IMPIANTO - UNIT - ANLAGE - SYSTEME

FREEBLOCK R290

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

NOTEC - 188 – 02-2023/F – 07-2022/E

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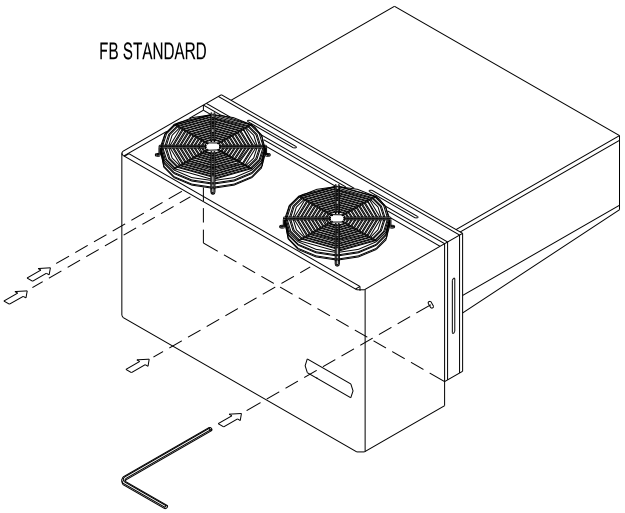


Fig. 1

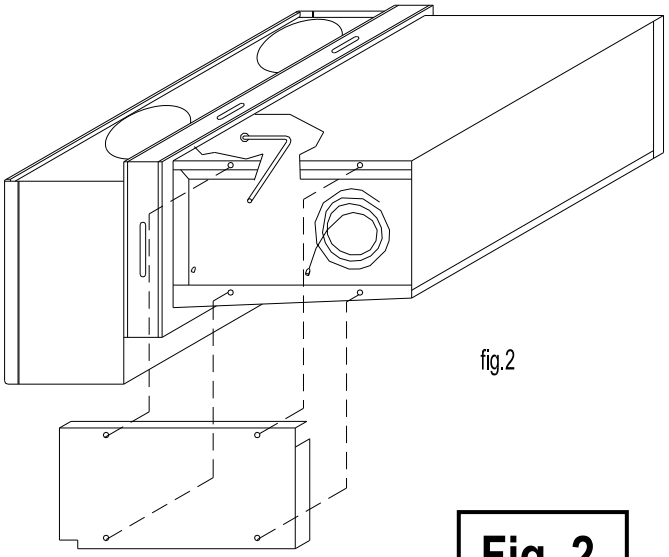
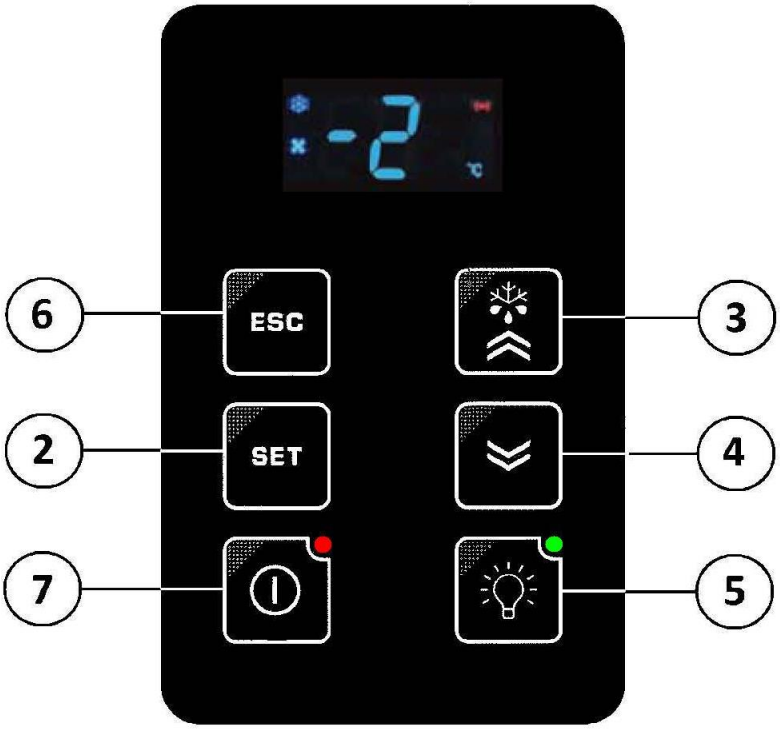


fig.2

Fig. 2

Fig. 3

ELIWELL IWP750



CAREL iJF

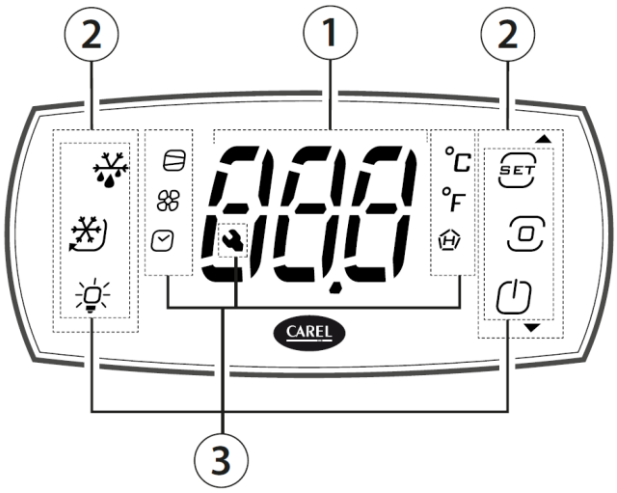


Fig. 4

PLUG 2P+T 32A 6h
IP66/IP67

0) SAFETY WARNINGS

ATTENTION: DO NOT DAMAGE THE REFRIGERANT CIRCUIT.

ATTENTION: DO NOT DAMAGE THE INTERNAL OR EXTERNAL SIDES OF THE EQUIPMENT: THE REFRIGERANT CIRCUIT COULD BE DAMAGED. IF SIDES ARE DAMAGED, DO NOT START UP THE EQUIPMENT AND CONTACT THE AFTER-SALES SERVICE.

ATTENTION: TO REDUCE THE RISKS CONNECTED WITH FLAMMABILITY, THIS EQUIPMENT MUST ONLY BE INSTALLED BY SUITABLY QUALIFIED PERSONNEL

Propane is a natural gas without effects on the environment, but flammable.
It is therefore essential to ensure that all the pipes of the refrigerant circuit are not damaged, before connecting the equipment to the power supply.

The installation room must avail of a minimum volume of 1m³ for every 8 grams of refrigerant.

The quantity of refrigerant of the equipment is indicated on the identification plate. Be careful not to damage the pipes of the refrigerant circuit during positioning, installation and cleaning.

ATTENTION: AVOID FIRES OR SPARKS INSIDE THE EQUIPMENT.

In case of damage:

• Keep the equipment away from flames or sources of ignition.
• Ventilate well the environment for a few minutes.
•Turn off the equipment and take out the power plug.
• Inform the after-sales service.
• The more refrigerant the equipment can contain the larger the environment will have to be in which it is found.
• In environments that are too small, a flammable mix of air and gas can form.
• THIS MANUAL IS CONTAINED IN THE PACKAGING OF THE EQUIPMENT. KEEP THE INSTRUCTION BOOKLET AND, IF THE EQUIPMENT IS SOLD, DELIVER IT TO THE NEW OWNER.
• THE FREEBLOCK MUST NOT BE EXPOSED OR USED OUTDOORS. IT MUST BE SHELTERED FROM CLIMATE CONDITIONS. THE UPPER AND LOWER PART OF THE EQUIPMENT MUST ALWAYS BE FREE.
• NEVER TOUCH OR MANUVER THE EQUIPMENT IN BARE FEET OR WITH WET HANDS OR FEET.
• DURING TRANSPORT, ASSEMBLY, TESTING, REPAIR, USE, DISASSEMBLY AND DISPOSAL ALL THE NECESSARY MEASURES MUST BE TAKEN TO AVOID RISKS OF TIPPING OVER AND TO GUARANTEE STABILITY OF THE PRODUCT. INSIDE, THE MANUAL INDICATES THE MODES OF TRANSPORT, FEATURES FOR LIFTING THE EQUIPMENT AND FASTENING INSTRUCTIONS (PARAGRAPH B).

PERSONAL PROTECTION EQUIPMENT IS REQUIRED BY THE USER.

