme.

F) UNREGELMÄSSIGKEITEN DER FUNKTIONSWEISE

1 - Blockierung des Kompressors

Sie äußert sich durch einen abnormalen Temperaturanstieg der Zelle. Der Kompressor ist mit einer Sicherheitsvorkehrung ausgestattet, die den Betrieb anhält, wenn gefährliche Bedingungen wie die folgenden auftreten:

- Schlechte Funktion des Ventilators des Kondensators
- Verschmutzter Kondensator (siehe Punkt E.1)

- Erhöhte Spannungsunregelmäßigkeiten im Versorgungsnetz
- Zu hohe Raumtemperatur (unzureichend für Luftaustausch)

Beachten, dass der Kompressor nach dem Stillstand automatisch wieder startet, aber es empfiehlt sich den Grund für den Stillstand auszuschalten. Schalten Sie einen Fachmann ein, falls die Unannehmlichkeit anhält.

2 – Bildung von Eis auf dem Verdunster

Mögliche Ursachen können sein:

- Fehlerhafte Einstellung des Thermostats (für positive MSG)
- Zu häufige Öffnung der Zellentür (siehe Punkt D.4)
- Lagerung von Lebensmitteln mit einer höheren Temperatur als die vorgesehene (nicht höher als 20° C für Positivzellen, nicht höher als -14°C für Zellen mit Niedrigtemperaturen).
- **VORSICHT:** Während der Abtauphase tritt eine Temperaturerhöhung ein. Das ist vorgesehen, um dem Verdunster zu gestatten, sich von Frost- oder Eisbildung zu befreien. Die Entfrostung wird beim Anschalten des LED  des elektronischen Geräts angezeigt.

G) ENTSORGUNG DER ABFÄLLE UND ABWICKLUNG

Am Ende des Lebenszyklus der Anlage vermeiden, dass das Kühlgas und das Öl POE frei in die Umwelt gelangen.

VORSICHT: Die Abbauvorgänge müssen auf jeden Fall von qualifiziertem Personal ausgeführt werden.

Beim Abbau der Anlage die Komponenten nach ihrer chemischen Natur zusammenfassen.

Eine provisorische Lagerung des Sondermülls ist während der Wartezeit auf eine Entsorgung mittels einer Behandlung und/oder einer endgültigen Lagerung gestattet.

Auf jeden Fall müssen die im Land des Verbrauchers gültigen Gesetze bezüglich des Umweltschutzes beachtet werden. Die Gesetzgebungen sind in den verschiedenen Ländern unterschiedlich, daher müssen die Vorschriften beachtet werden, welche die Gesetze und die Unternehmen der Länder auferlegen, in denen die Verschrottung erfolgt.

TABLE DES MATIERES :**LISTE DES ILLUSTRATIONS :**

Fig.1 - MONTAGE DE L'EVAPORATEUR	27
Fig.2 - MONTAGE DE L'UNITÉ DE CONDENSATION SUR LA CHAMBRE	27
Fig.3 - MONTAGE DE L'UNITÉ DE CONDENSATION AU MUR	27
Fig.4 - INSTRUMENTATION TABLEAU ELECTRIQUE	28
Fig.5 - MONTAGE DE L'UNITÉ DE CONDENSATION SUPERPOSEE	28
Fig.6 - DIMENSIONS DE L'UNITÉ DE CONDENSATION	35
Fig.7 - DIMENSIONS DU TABLEAU ELECTRIQUE	36
Fig.8 - DIMENSIONS DE L'UNITE EVAPORATEUR	36
Fig.9 - POSITIONS PIECES DETACHEES MSG 4P-7P-13P-16P	42
Fig.10 - POSITIONS PIECES DETACHEES MSG 6N-13N	44
Fig.11 - POSITIONS PIECES DETACHEES MSG 18P-20N	46

LISTE DES SCHEMAS ELECTRIQUES :

SCHEMA ELECTRIQUE POUR MSG MONOPHASE	39
SCHEMA ELECTRIQUE POUR MSG TRIPHASE	40

LISTE DES TEXTES DE COMMENTAIRE :**INSTRUCTIONS D'UTILISATION ET D'ENTRETIEN**

A) INFORMATIONS GENERALES	29
A.1 AVANT-PROPOS	29
A.2 USAGE PREVU ET RESTRICTIONS	29
B) INSTALLATION	29
B.1 RETRAIT DE L'EMBALLAGE ET MANUTENTION DU PRODUIT	29
B.1.1 STOCKAGE ET TRANSPORT	29
B.1.2 INTEGRITE DE L'EMBALLAGE	29
B.1.3 RETRAIT DE L'EMBALLAGE ET MANUTENTION	29
B.1.4 ELIMINATION DE L'EMBALLAGE	29
B.2 MONTAGE DE L'UNITE SPLIT	29
B.2.1 MONTAGE DE L'EVAPORATEUR	29
B.2.2 MONTAGE DE L'UNITÉ DE CONDENSATION SUR LA CHAMBRE	29
B.2.3 MONTAGE DE L'UNITÉ DE CONDENSATION AU MUR	29
B.2.4 MONTAGE DE L'UNITÉ DE CONDENSATION SUPERPOSEE	29
B.2.5 MONTAGE DES TUYAUX PRECHARGES	30
B.3 MONTAGE DU TABLEAU ELECTRIQUE	30
B.4 BRANCHEMENT ELECTRIQUE	30
C) MISE EN SERVICE DE L'INSTALLATION	30
D) UTILISATION DE L'INSTALLATION	30
D.1 DESCRIPTION ET FONCTIONNEMENT DU TABLEAU DE COMMANDE	30
D.1.2 MESSAGE D'ALARME	31
D.1.2.1 MESSAGE D'ALARME LIE A DES SONDES EN PANNE	31
D.2 REGLAGE DES PARAMETRES DE L'INSTRUMENT	31
D.3 COPY CARD	31
D.4 NORMES POUR UNE BONNE UTILISATION DE L'INSTALLATION	31
E) ENTRETIEN	33
E.1 ENTRETIEN ORDINAIRE	33
E.2 ENTRETIEN EXTRAORDINAIRE	33
F) ANOMALIES DE FONCTIONNEMENT	33
G) ELIMINATION DES DECHETS ET MISE A LA DECHARGE	33
DONNEES TECHNIQUES	34
SCHEMAS ELECTRIQUES	37
PIECES DETACHEES	41
DECLARATION DE CONFORMITE	50