• AFTER INSTALLING THE EQUPIMENT ENSURE THAT THE POWER CABLE HAS NOT BEEN CRUSHED OR DAMAGED.
• TO DETACH THE EQUIPMENT FROM THE POWER SUPPLY, TAKE OUT THE PLUG. DO NOT PULL THE CABLE OF THE LATTER.
• DO NOT KEEP EXPLOSIVE SUBSTANCES, SUCH AS PRESSURISED CONTAINERS WITH FLAMMABLE PROPELLENT IN THIS EQUPIMENT.
• THE EQUIPMENT MUST NOT BE MADE TO WORK WITH THE FRONT PANEL OPEN DURING TESTING OR REPAIR. PROLONGED OPERATION IN THIS CONDITION CAUSES HIGH-PRESSURE BLOCKAGE OF THE SYSTEM. IN THIS SITUATION RECLOSE THE FRONT PANEL AND WAIT 4 HOURS BEFORE RESTARTING THE SYSTEM.
• THE EQUIPMENT CAN BE USED BY ADULT PERSONNEL AFTER THEY HAVE RECEIVED INSTRUCTIONS ON THE SAFE USE OF THE EQUIPMENT AND THE UNDERSTANDING OF HAZARDS RELATED TO IT.
• DO NOT POWER UP THE EQUIPMENT IF IT IS DAMAGED. IN CASE OF DOUBT, CONTACT THE RETAILER'S AFTER-SALES SERVICE.
• IF THE POWER CABLE IS DAMAGED, DO NOT USE THE EQUIPMENT OR ATTEMPT TO REPAIR IT: IT MUST BE REPLACED BY THE MANUFACTURER OR BY HIS AFTER-SALES SERVICE.
• THE REPLACEMENT OF ELECTRIC AND MECHANICAL COMPONENTS MUST BE DONE EXCLUSIVELY BY QUALIFIED PERSONNEL. THE USE OF SPARE PARTS OTHER THAN THOSE INDICATED IN THIS MANUAL MAY CAUSE RISKS TO THE HEALTH AND SAFETY OF THE OPERATOR.
• DO NOT USE MECHANICAL DEVICES OR OTHER MEDIA DIFFERENT FROM THOSE RECOMMENDED BY THE MANUFACTURER TO ACCELERATE THE DEFROSTING PROCESS.
• DO NOT USE ELECTRICAL EQUIPMENT INSIDE THE COLD ROOM IF IT IS NOT OF THE TYPE RECOMMENDED BY THE MANUFACTURER.
• THE EQUIPMENT HAS A SOUND PRESSURE EMISSION LEVEL LOWER THAN 70dB(A).

PERSONAL PROTECTION EQUIPMENT IS REQUIRED DURING TRANSPORT, ASSEMBLY, TESTING DISASSEMBLY AND REPAIR.

PERSONAL PROTECTIVE EQUIPMENT REQUIRED BY THE USER

A) GENERAL INFORMATION

A.1 INTRODUCTION

The equipment described in this manual complies with machine directive 2006/42/CE.

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 cannot be held in any way liable for damage caused to people or property due to non-compliance with warnings contained in this manual.

A.2 DESTINATION OF USE AND RESTRICTIONS

The FREEBLOCK 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 installation must be carried out by qualified personnel in conformity with the applicable electrical regulations in force of the countries of destination of FREEBLOCK.

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 FREEBLOCK 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 polysterol: protections

Pressed cardboard: protections

B.1.5 POSITIONING THE FREEBLOCK

Lift the FREEBLOCK unit by the buttonhole and position it in the appropriate predisposed compartment on the refrigeration cell. Pull the fasteners on the support panel by the key supplied in the packing as indicated in Fig. 1.

ATTENTION: In the case of models FB6N, FB26 and FB28 to tighten the fasteners that are not accessible on the compressor side, gain access to the other side of the panel by removing the side panels of the evaporator as indicated in Fig. 2.

B.1.6 ELECTRICAL CONNECTION

ATTENTION: the electrical safety of the unit is ensured only when the unit is correctly connected to an effective electrical system that is earthed and carried out as foreseen by the safety norms in force.

Check that the mains voltage corresponds to the voltage indicated on the registration plate indicated in Fig. 3. The tolerance allowed is +/- 10% of the nominal value.

The electrical power line to which FREEBLOCK will be connected must be dedicated and protected by magnetic and differential switch (id=30Ma) with minimum contact opening of 3 mm and connected to the grounding system.

The cut-off device must be located in a visible position.

The electrical data necessary for sizing the electrical line and the protection devices are set out on the identification plate shown in FIG. 3.

The installation operations must be effectuated exclusively by qualified personnel in conformity to the norms in force.

On all units, the cable for the connection of the door micro switch is available (supplied as an optional) that, if connected, automatically:

- switches on the cell light
- stops the unit

ATTENTION: A lighting Set is provided with all FB models consisting of an ATEX IP65 lighting fixture and a lighting power cable. Attach the lighting fixture at the pre-chosen cell point

and make the electrical connection , keeping in mind that the cables is about 2 m long.

C) SWITCHING ON THE UNIT

Power up by entering the specific single-phase plug into the electrical socket.

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 ELIWELL CONTROL PANEL

The functions of the control panel on board the refrigeration cell represented in Fig. 4 are:

② - SET Button

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

③ - UP Button

Button to increase settable values.

Pressing down for 2 seconds results in defrosting.

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.

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.

- Signal Ledl: The display includes leds are installed with symbol and their definition indicated below:

- Compressor or relay 1: ON for compressor switched on. Flashing for delay, protection or actuation blocked.
- Defrosting: ON for defrosting in course. Flashing for manual actuation.
- Alarm: ON for alarm active. Flashing for alarm silenced.
- Fans: ON for fan functioning.

IMPORTANT: The electronic control instrument is programmed directly by the manufacturer according to optimum parameters. It is therefore recommended to not modify these parameters without having previously consulted with our offices so as not to cause a decrease in performance of the unit and malfunctions.

To gain access to the functioning parameters of the instrument by specialised personnel see the instructions attached to the electrical control panel.

D.1.1 ELIWELL ALARM SIGNALS

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

D.1.2 ELIWELL ALARM SIGNAL COMING FROM A FAULTY PROBE

This alarm signal is directly visualised on the display of the instrument:

E1 – Cell probe faulty

E2 – Defrosting probe faulty

E7 - Lack of communication between electronic panel and keyboard .

The substitution of a faulty probe must be effectuated by specialised technical personnel in the shortest time possible.

D.1.3 ELIWELL TEMPERATURE ALARM SIGNAL

If the alarm threshold for the temperature is to be changed, it is necessary to gain access to the "programming menu" of the parameters:

HAL – Maximum temperature alarm. Exceeding this temperature value, the alarm icon is tripped .

LAL – Minimum temperature alarm. Dropping below this temperature value, the alarm icon is tripped .

When the alarm LED switches on, 12V DC is made available simultaneously to the alarm terminals on the card (see electrical wiring diagrams) to make any eventual signal remote.

To silence the alarm press any key. In the case of a silent alarm, the icon flashes.

D.1.4 SETTING THE ELIWELL INSTRUMENT PARAMETERS

The instrument is programmed with the values indicated in the table that follows. For interventions by specialised personnel to change the functioning parameters, refer to the technical sheet attached to the following booklet.

D.1.5 ELIWELL COPY CARD

The Copy Card is an optional electronic card that is connected directly to the instrument by the TTL serial port. Gaining access by the keyboard to the parameters of the FPr folder it will be possible to record in the Copy Card the setting of the instrument's parameters or download from the Copy Card the information in another instrument. In the FPr folder are contained two operations:

3. UPLOAD (UL): insertion of programming parameters (from instrument to the Copy Card)
4. DOWNLOAD (DL): insertion of programming parameters (from the Copy Card to the instrument)

On the display appears the letter "Y" if the operation was effectuated correctly or "N" if not.

ELIWELL CONTROL / PARAMITERS SETTING IWP 750 LX

Description	FB G 1x	FB G 2x	FB N 1x	FB N 2x
SEt - Regulation set point	0	0	-21	-21
diF - Tripping differential	3	3	3	3
HSE - Maximum value settable for set point	8	8	-10	-10
LSE - Minimum value settable for set point	-2	-2	-21	-21
OSP - Offset on set point	0	0	0	0
Cit - Minimum enabling time for compressor output	0	0	0	0
CAt - Maximum enabling time for compressor output	0	0	0	0
dOn - Compressor output enabling delay from request	0	0	0	0
dOF - Compressor output enabling delay from shutdown	0	0	0	0
dbi - Delay between two consecutive starts of the compressor output	2	2	2	2
OdO - Delay output enabling from Power On	0	0	0	0
dSC - Compressor Activation Delay 2	5	5	5	5
dtY - Type of defrost	1	1	1	1
dit - Interval between defrosts	6	6	4	4
dCt - Counting mode for defrost interval	1	1	1	1
dOH - Defrost cycle enabling delay from request	0	0	0	0
dEt - Defrost timeout	30	30	30	30
dSt - Defrost end temperature	10	10	10	10
FSt - Evaporator fans disabling temperature	15	15	8	8
FAd - Evaporator fans enabling differential	2	2	2	2
Fdt - Evaporator fans delay after defrost cycle	4	4	4	4
dt - Dripping time	2	2	2	2
dFd - Evaporator fans disabling during defrost time	1	1	1	1
FCO - Evaporator fans status with OFF compressor output	0	0	0	0
FOd - Evaporator fans status with open door	0	0	0	0
Att - Mode of parameter HAL and LAL (absolute or relative)	0	0	0	0
AFd - Alarm tripping differential	2	2	2	2
HAL - Maximum alarm threshold	50	50	50	50
LAL - Minimum alarm threshold	-50	-50	-50	-50
PAO - Temperature alarms disabling time from Power On	4	4	4	4
dAO - Temperature alarm disabling time after defrost cycle	180	180	180	180
OAO - High and low temperature alarms disabling time after door closing	1	1	1	1
tdO - Open door disabling time	10	10	10	10
tAO - Temperature alarms delay time	30	30	30	30
dAt - Defrost alarm signal silenced due to timeout	0	0	0	0
AOP - Polarity of alarm output	1	1	1	1
dSd - Enabling light relay by door switch	1	1	1	1
dLt - Light relay disabling time from door closing	0	0	0	0
OFL - Cell light shutdown disabling from button during the delay set with parameter dLt	1	1	1	1
dOd - Loads shutdown enabling after door micro enabling	1	1	1	1
PEn - Number of errors allowed for pressure switch input. 0 = disabled	0	0	0	0
PEI - Pressure switch error count interval	60	60	60	60
dEA - Device address	0	0	0	0

FAA - Family address	0	0	0	0
LOC - Disables keyboard operation	0	0	0	0
PS1 - Password to access the Level 1 Parameters Menu	0	0	0	0
PS2 - Password to access the Level 2 Parameters Menu	100	100	100	100
ndt - Display with decimal point	0	0	0	0
CA1 - Cell probe calibration	0	0	0	0
CA2 - Evaporator probe calibration	0	0	0	0
ddL - Display blocking mode during defrost	0	0	0	0
dro - °C/°F selection	0	0	0	0
H11 - Configurabilità e polarità ingresso digitale 1	0	0	0	0
H12 - Configurabilità e polarità ingresso digitale 2	0	0	0	0
H13 - Configurability and polarity of digital input 3	4	4	4	4
H14 - Configurability and polarity of digital input 4	0	0	0	0
H21 - Configurability of digital output 1	1	1	1	1
H22 - Configurability of digital output 2	3	3	3	3
H23 - Configurability of digital output 3	2	2	2	2
H24 - Configurability of digital output 4	7	7	7	7
H25 - Configurability of digital output 5	4	10	4	10
H31 - UP button configurability	1	1	1	1
H32 - DOWN button configurability	0	0	0	0
H33 - ESC button configurability	0	0	0	0
H42 - Evaporator probe present	1	1	1	1

D.2 DESCRIPTION AND OPERATION OF THE CAREL CONTROL PANEL

The functions of the on-board control controller shown in FIG. 4 are:
① - Display
② - Icons / buttons
③ - Icons
The function of the keys is as follows:

- Setpoint or UP value increase key; a short press allows to increase the value or scroll the menu

- Program key; a short press allows you to enter the menu branch or to save the value and return to the parametric code. Long pressure (3 s) allows you to go back to the previous level from Stand by to unlock the keyboard and enter programming mode or while navigating.

- ON-OFF or DOWN value decrease key; a short press allows the decrease of a value or the scrolling of the menu or ON / OFF unit

Signaling LEDs: the following LEDs are present on the display with the symbols and meanings shown below:

- Defrost: on for active defrost; flashing when defrost is pending

- Light: on for active light; blinking for waiting

- Auxiliary output: on when the auxiliary output is active; flashing with expectation

- Compressor: on when compressor is active; flashing for waiting

- Evaporator fans: on for evaporator fans active; flashing waiting

- Alarms log: on for logged alarms and direct access to the alarms log menu

- Presence of alarms: assistance / maintenance required

IMPORTANT: The electronic control instrument is programmed directly by the manufacturer according to the optimal operating parameters; it is therefore advisable not to change these parameters without having previously consulted our offices in order not to cause a decrease in system performance and malfunctions.
To access the operating parameters of the instrument by specialized personnel, use the instructions attached to the electrical panel.
To access the operating parameters of the instrument by specialized personnel, use the instructions attached to the electrical panel.

D.2.1 CAREL ALARM SIGNAL

The instrument provides for the possibility of setting and signaling some alarm conditions on the display.
They are directly highlighted on the instrument display:
E1 – Cell probe fault
E2 – Defrost probe faulty
dor – Door open alarm
IA – High pressure switch intervention alarm
HI – High temperature alarm
The replacement of the faulty probe must be carried out by specialized technical personnel as soon as possible.

D.2.2 CAREL INSTRUMENTS PARAMETER SETTINGS

The instrument is programmed in the factory with a set of parameters customized and optimized by the manufacturer to ensure its operation. If you need to program the tool, contact our offices who will send you a configuration file suitable for the system that can be installed on the controller via smartphone with the app APPLICA.

D.2.3 PROGRAMMING WITH APPLICA

To facilitate assistance operations, the APPLICA smartphone application provides the "apply configuration" function, which allows you to program the instrument with a configuration file to be requested from our offices.

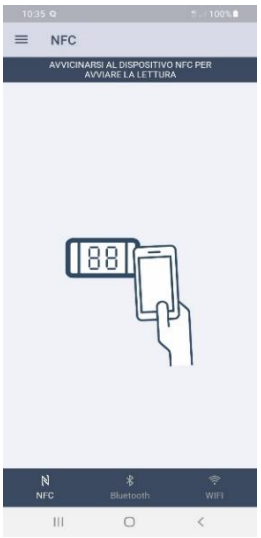
D.2.4 PROCEDURE WITH APPLICA

For the complete guide, refer to the following link:
https://www.carel.com/documents/10191/0/+0300100IT/b5d02231-5bd4-452c-97d3-78fe9ef4e52c?version=1.1

0. Download and install “APPLICA” from playstore (android) or applestore (ios)

1. start the NFC function on the smartphone and the application APPLICA;

①

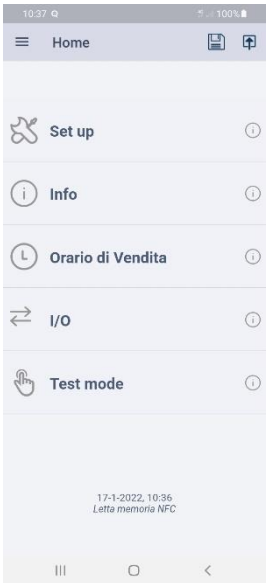


2. access the control via NFC connectivity, with the credentials of your profile (OEM = 44);

②

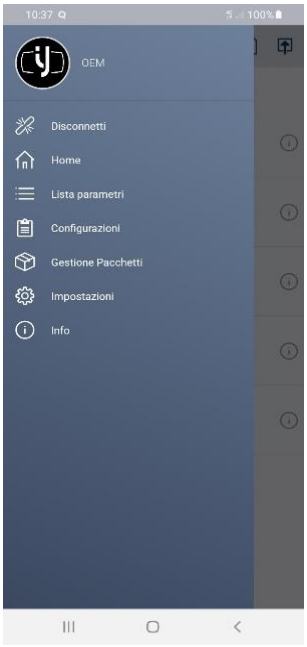
3. in the top left drop-down menu, access the menu and follow the "Configurations" path;

③



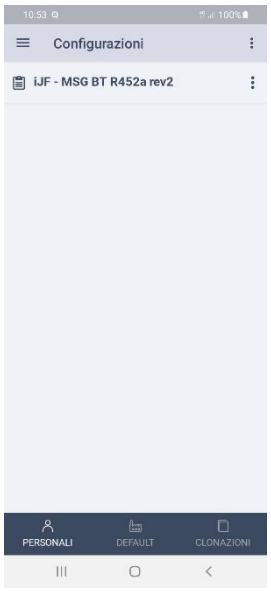
4. in the configurations menu on the right side, select the configuration file sent by our offices and select the "apply configuration" function

④



5. bring the device closer to the IJF from which you want to apply the configuration (only for NFC connection)

⑤



6. wait the time necessary to write the configuration in the instrument and confirm it

⑥

D.3 NORMS FOR GOOD MANAGEMENT OF THE UNIT

The FREEBLOCK units are designed for the conservation of fresh goods (0 + 8°C) or frozen foods (-18 to -25°C) therefore it is necessary to keep to the following instructions:

1 – Door opening

Programme the movement of goods so as to reduce the number of openings of the door and to not concentrate them over a period of time. Not more than 25 openings in 24 hours.

2 – Daily movement of goods

Do not exceed 30 kgs/ m^3 .

3 – Rubber door

On a low-temperature refrigeration cell it is always advisable to install a rubber door that avoids excessive entries of external air. It is indispensable in the case of door openings more than 25 times in 24 hours (see D.4.).

4 - Load limits

The goods stored in the refrigeration cell must not exceed the minimum limit of the air cooler.

5 – Environmental conditions:

Check that the unit is not exposed to the sun's rays.

Check that the ambient temperature, when near the condensing unit, be not more than 43°C.

6 – Low-temperature refrigeration cells

ATTENTION: It is indispensable to mount an equalizing valve.

E) MAINTENANCE

E.1 ORDINARY MAINTENANCE

ATTENTION: The user must never open the FREEBLOCK 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 FREEBLOCK unit. Ensure that there is always a sufficient exchange of air if FREEBLOCK 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.