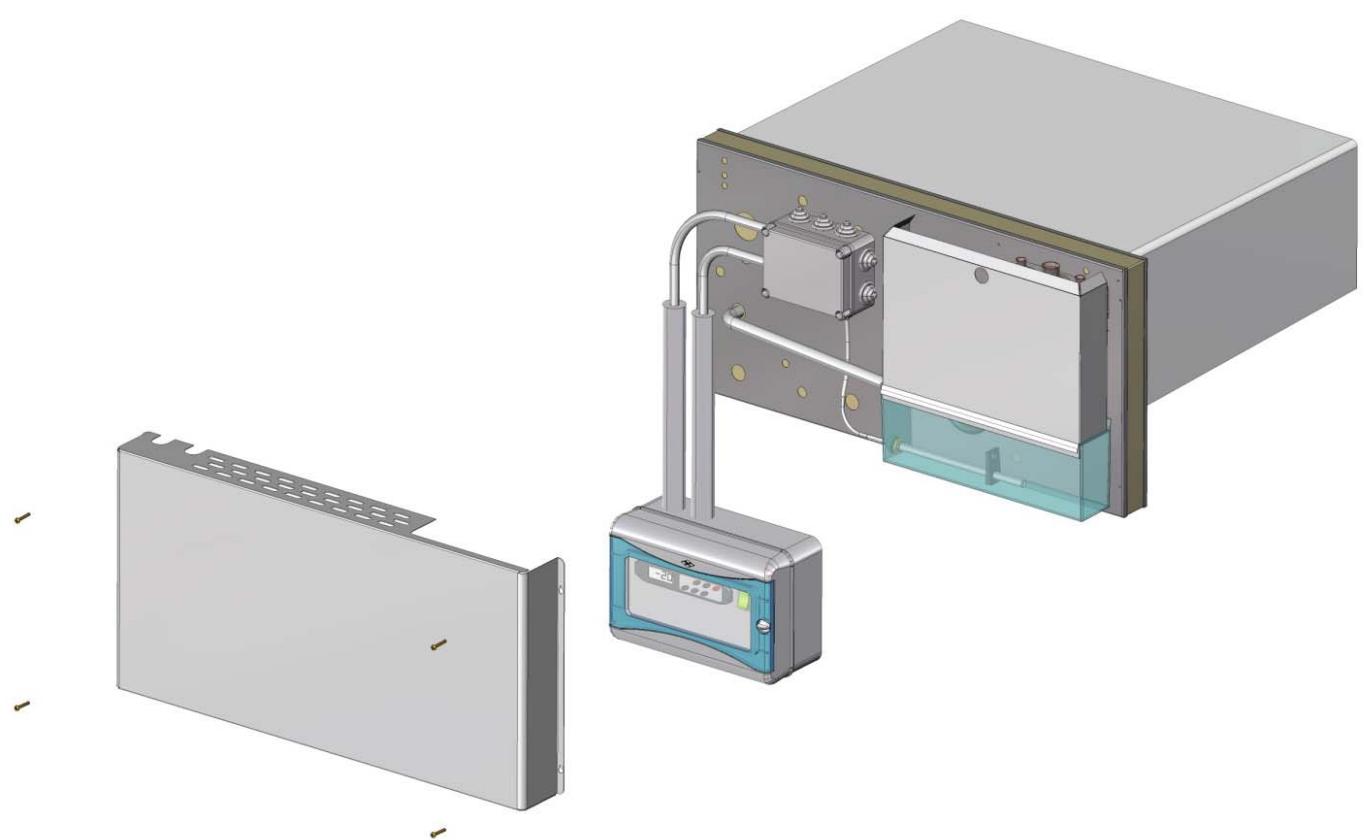


Fig. 1

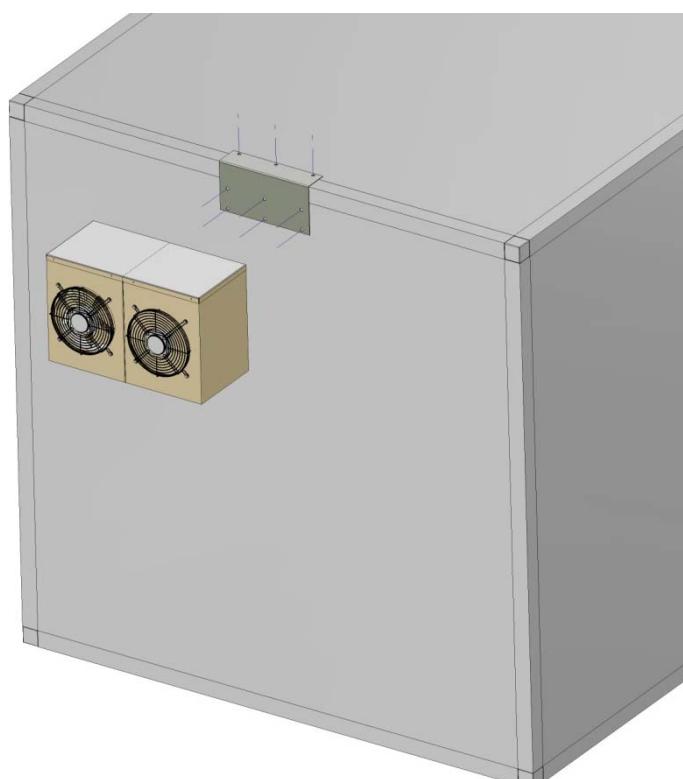


Fig. 2

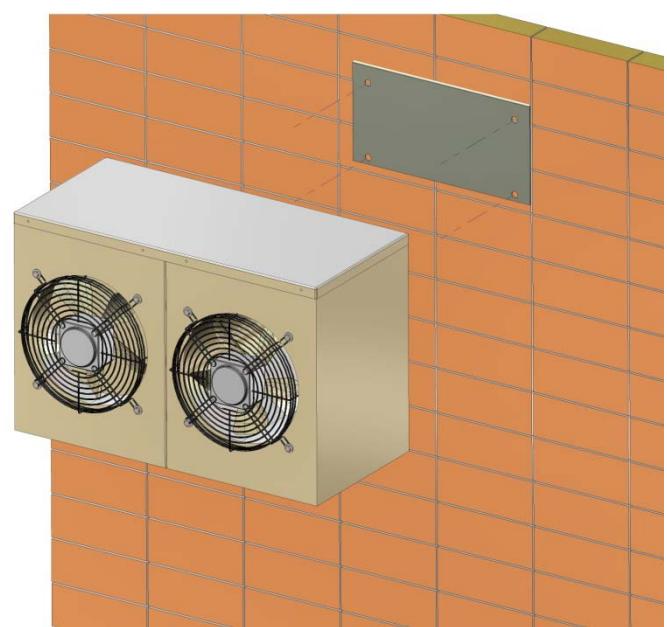


Fig. 3

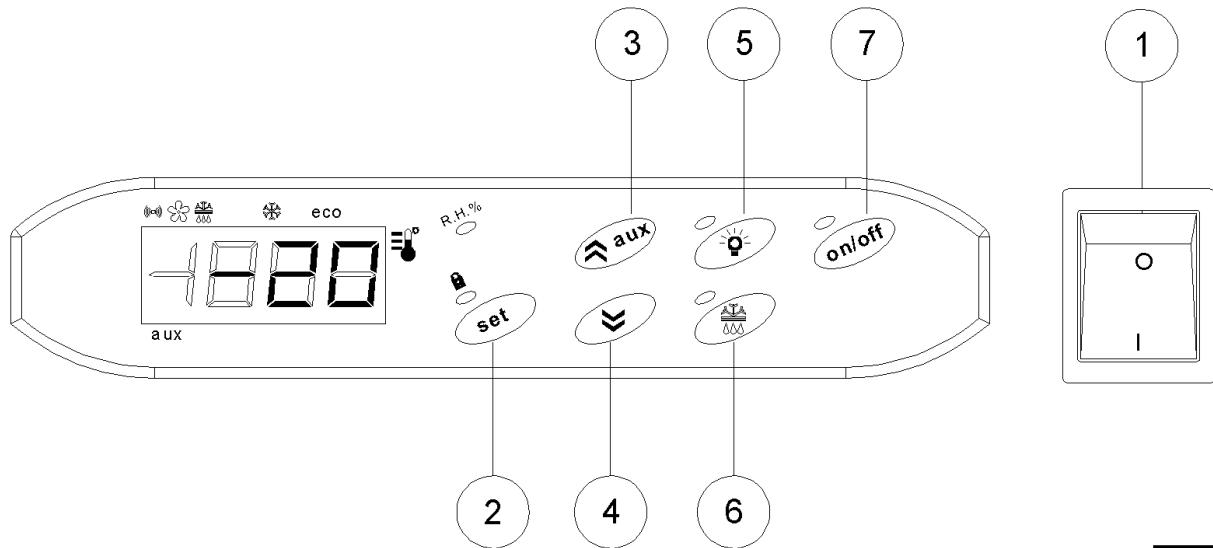


Fig. 4

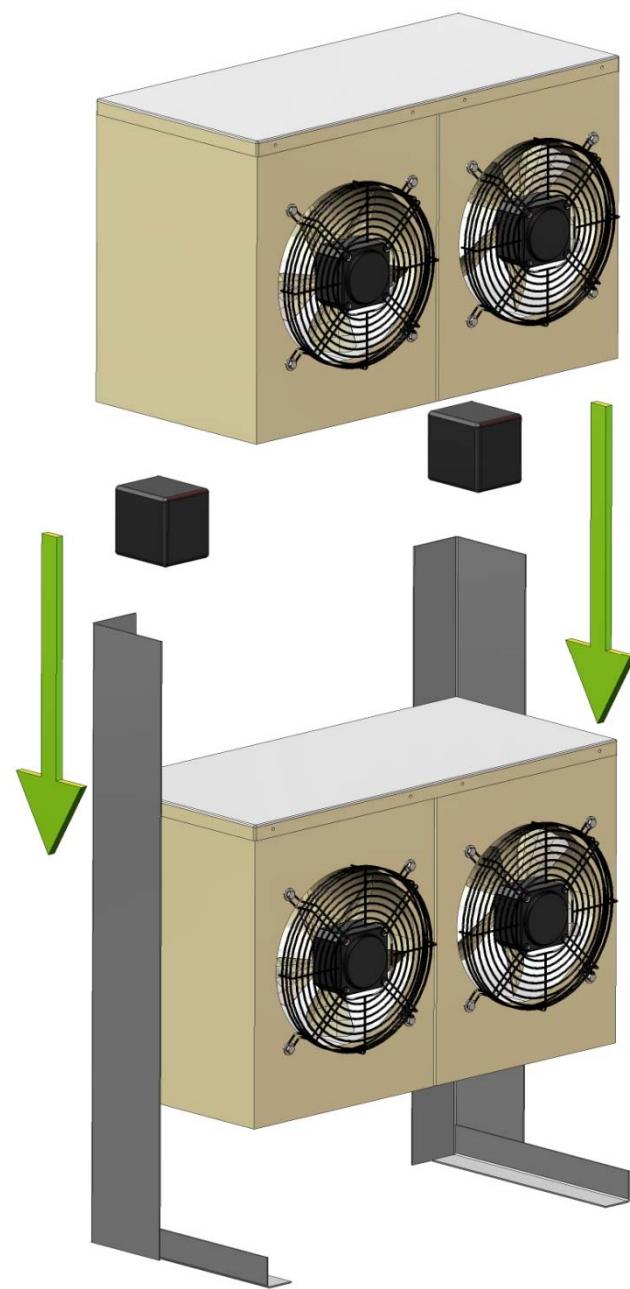


Fig. 5

A) INFORMATIONS GENERALES

A.1 PREAMBULE

Ce manuel a pour but de fournir toutes les informations nécessaires pour effectuer correctement l'installation, l'utilisation et l'entretien du système. Il fait partie intégrante et essentielle du produit et devra être livré à l'utilisateur.

Avant chaque opération, lire attentivement les instructions suivantes.

Le constructeur décline toute responsabilité pour toute opération effectuée sur le système en négligeant les indications suivantes.

A.2 DESTINATION D'USAGE ET RESTRICTIONS

Le système MSG a été conçu et construit pour être installé sur des cellules destinées à la réfrigération et à la conservation de produits alimentaires. Toute autre utilisation est considérée comme impropre et donc dangereuse. Il est recommandé de protéger l'appareil d'un usage impropre qui pourrait constituer un danger.

Le constructeur décline toute responsabilité pour des dommages causés sur des personnes ou objets dus à des erreurs d'installation, d'utilisation et toutefois de non observation des instructions fournies par le constructeur.

A.3 CONTROLE

Nos appareils sont étudiés et optimisés grâce à des tests de laboratoire, pour obtenir des prestations et des rendements élevés et grâce à un contrôle en fin de ligne dont le compte-rendu d'essais est annexé à ce document.

B) INSTALLATION

Pour assurer un fonctionnement correct du produit et le maintien des conditions de sécurité durant l'utilisation, suivre scrupuleusement les instructions reportées dans le paragraphe suivant.

L'installation du système doit être réalisée en conformité avec les normes en vigueur concernant la conception, l'installation et l'entretien des installations frigorifiques et doit être effectuée par du personnel professionnellement qualifié selon les instructions du constructeur. L'installation électrique d'alimentation des unités devra être réalisée selon les normes CEI et dans le respect des Lois n° 186/68 et DM 37/2008.

Une mauvaise installation peut entraîner des dommages sur des personnes ou des objets, à l'égard desquels le constructeur ne peut être considéré comme responsable.

ATTENTION : Ne pas lancer le système tant que l'installation de mise à terre n'est pas reliée.

B.1 DEBALLAGE ET MANIPULATION DU PRODUIT

B.1.1 EMMAGASINAGE ET TRANSPORT

Stocker la machine dans un endroit sec et à l'abri des intempéries dans son emballage d'origine. La température d'emmagasinage doit être comprise entre -20°C et 60°C. Au cours du transport, utiliser l'emballage d'origine et éviter les secousses et les chocs.

B.1.2 INTEGRITE DE L'EMBALLAGE

Avant de procéder au déballage du produit, vérifier son intégrité et les protections éventuelles. Les dommages éventuels doivent être immédiatement signalés au transporteur. Toutefois, dans tous les cas, aucun appareil endommagé ne pourra être rendu au constructeur sans préavis et autorisation préalable écrite.

B.1.3 ENLEVEMENT DE L'EMBALLAGE ET MANIPULATION

L'emballage du MSG est prédéfini pour être manipulé par un chariot à fourches. Pour ne pas griffer les tôles, il est conseillé de déplacer le système en utilisant sa palette jusqu'à proximité de la zone d'installation. Pour ôter l'emballage, dévisser les vis posées dans la partie inférieure et soulever l'emballage.

ATTENTION : sur la paroi supérieure de la machine, à proximité du ventilateur, un œillet est prévu pour soulever et positionner la machine dans l'espace prédéfini sur la cellule.

B.1.4 DEMANTELEMENT DE L'EMBALLAGE

Le démantèlement des emballages doit être fait en conformité avec les normes en vigueur dans le pays où le produit est utilisé.

Les composants en matériau plastique sujets à un éventuel démantèlement avec recyclage sont contresignés de la façon suivante :



polyéthylène : sachet instructions



polystyrène mousse : protections



carton comprimé : protections

B.2 MONTAGE DE L'UNITE SPLIT

B.2.1 MONTAGE DE L'EVAPORATEUR

Soulever l'évaporateur et le placer dans l'ouverture spécifique placée sur la chambre. Retirer les agrafes présentes sur le panneau de soutien à l'aide de la clé fournie dans l'emballage.

En cas d'installation du tableau électrique dans la position indiquée sur la FIG.1., faire passer les deux câbles sortant de la boîte de dérivation dans le tuyau de droite et le câble d'alimentation dans le tuyau de gauche.

B.2.2 MONTAGE DE L'UNITE DE CONDENSATION SUR LA CHAMBRE

Monter la fixation d'angle avec 9 rivets ø 4 x 9,5 comme indiqué sur la FIG.2.

Accrocher l'unité de condensation en interposant la garniture adhésive 3 x 10 entre l'unité et la chambre.

B.2.3 MONTAGE DE L'UNITE DE CONDENSATION AU MUR

Monter la fixation murale avec 4 chevilles M6 x 50, comme indiqué sur la FIG.3

Accrocher l'unité de condensation en interposant la garniture adhésive 3 x 10 entre l'unité et le mur.

B.2.4 MONTAGE DE L'UNITE DE CONDENSATION SUPERPOSEE

Effectuer les opérations suivantes, comme indiqué sur la FIG.5:

- 1.) Visser le pied au montant avec le N°6 vis et écrous M8 fournis
- 2.) Placer la première unité de condensation et la bloquer avec les vis M8 fournies
- 3.) Placer les 2 entretoises en bois aux angles de l'unité déjà montée et poser la seconde unité. Les 6 trous de fixation coïncideront parfaitement et il sera possible de bloquer

l'unité avec les vis M8. Retirer les deux entretoises et répéter l'opération dans le cas d'une superposition d'une troisième unité

- 4.) A ce moment-là, bloquer au sol l'ensemble avec les 4 trous présents sur les pieds après avoir préparé une zone d'appui parfaitement à niveau.
- 5.) En cas de superpositions mixtes d'unités de condensation triphasées et monophasées, utiliser pour les monophasées les entretoises en aluminium et les vis plus longues fournies (kit fourni en option par Misa).

B.2.5 MONTAGE DES TUBES PRECHARGES

ATTENTION : LE RACCORD RAPIDE FEMELLE ET LE MALE CORRESPONDANT DOIVENT ETRE PARFAITEMENT ALIGNES AVANT DE COMMENCER LE SERRAGE, DE MANIERE A EVITER D'ABIMER LE FILETAGE.

LE SERRAGE DU RACCORD RAPIDE FEMELLE DANS LE MALE DOIT SE PRODUIRE DE MANIERE RAPIDE ET COMPLETE AFIN QUE LES GARNITURES CREENT LA BONNE ETANCHEITE. UN SERRAGE PARTIEL DU RACCORD PEUT PROVOQUER LA PERTE DU GAZ DE L'INSTALLATION

Visser les tubes sur les raccords rapides relatifs côté évaporateur et côté unité de condensation, en prenant soin de ne pas inverser le tube du liquide et le tube du gaz chaud. Modeler les tubes sur tout leur parcours en prenant soin de les plier avec un rayon adapté et éviter les étranglements qui compromettraient le bon fonctionnement de l'installation

B.3 MONTAGE DU TABLEAU ELECTRIQUE

Monter le tableau électrique sur la paroi de la chambre avec les quatre vis fournies.

Si une position différente par rapport à la position standard prévue sur la FIG.1 est choisie, faire en sorte de protéger les câbles électriques avec les tuyaux en plastique et les courbes fournis. Après avoir serré les vis , appliquer les 4 bouchons dans le logement prévu de la vis , afin de garantir le degré de protection IP65

Effectuer les branchements électriques en branchant le câble des sondes et le câble à 7 pôles de l'évaporateur, le câble provenant de l'unité de condensation et le câble d'alimentation.

B.4 BRANCHEMENT ELECTRIQUE

L'alimentation doit être effectuée avec un câble de section 3 x 2,5 pour les installations monophasées et 5 x 1,5 pour les installations triphasées à l'aide d'un interrupteur magnétothermique avec une ouverture des contacts de minimum 3 mm, ou avec une prise polarisée ; dans les deux cas, la disposition de sectionnement doit être visible.