ATTENTION: If the power cable is damaged, do not use the FREEBLOCK and do not attempt to repair it: it must be replaced by the manufacturer or by his after-sales service.

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 FB positive cells)
- 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

ATTENTION: The equipment contains oil, flammable refrigerant gas, parts in plastic, metallic parts and glass. At the end of the life cycle of the unit, avoid dispersing the refrigerant gas R452a 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.

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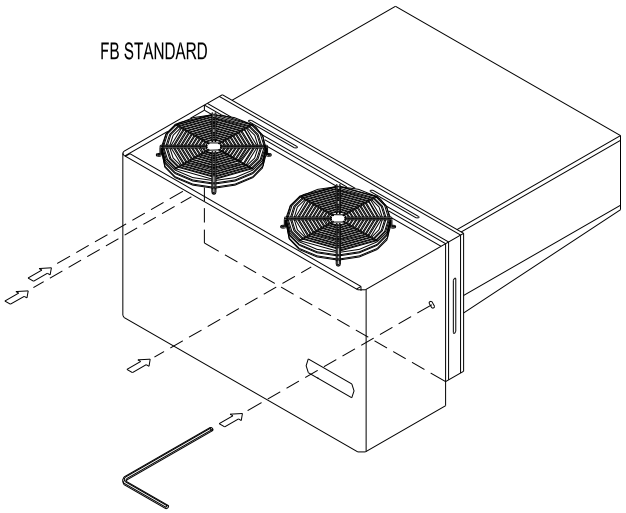


Abb. 1

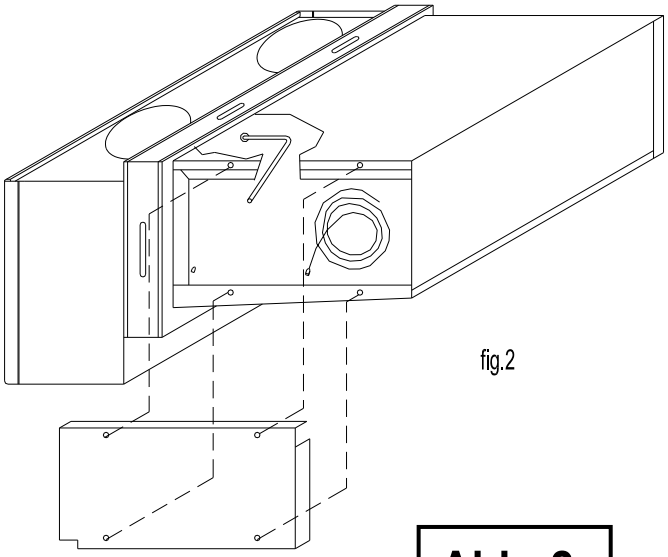
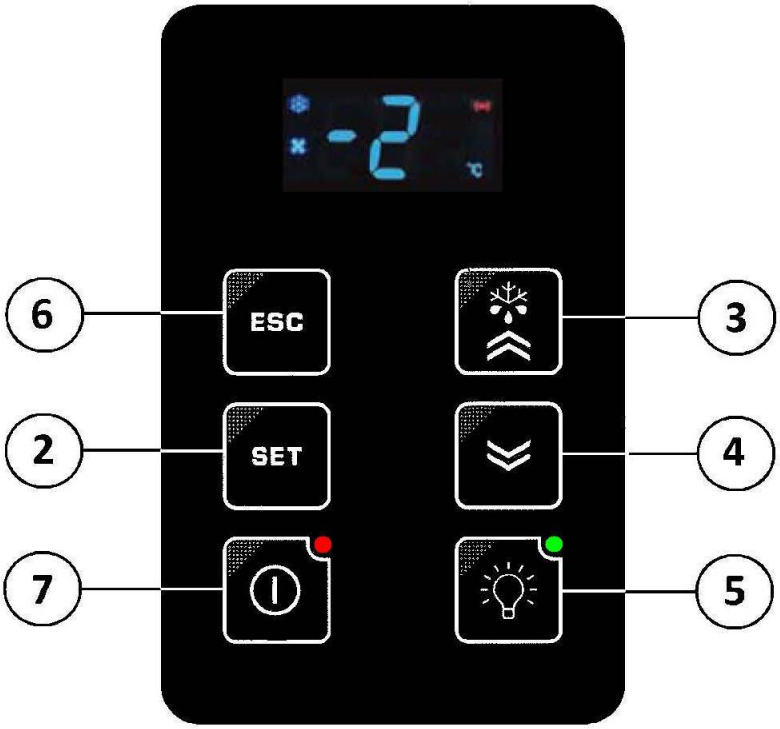


fig.2

Abb. 2

Abb. 3

ELIWELL IWP750



CAREL iJF

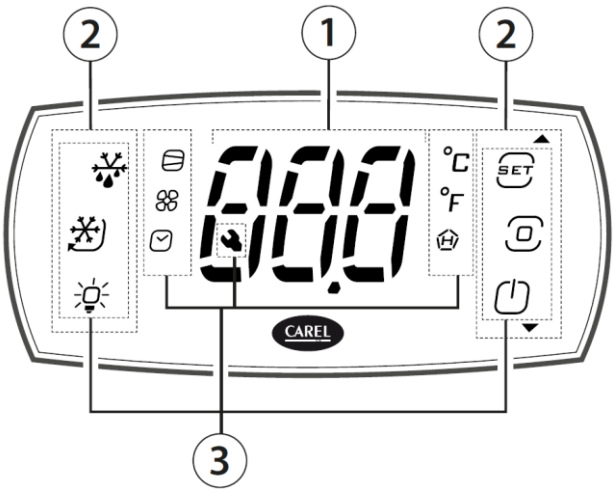


Abb. 4

PLUG 2P+T 32A 6h
IP66/IP67

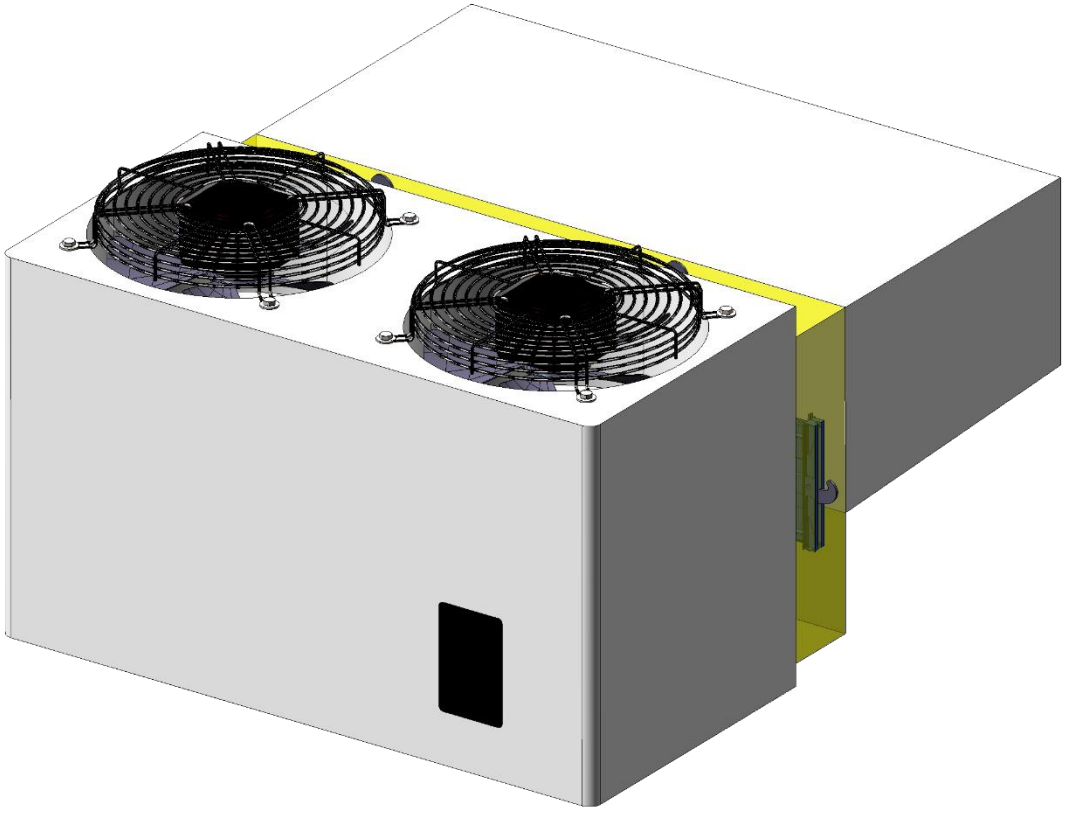
DATI TECNICI
TECHNICAL DATA
TECHNISCHE DATEN
DONNEES TECNIQUES

IMPIANTO
UNIT
ANLAGE
SYSTEME

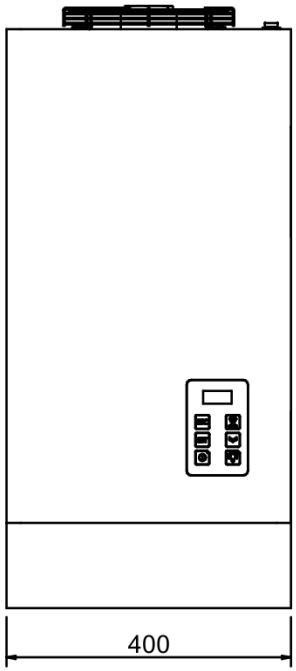
FREEBLOCK

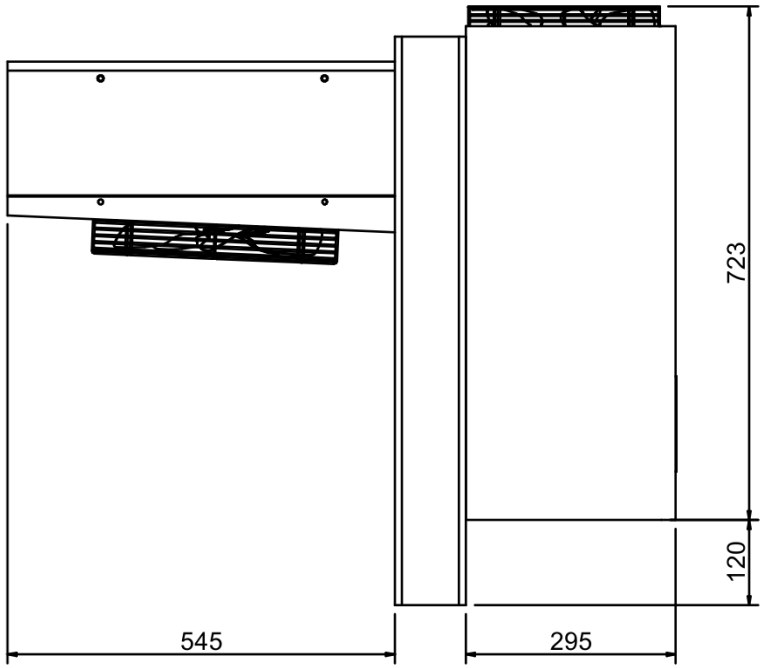
FB 3G	FB 3N
FB 7G	FB 6N
FB 13G	FB 13N
FB 16G	FB 20N
FB 20G	FB 28N
FB 26G	

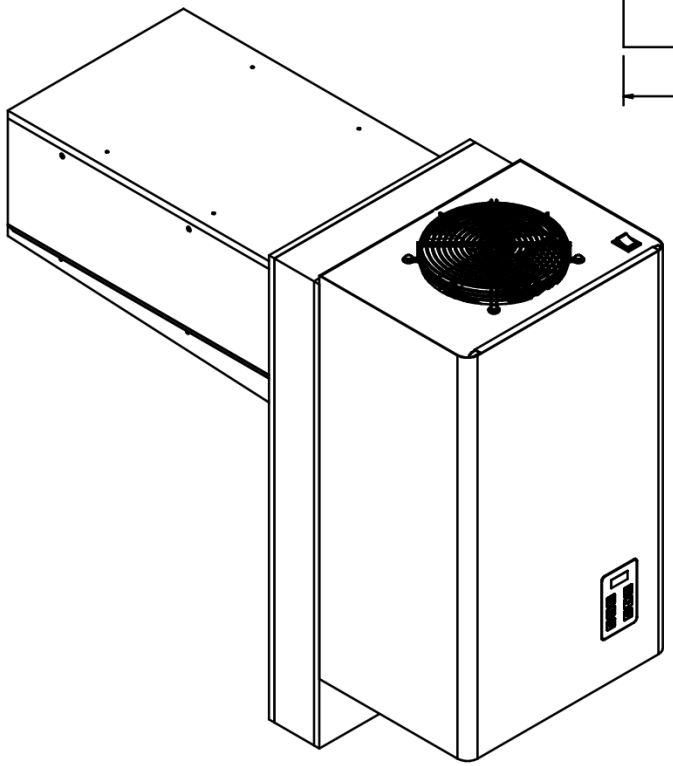
R290

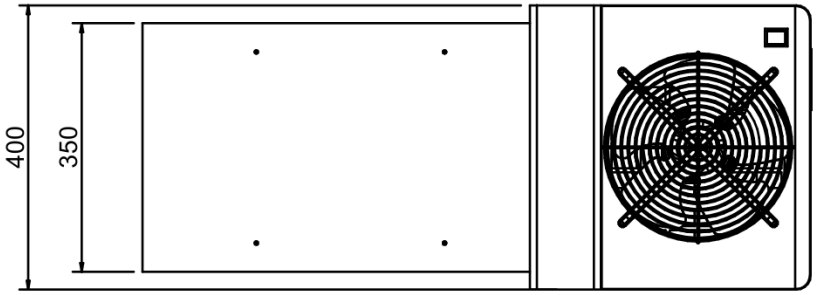


Medium and Low temperature applications											
Refrigerant R290											
Model	Freeblock FB3G TN R290 220/50	Freeblock FB7G TN R290 220/50	Freeblock FB13G TN R290 220/50	Freeblock FB16G TN R290 220/50	Freeblock FB20G TN R290 220/50	Freeblock FB26G TN R290 220/50	Freeblock FB3N BT R290 220/50	Freeblock FB6N BT R290 220/50	Freeblock FB13N BT R290 220/50	Freeblock FB20N BT R290 220/50	Freeblock FB28N BT R290 220/50
Cod.											
Supply voltage	220V/1/50Hz										
Cooling capacity (W) [1]	1192	1192	1543	2x 1022	2x 1192	2x 1543	907	907	2x 606	2x 694	2x 907
Absorbed power (W) [1]	513	513	736	2x 444	2x 513	2x 736	684	684	2x 411	2x 474	2x 684
Absorbed corrent (A) [1]	2,37	2,37	3,97	4,62	4,74	7,94	3,79	3,79	4,00	4,56	7,58
Maximum absorbed power (W	1061	1056	1330	1623	1837	2426	1467	1474	1697	1963	2714
Lp dB(A) at 1 meter	59,0	59,0	59,0	60,0	62,0	62,0	59,0	59,0	55,0	55,0	62,0
Panel width (mm)	400	800					400	800			
Panel height (mm)	800	400					800	400			
Ø Liquid diameter (mm)	6	6	6	6	6	6	6	6	6	6	6
Ø Suction diameter (mm)	10	10	10	10	10	10	10	10	10	10	10
Weight (Kg)	74	76	80	89	120	144	70	72	82	107	129
Plug	PLUG 2P+T 32A 6h IP66/IP67										
Compressor	NEU6217U	NEU6217U	NT6222U	2x NEU6214U	2x NEU6217U	2x NT6222U	NT2210U	NT2210U	2x NEU2168U	2x NEU2178U	2x NT2210U
Displacement (cm³)	14,28	14,28	20,44	2x 12,11	2x 14,28	2x 20,44	27,8	27,8	2x 16,80	2x 18,70	2x 27,80
Type	Ermetico Embraco										
Lubrificant	ESTER / ISO22										
Refrigerant	R290										
Standard quantity (Kg)	0,14	0,14	0,14	2x 0,12	2x 0,15	2x 0,13	0,12	0,12	2x 0,11	2x 0,14	2x 0,13
Condensator	COIL D= 5 mm										
Fin spacing (mm)	3,0	2,5	2,5	2,5	2,5	2,5	3,0	2,5	2,5	2,5	2,5
Nr. of rows	3	2	2	4	4	4	3	2	4	4	4
Frontal area (m²)	0,070	0,144	0,144	0,144	0,144	0,144	0,070	0,144	0,144	0,144	0,144
Condensator fan	EC MOTOR FAN										
Quantity / diameter	1X254/31°	1X254/27°	1X254/31°	2X254/27°	2X254/27°	2X254/31°	1X254/31°	1X254/31°	2X254/31°	2X254/27°	2X254/31°
Supply voltage	220V/1/50Hz										
RMP	1350										
Volumetric air quantity (m³/h) [	660	580	660	1.160	1160	1320	660	660	660	1160	1320
Nominal power (W)	48	36	48	72	72	96	48	48	48	72	96
Absorb. during op'n (A)	0,27	0,21	0,27	0,42	0,42	0,54	0,27	0,27	0,27	0,42	0,54
Evaporator	COIL D= 7 mm										
Fin spacing (mm)	4,2	4,5	4,5	4,5	4,5	4,5	4,2	4,5	4,5	4,5	4,5
Nr. of rows	6	3	4	4	4	5	6	3	4	4	5
Frontal area (m²)	0,061	0,128	0,128	0,128	0,128	0,186	0,061	0,128	0,128	0,128	0,186
Evaporator fan	EC MOTOR FAN										
Quantity / diameter	1X254/31°	1X300/27°	1X300/27°	1X300/27°	1X300/27°	2X254/31°	1X254/31°	1X300/27°	1X300/27°	1X300/27°	2X254/31°
Supply voltage	220V/1/50Hz										
RMP	1350										
Volumetric air quantity (mc/h)	970	970	970	970	970	1940	970	970	970	970	1940
Nominal power (W)	48	55	55	55	55	96	48	55	55	55	96
Absorb. during op'n (A)	0,27	0,33	0,33	0,33	0,33	0,54	0,27	0,33	0,33	0,33	0,54
Option											
kit press. compr. HP	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD
Plug-in 2P+T IP66/67 32A 6H	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD
Panel thickness 60 mm	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD	//	//	//	//	//
Panel thickness 100 mm	OPZ	OPZ	OPZ	OPZ	OPZ	OPZ	STANDARD	STANDARD	STANDARD	STANDARD	STANDARD