ATTENTION : La sécurité électrique de l'appareil n'est garantie que si ce dernier est correctement relié à un équipement de mise à la terre efficace, comme prévu par les normes de sécurité en vigueur.

Vérifier que la tension de ligne correspond à la tension indiquée sur la plaquette. La tolérance autorisée est de +/- 10% de la valeur nominale.

Les opérations d'installation doivent être exclusivement effectuées par du personnel qualifié, conformément aux normes en vigueur.

C) MISE EN SERVICE DE L'INSTALLATION

Appuyer sur l'interrupteur compresseur ① de la FIG.4.

Paramétriser la température d'exercice de la cellule pour changer la température déjà paramétrée. Pour afficher le point de réglage, appuyer et relâcher la touche « set ». L'étiquette « set » apparaîtra ; appuyer de nouveau sur la touche set pour afficher la valeur paramétrée. Pour changer la valeur du point de réglage, appuyer avant 15 secondes, sur les touches ↗ et ↘.

ATTENTION : dans le cas d'installations de réfrigération à basse température, il est recommandé de mettre la cellule à la température de fonctionnement de façon graduelle pour ne pas créer de pressions excessives qui pourraient endommager la cellule.

D) UTILISATION DU SYSTEME

ATTENTION : tous les systèmes MSG sont conçus de façon à ce que l'utilisateur puisse accéder à toutes les fonctions sans intervenir à l'intérieur du système. Le constructeur décline toute responsabilité en cas de dommages sur des personnes ou objets dus à des interventions de personnel non spécialisé à l'intérieur du système.

L'utilisateur en remplissant les fonctions de monitorage et les variations des paramètres de fonctionnement doit agir exclusivement sur l'instrumentation externe du cadre de commande représenté sur la FIG.4.

D.1 DESCRIPTION ET

FONCTIONNEMENT DU CADRE DE COMMANDE

Les fonctions du tableau de commande de la chambre froide, représenté dans la FIG. 4 sont :

① - Interrupteur général

L'allumage est signalée par le bouton lumineux vert

② - Touche SET

Tenir pressé pendant 5 secondes et on accède à la programmation de l'instrument.

③ - Touche UP

Touche pour augmenter les valeurs programmées.

④ - Touche DOWN

Touche pour diminuer les valeurs programmées.

⑤ - Touche ECLAIRAGE CHAMBRE

L'allumage est signalé par la lumière incorporée.

⑥ - Touche ESC (sortie)

Touche sortie du menu.

Si pressé pendant 2 secondes un dégivrage supplémentaire sera provoqué.

⑦ - Touche ON / OFF

Touche pour allumer ou éteindre l'instrument.

Dans la modalité OFF toutes les fonctions de l'équipement sont désactivées sauf la touche éclairage chambre froide.

- Témoin lumineux de signalisation : la partie supérieure de l'afficheur reporte les témoins lumineux ci-dessous avec les symboles et leur signification :

❖ Compresseur ou relais 1: ON pour compresseur allumé ; clignotant pour retard, protection ou activation bloquée.

❖ Dégivrage : ON pour dégivrage en cours ; clignotant pour activation manuelle.

❖ Alarme: ON pour alarme active ; clignotant pour alarme arrêtée.

❖ Ventilateurs : ON pour ventilateur en marche.

IMPORTANT : L'instrument électronique de contrôle est directement programmé par le fabricant selon les paramètres optimaux de fonctionnement ; il est donc conseillé de ne pas modifier ces paramètres sans avoir préalablement consulté nos bureaux afin de ne pas provoquer de réduction des prestations de l'installation et des dysfonctionnements.

Le personnel spécialisé souhaitant accéder aux paramètres de fonctionnement de l'instrument doit suivre les instructions fournies avec le tableau électrique.

D.1.2 MESSAGE D'ALARME

L'instrument prévoit la possibilité de régler et de signaler sur l'afficheur certaines conditions d'alarmes.

D.1.2.1 MESSAGE D'ALARME LIE A DES SONDES EN PANNE

L'afficheur de l'instrument indiquera :

E1 – La sonde chambre en panne

E2 – La sonde dégivrage en panne

Le remplacement de la sonde en panne devra être effectué au plus vite par du personnel technique spécialisé.

D.2 REGLAGE DES PARAMETRES DE L'INSTRUMENT

L'instrument est programmé avec les valeurs indiquées dans le tableau qui suit. Pour les interventions du personnel spécialisé destinées à modifier les paramètres de fonctionnement, consulter le volet technique joint à ce manuel.

D.3 COPY CARD

La Copy Card est une fiche en option qui se branche directement à la sortie série TTL de l'instrument. En accédant à l'aide du clavier aux paramètres du dossier FPr, il sera possible d'enregistrer dans la Copy Card les informations dans un autre instrument. En effet, le dossier FPr contient deux opérations :

1. UPLOAD (UL): insertion de paramètres de programmation (de l'instrument vers la Copy Card)
2. DOWNLOAD (DL): insertion des paramètres de programmation (de la Copy Card vers l'instrument)

Un « Y » apparaîtra sur l'afficheur si l'opération s'est bien déroulée ou un « n » dans le cas contraire.

D.4 NORMES POUR LA BONNE

UTILISATION DE L'INSTALLATION

Les installations MSG sont conçues pour la conservation de marchandises fraîches (0/+8°C) ou surgelées (-18/-25°C).

Par conséquent, il faut respecter les prescriptions suivantes :

1 – Ouverture des portes

Programmer les mouvements de marchandise de manière à réduire le nombre d'ouvertures de la porte et à ne pas les concentrer dans le temps.

2 - Mouvement quotidien de la marchandise

Inférieur ou égal à 30/35 kg par mètre cube de chambre par jour.

3 - Porte à bandes

Il est toujours conseillé d'installer sur les chambres à basse température une porte à bandes pour éviter l'introduction excessive d'air provenant de l'extérieur. Elle est indispensable en cas d'ouvertures fréquentes de la porte.

4 - Limites de charge

La marchandise stockée dans la chambre ne doit pas dépasser la limite inférieure du diffuseur d'air froid.

5 - Conditions environnementales :

Vérifier que l'installation n'est pas directement exposée aux rayons du soleil.

Vérifier que la température ambiante, à proximité de l'unité de condensation ne dépasse pas 45°C et n'est pas inférieure à 0°C.

6 - Chambres à basse température

ATTENTION : Il est indispensable de monter une vanne de compensatio

7 – Tableau électrique sur la chambre froid (FIG.4) :

Eviter les jets d'eau directs sur le tableau électrique quand la Porte n'est pas parfaitement fermée : le degré de protection IP65 n'est garanti que si la porte est fermée .