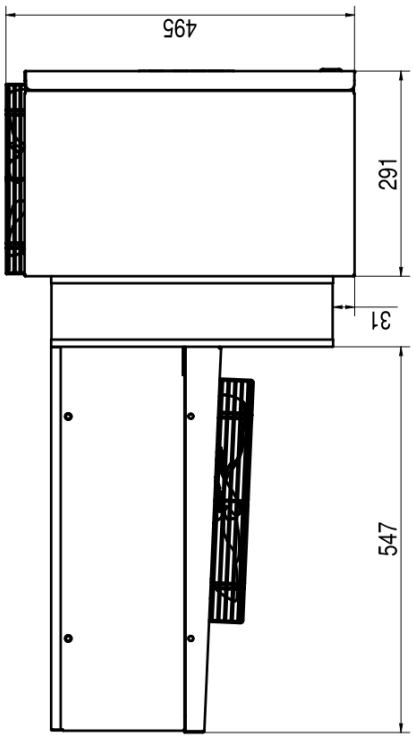


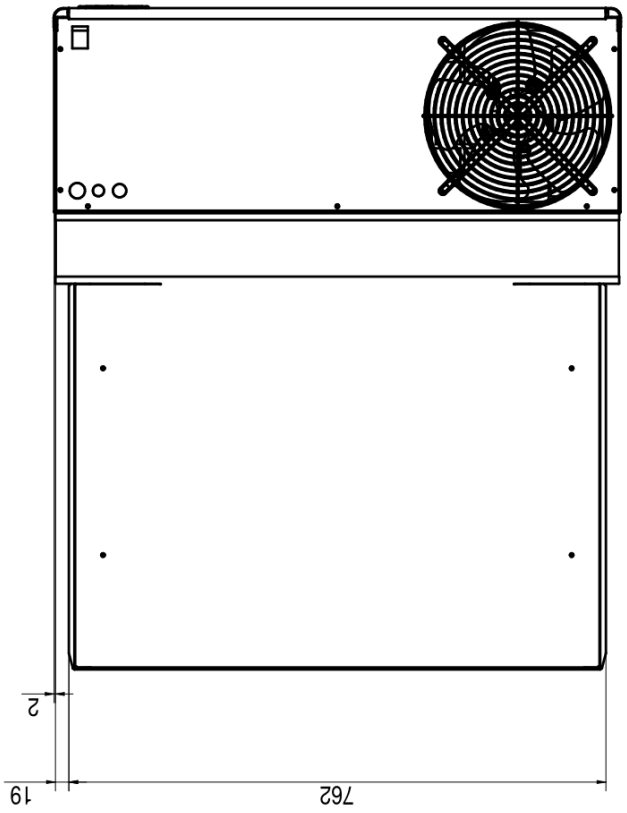


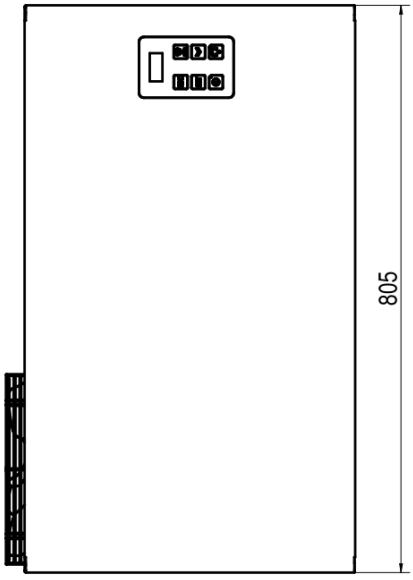


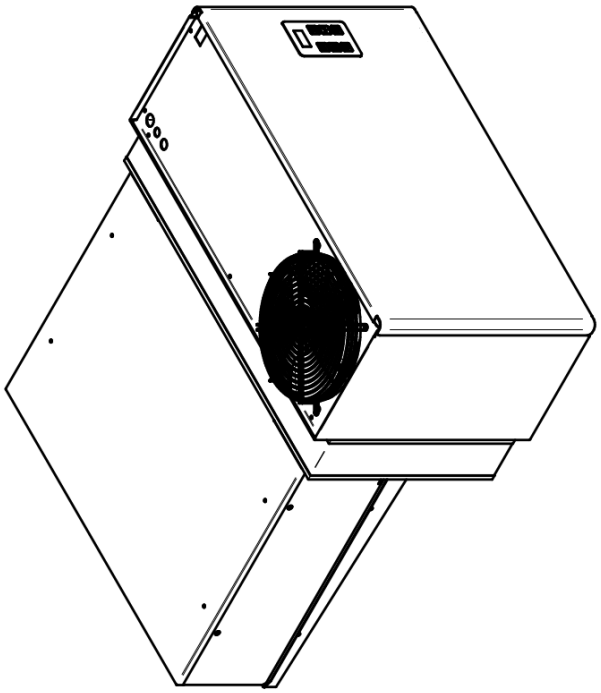


DIMENSIONI FB R290 - SINGOLO COMPRESSORE DIMENSION FB R290 - SINGLE COMPRESSOR	MODELLI: FB 3G-3N MODEL: FB 3G-3N	**Dis.Nr.**	114233
DIMENSIONI FB R452A - ALIM. MONOFASE DIMENSION FB R452A - SUPPLY SINGLE PHASE	MODELLI: FB 3G PLUS-3N PLUS MODEL: FB 3G PLUS-3N PLUS	**Dis.** **Data**	R&D 14/01/2021