INSTRUMENT ELIWELL / VALEURS PARAMETREES

IWC 750 LX

	Description	MSG P	MSG N	
CP	Set Point de consigne de réglage	0	-21	
	diF Différentiel d'intervention	3	3	
	HSE Valeur maximale attribuable au point de consigne	8	-10	
	LSE Valeur minimale attribuable au point de consigne	-2	-21	
	OSP Offset point de consigne	0	0	
	Cit Temps minimum d'activation sortie compresseur	0	0	
	CAt Temps maximum d'activation sortie compresseur	0	0	
	Ont Temps d'allumage du compresseur en cas de sonde en panne	0	0	
	OFT Temps de désactivation du compresseur en cas de sonde en panne	0	0	
	dOn Retard activation sortie compresseur à partir de l'allumage	0	0	
	dOF Retard activation sortie compresseur à partir de l'arrêt	0	0	
	dbi Temps de retard entre deux allumages consécutifs du compresseur	2	2	
dEF	OdO Temps de retard de l'activation des sorties à l'allumage	0	0	
	dtY Type de dégivrage	1	1	
	dit Intervalle entre les dégivrages	6	4	
	dCt Mode de comptage de l'intervalle de dégivrage	1	1	
	dOH Temps de retard d'activation du cycle de dégivrage à partir de l'allumage	0	0	
	dEt Time out dégivrage	30	30	
	dPO Dégivrage au moment de l'allumage	n	n	
FAn	dSt Température de fin de dégivrage	10	10	
	FSt Température de blocage des ventilateurs de l'évaporateur	15	8	
	Fad Différentiel d'intervention des ventilateurs de l'évaporateur	2	2	
	Fdt Temps de retard des ventilateurs de l'évaporateur après un cycle de dégivrage	4	4	
	dt Temps d'égouttement	2	2	
	dFd Exclusion des ventilateurs de l'évaporateur pendant le dégivrage	y	y	
	FCO Etat des ventilateurs de l'évaporateur en cas de sortie compresseur	n	n	
	Fod Etat des ventilateurs de l'évaporateur en cas de porte ouverte	n	n	
	FdC Temps de retard de l'arrêt des ventilateurs de l'évaporateur après l'extinction du compresseur	0	0	
AL	Fon Temps d'activation des ventilateurs de l'évaporateur en mode régulateur cyclique	0	0	
	FoF Temps de désactivation des ventilateurs de l'évaporateur en mode régulateur cyclique	0	0	
	Att Modalités paramètre HAL et LAL	0	0	
	Afd Différentiel d'intervention des alarmes	2	2	
	HAL Seuil alarme température maximale	50	50	
	LAL Seuil alarme température minimale	-50	-50	
	PAO Exclusion des alarmes à l'allumage	4	4	
	dAO Temps d'exclusion des alarmes de température après un cycle de dégivrage.	180	180	
	OAO Temps d'exclusion des alarmes haute et basse température après la fermeture	1	1	
	tdO Temps d'exclusion de l'alarme de porte ouverte	10	10	
Lit	tAO Temps de retard signalement des alarmes de température	30	30	
	dAt Signalement de l'alarme après dégivrage terminé pour time-out	n	n	
	EAL Alarme extérieure de blocage des régulateurs	n	n	
	AOP Polarité de la sortie de l'alarme	1	1	
	dSd Activation du relais lumière par interrupteur porte	y	y	
Add	OFL Activation/désactivation de la lumière de la chambre au moyen de la touche pendant le retard réglé	y	y	
	dOd Activation/désactivation des services sur activation de l'interrupteur	y	y	
	dAd Retard de l'activation des entrées numériques	0	0	
diS	dEA Adresse dispositif	0	0	
	FAA Adresse famille	0	0	
	LOC Activation blocage clavier	n	n	
diS	PA1 Valeur mot de passe	0	0	
	ndt Affichage avec point décimal	n	n	

	CA1	Calibrage sonde chambre	0	0		
	CA2	Calibrage sonde évaporateur	0	0		
	ddL	Blocage des ressources à la fin du dégivrage	0	0		
	dro	Sélection °C / °F	0	0		
CnF	H06	Touche ou entrée numérique auxiliaire / lumière actifs lorsque l'instrument est éteint	y	y		
	H11	Configuration et polarité de l'entrée numérique	3	3		
	H21	Configuration sortie numérique 1 (A)	1	1		
	H22	Configuration sortie numérique 2 (B)	2	2		
	H23	Configuration sortie numérique 3 (C)	3	3		
	H24	Configuration sortie numérique 4 (D)	4	4		
	H25	Configuration sortie numérique 5 (E)	5	5		
	H26	Configuration sortie numérique 6 (Buzzer)	4	4		
	H31	Configuration touche UP	1	1		
	H32	Configuration touche DOWN	0	0		
	H33	Configuration touche ESC	1	1		
	H34	Configuration touche Free	2	2		
	H42	Présence sonde évaporateur	y	y		

E) ENTRETIEN

E.1 ENTRETIEN ORDINAIRE

ATTENTION : l'utilisateur ne doit en aucun cas ouvrir le MSG. Le constructeur décline toute responsabilité en cas de dommages sur des personnes ou objets et pour des mauvais fonctionnements dus à des interventions effectuées par du personnel non spécialisé.

Il est recommandé pour le bon fonctionnement de l'installation de nettoyer tous les 2 ou 3 mois les ailettes du condensateur positionné sur le côté opposé à celui des ventilateurs ; cela doit être effectué avec un jet d'air comprimé ou avec une brosse à poils longs et sans ouvrir le MSG.

S'assurer, dans le cas où le MSG est installé dans un environnement fermé, qu'un changement d'air est toujours garanti.

En cas de panne de la lampe, la remplacer avec une lampe de puissance égale en coupant d'abord le courant du système.

E.2 ENTRETIEN EXTRAORDINAIRE

ATTENTION : toutes les opérations d'entretien extraordinaire doivent être effectuées par du personnel qualifié selon les modalités décrites dans ce livret d'instruction.

IMPORTANT : avant toute opération d'entretien ou de nettoyage, couper le courant de la machine.

En cas d'endommagement du câble d'alimentation sur les appareils monophasés, remplacer par un câble avec des terminaux faston 6.3 mm plus des couvres-faston et un terminal à œillet sur le câble conducteur de terre.