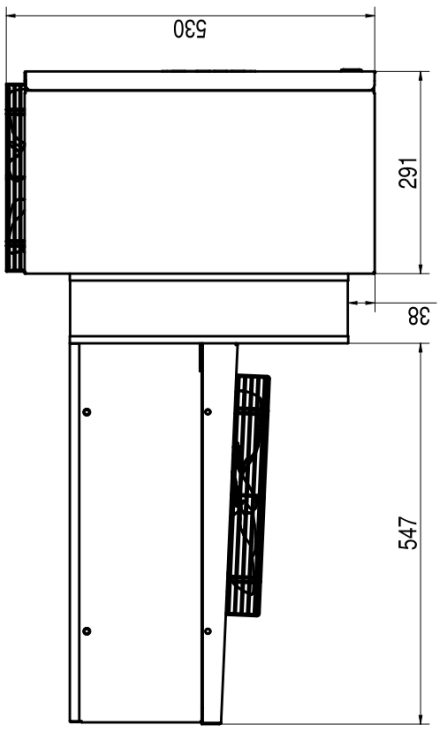


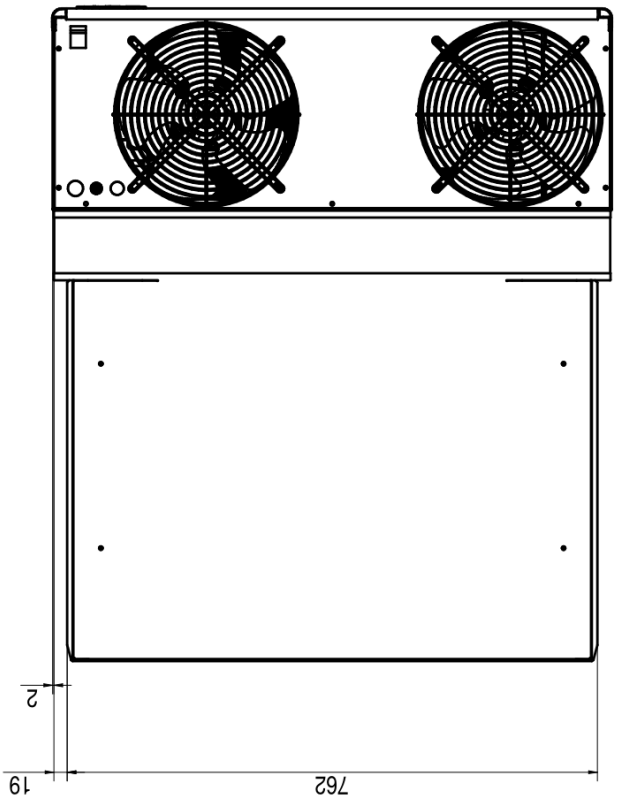


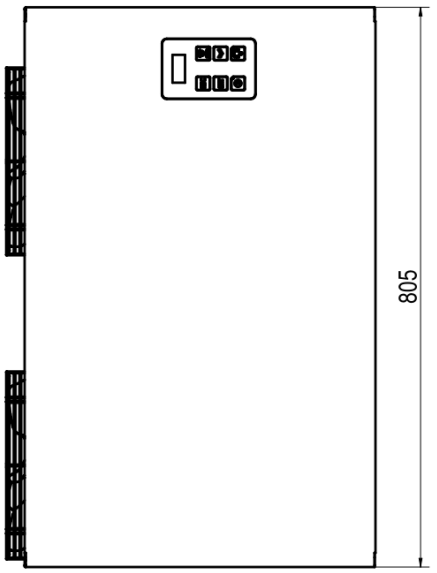


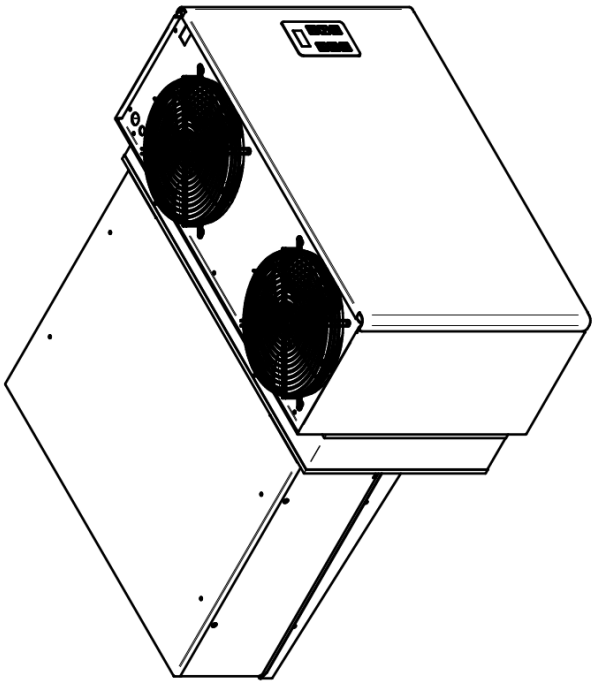


DIMENSIONI FB R290 - SINGOLO COMPRESSORE DIMENSION FB R290 - SINGLE COMPRESSOR DIMENSIONI FB R452A - ALIM. MONOFASE DIMENSION FB R452A - SUPPLY SINGLE PHASE	MODELLI: FB 7G-13G-6N MODEL: FB 7G-13G-6N MODELLI: FB 7G-13G-16G-6N-13N MODEL: FB 7G-13G-16G-6N-13N	**Dis.Nr.** 114227 **Dis.** R&D **Data** 26/10/2020	





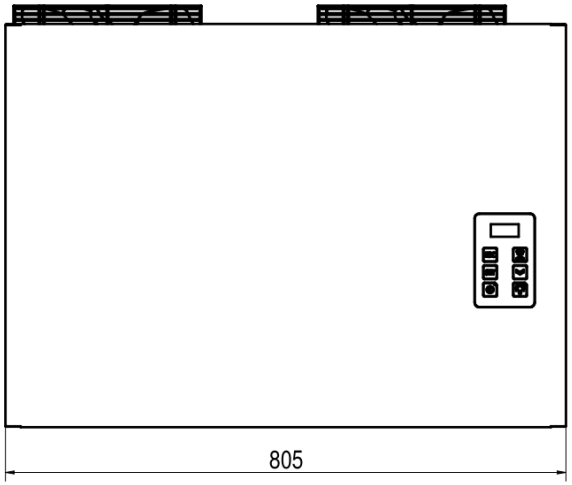


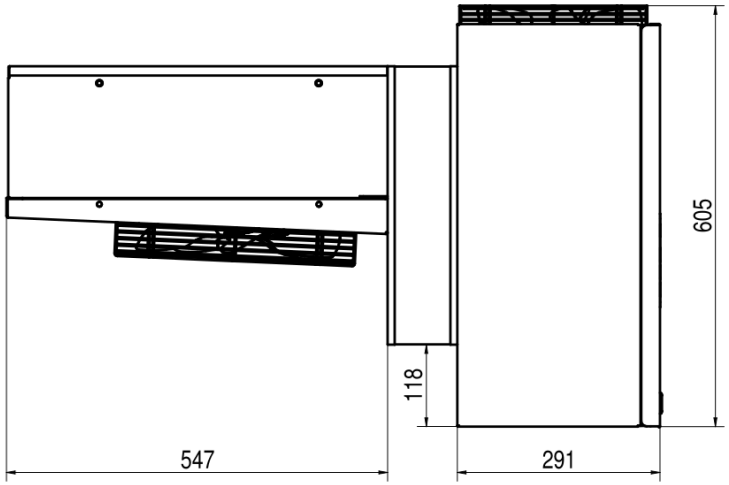


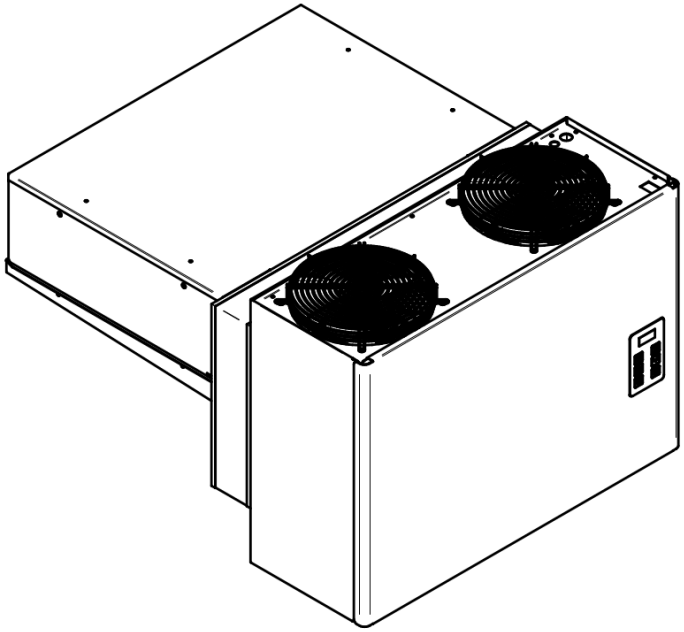
Dis.Nr.	114236
Dis.	R&D
Data	09/02/2021

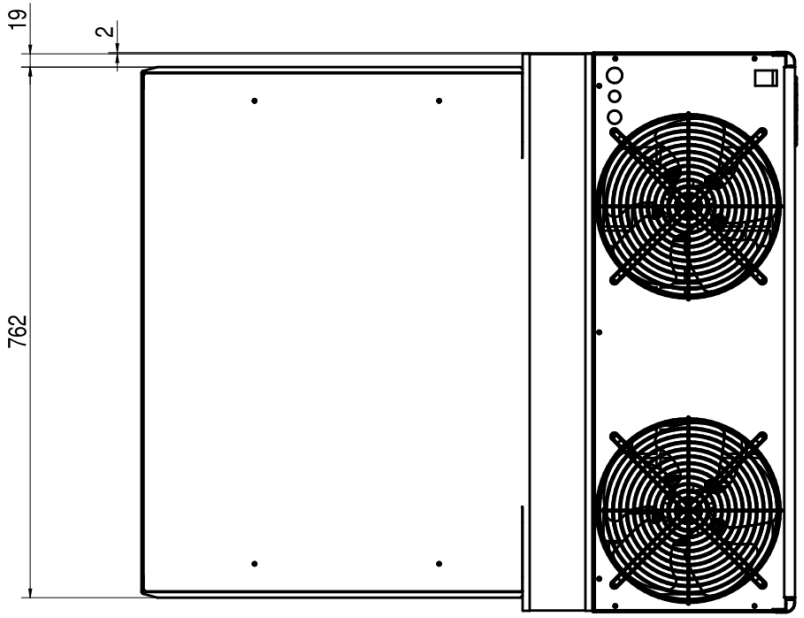
MODELLI: FB 16G-20G-13N-20N
MODEL: FB 16G-20G-13N-20N

DIMENSIONI FB R290 - DOPPIO COMPRESSORE
DIMENSION FB R290 - DOUBLE COMPRESSOR









DIMENSIONI FB R290 - DOPPIO COMPRESSORE DIMENSION FB R290 - DOUBLE COMPRESSOR	MODELLI: FB 26G-28N MODEL: FB 26G-28N	**Dis.Nr.** 114228
DIMENSIONI FB R452A - ALIM. TRIFASE DIMENSION FB R452A - SUPPLY THREE PHASE	MODELLI: FB 20G-26G-20N-28N MODEL: FB 20G-26G-20N-28N	**Dis.** R&D **Data** 26/10/2020