F) ANOMALIES DE FONCTIONNEMENT

1 – Blocage du compresseur

Une élévation anormale de la température de la cellule a lieu. Le compresseur est équipé d'un dispositif de sécurité qui en arrête la marche quand des conditions de danger ont lieu comme les suivantes :

- Mauvais fonctionnement du ventilateur du condensateur
- Condensateur sale (voir point E.1)
- Sauts de tension élevés dans le réseau d'alimentation

- Température ambiante excessive (changement d'air insuffisant)

On rappel qu'après l'arrêt, le compresseur repart automatiquement mais il est nécessaire de trouver la cause qui a provoqué l'arrêt. Faites intervenir un technicien si l'inconvénient persiste.

2 – Formation de glace sur l'évaporateur

Les causes possibles peuvent être :

- paramétrage erroné du thermostat (pour MSG positifs)
- Ouvertures de la porte de la cellule trop fréquentes (voir point D.4)
- Introduction de denrées à température supérieure à celle prévue (non supérieur à 20°C pour des cellules positives, non supérieur à -14°C pour des cellules à basse température)

ATTENTION : durant la phase de dégivrage, une hausse de la température a lieu. Cela est prévu pour permettre à l'évaporateur de se libérer des formations de givre ou de glace. Le dégivrage est signalé par l'allumage de la DEL 

G) ECOULEMENT DES DECHETS ET MISE HORS SERVICE

A la fin du cycle de vie du système, éviter que le gaz réfrigérant R404A et l'huile POE soient dispersés dans l'environnement.

ATTENTION : les opérations de démontage doivent être toutefois effectuées par du personnel qualifié.

Démonter l'installation en regroupant les composants selon leur nature chimique.

Un stockage provisoire des déchets spéciaux est autorisé dans l'attente du démantèlement par traitement et/ou stockage définitif.

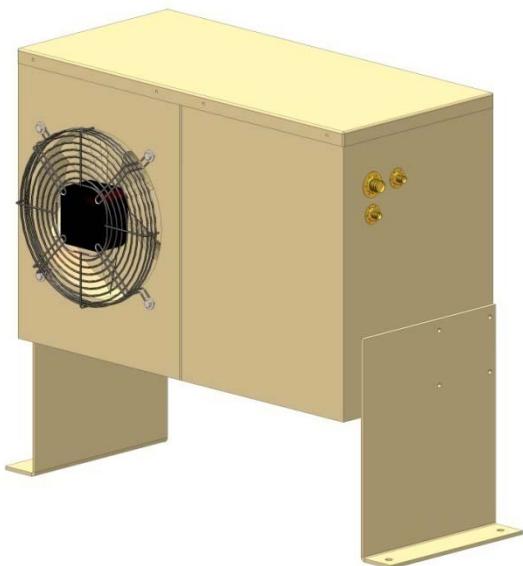
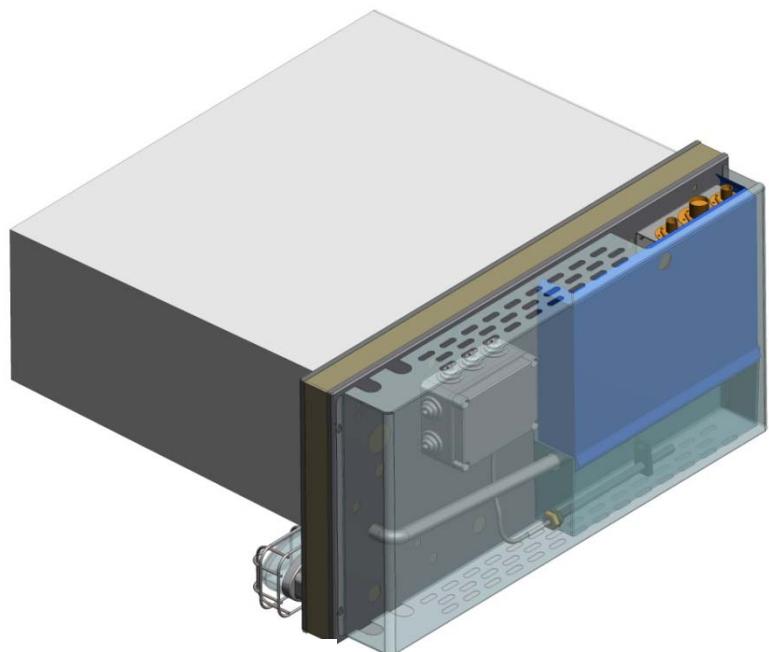
Les lois en vigueur dans le pays de l'utilisateur en matière de protection de l'environnement doivent être observées. Dans les différents pays, des législations différentes sont en vigueur, il faut donc observer les prescriptions imposées par la loi et par les organismes préposés des Pays dans lesquels la démolition a lieu.

DATI TECNICI
TECHNICAL DATA
TECHNISCHE DATEN
DONNEES TECNIQUES

IMPIANTO
UNIT
ANLAGE
SYSTEME

MSG

MSG 4P	MSG 6N
MSG 7P	MSG 13N
MSG 13P	MSG 20N
MSG 16P	
MSG 18P	



DATI TECNICI – TECHNICAL DATA

UNITA' CONDENSANTI / CONDENSING UNIT							
MODELLO/ MODEL	FIG.	VOLT (50 Hz)	POTENZA NOMINALE / NOMINAL POWER HP	WATT ASSORBITI/ WATT INPUT	POTENZA FRIGORIFERA/ REFR. POWER		GAS
					WATT	Kcal/h	
MSG 4P	A	230/1	0,5	680	1030	890	R404A
MSG 7P			0,5	680	1140	980	
MSG 13P			0,75	830	1620	1400	
MSG 16P			1,1	950	2020	1740	
MSG 18P	B	380-400/3	1,3	1120	2470	2120	
MSG 6N			1,2	740	960	830	
MSG 13N			1,7	960	1320	1135	
MSG 20N	B	380-400/3	2,2	1430	1570	1350	

FRIGODIFFUSORI/ EVAPORAT.		
SUPERFICIE/ s m ²	N° VENTILATORI/ FAN	ARIA/ AIR m ³ /h
4,2	1x254	550
4,2	1x300	500
4,2	1x300	950
8,4	1x300	850
8,4	1x300	850
4,2	1x300	500
5,6	1x300	950
8,4	1x300	850

IMBALLO/ PACKING	
DIM. IMB./ CRATE DIM.	PESO/ WEIGHT KG
125x5x97H	48
	48,5
	53
	61
	120
	60
	61
	130

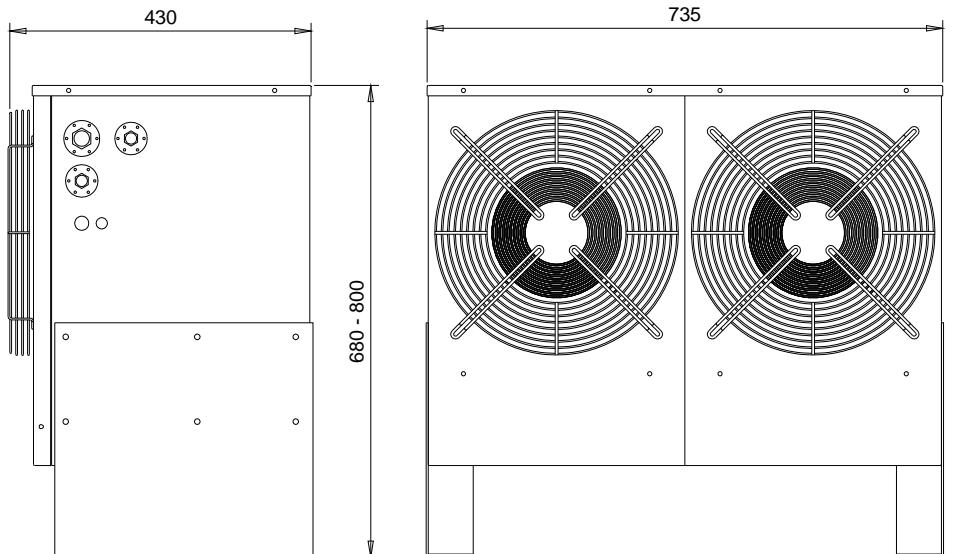
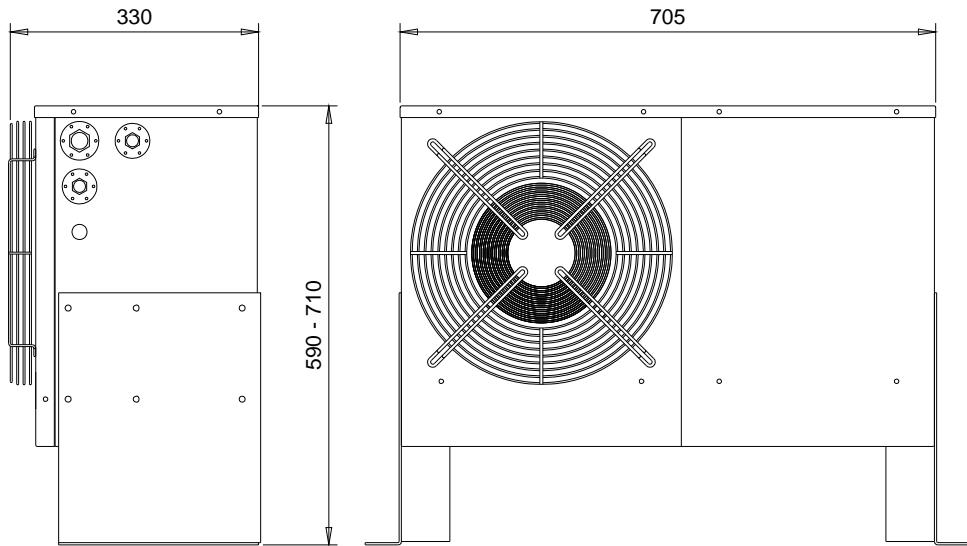


Fig. 6

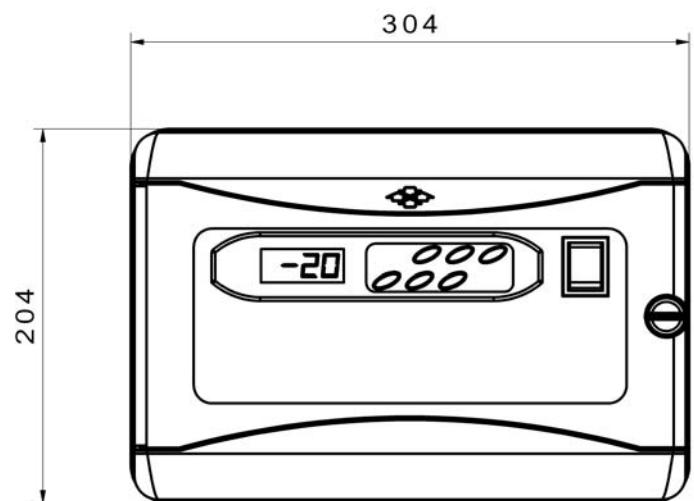


Fig. 7

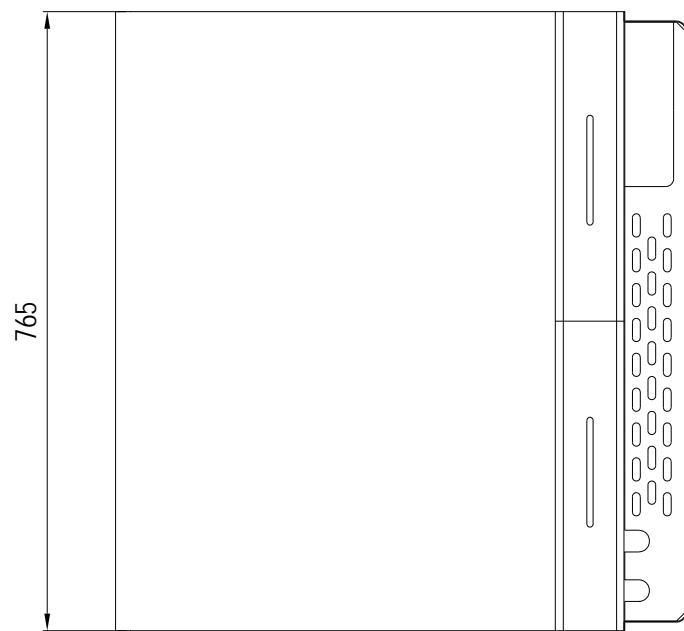
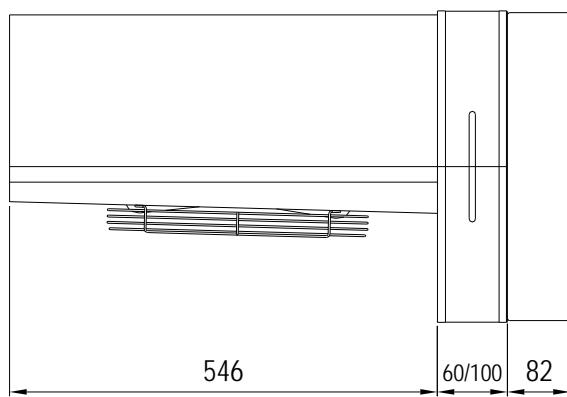


Fig. 8