SCHEL

188

02-2023/F
07-2022/E

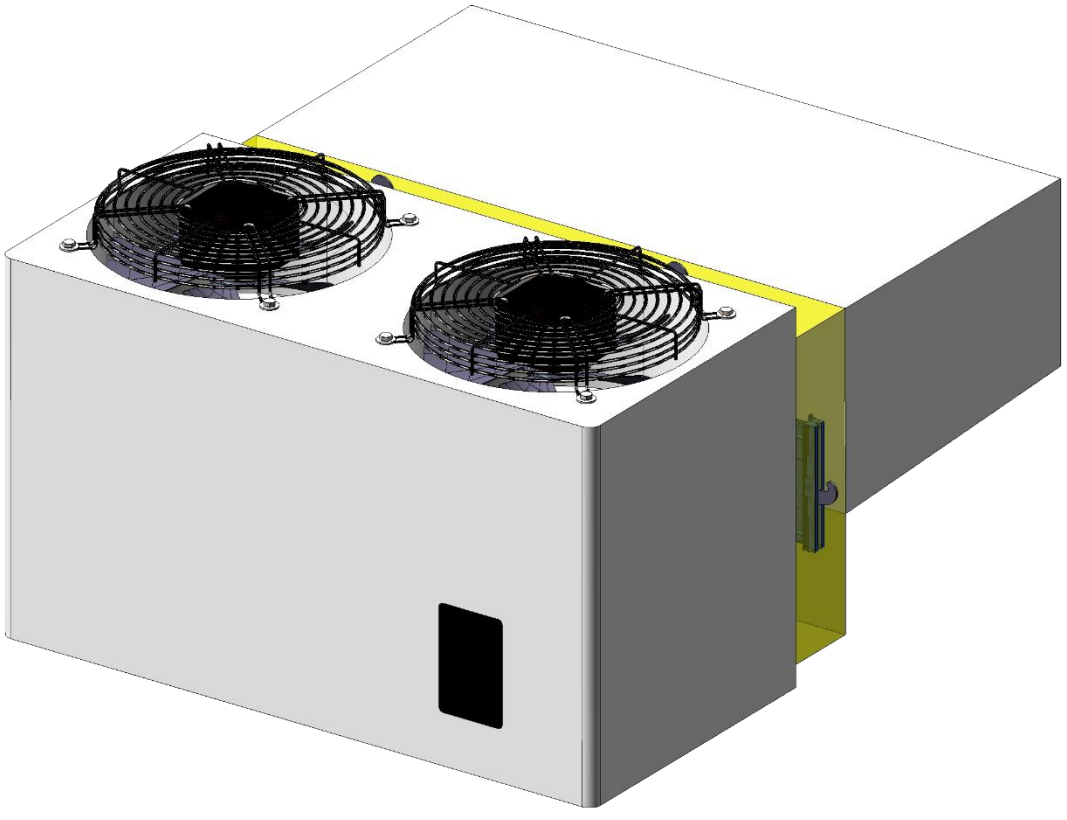
SCHEMI ELETTRICI
ELECTRICAL WIRING DIAGRAMS
SCHEMAS ELECTRIQUES
ELEKTRISCHE SCHEMATA

IMPIANTO
UNIT
ANLAGE
SYSTEME

FREEBLOCK

FB 3G	FB 3N
FB 7G	FB 6N
FB 13G	FB 13N
FB 16G	FB 20N
FB 20G	FB 28N
FB 26G	

R290



LEGENDA SCHEMI ELETTRICI
WIRING DIAGRAMS
LEGENDE SCHEMAS ELECTRIQUES
LEGENDE DER SCHALTPLÄNE / WIRING DIAGRAMS

IWP 750 LX
STRUMENTO DIGITALE
DIGITAL INSTRUMENT

HPC
PRESSOSTATO ALTA PRESSIONE
HP SWITCH
HOCHDRUCKSCHALTER
PRESSOSTAT HAUTE PRESSION

K1
CONTATTORE COMPRESSORE
COMPRESSOR CONTACTOR
KOMPRESSOR SCHALTSCHÜTZ
CONTACTEUR COMPRESSEUR

LC
LAMPADA LUCE ELETTRICA
ROOM LIGHT
LAMPE ELEKTRISCHES LICHT
LAMPE LUMIERE ELECTRIQUE

MSP
MICROSWITCH PORTA
DOOR MICROSWITCH (ROOM)
MICROSWITCHTÜR
MICROCONTACTEUR PORTES

MC
MOTOCOMPRESSORE
COMPRESSOR MOTOR
MOTORKOMPRESSOR
MOTOCOMPRESSEUR

K1
RELE' MOTOCOMPRESSORE
COMPRESSOR RELAY
KOMPRESSOR-RELAIS
RELAIS COMPRESSEUR

VC
VENTILATORE CONDENSATORE
CONDENSER FAN
VENTILATOR DES KONDENSATORS
VENTILATEUR CONDENSATEUR

VC2
VENTILATORE CONDENSATORE (FB16G-20G-26G-13N-20N-28N)
CONDENSER FAN (FB16G-20G-26G-13N-20N-28N)
VENTILATOR DES KONDENSATORS (FB16G-20G-26G-13N-20N-28N)
VENTILATEUR CONDENSATEUR (FB16G-20G-26G-13N-20N-28N)

VE
VENTILATORE EVAPORATORE
EVAPORATOR FAN
VENTILATOR DES VERDUNSTERS
VENTILATEUR EVAPORATEUR

VE2
VENTILATORE EVAPORATORE (FB26G-28N)
EVAPORATOR FAN (FB26G-28N)
VENTILATOR DES VERDUNSTERS (FB26G-28N)
VENTILATEUR EVAPORATEUR (FB26G-28N)

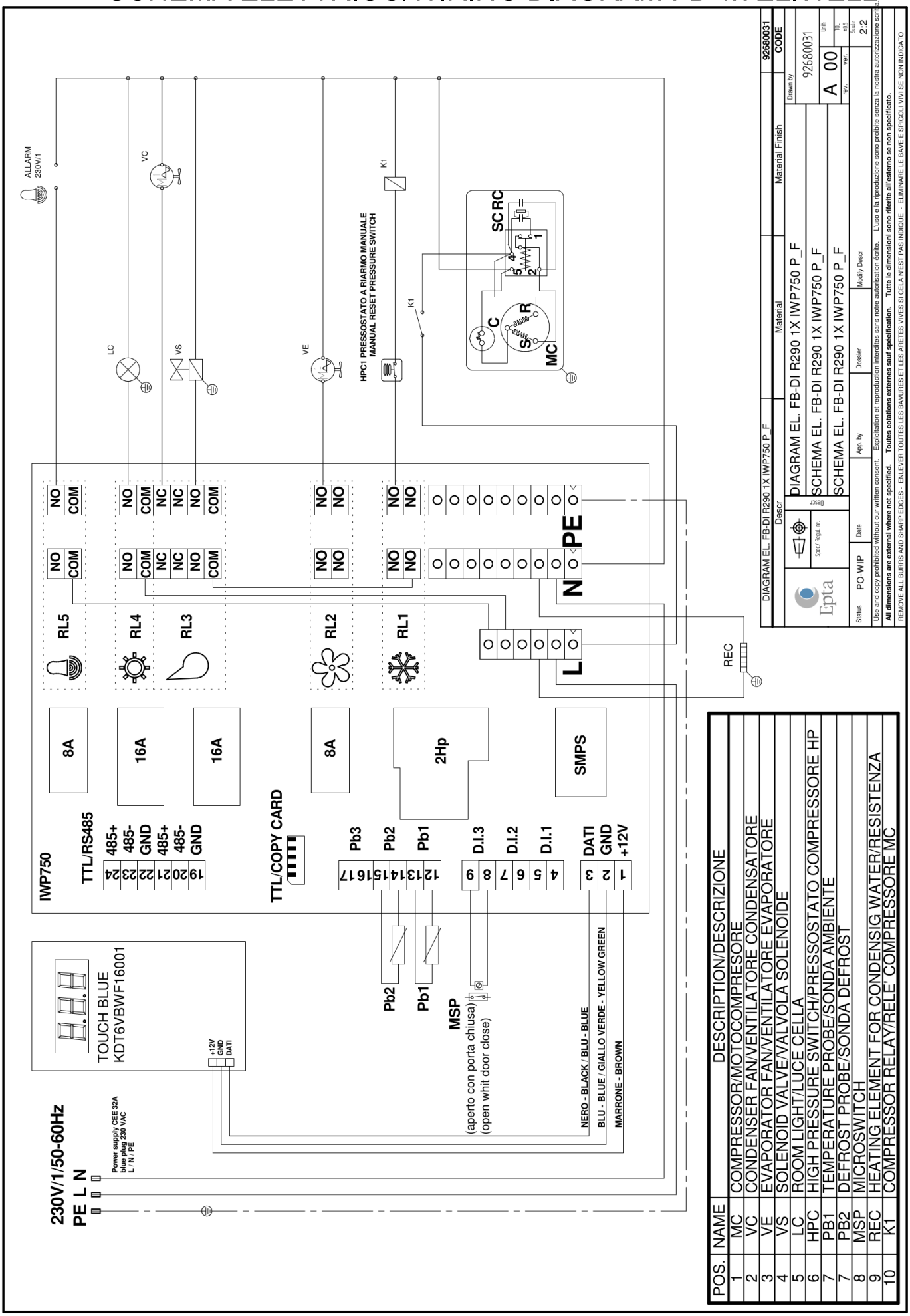
VS
VALVOLA SOLENOIDE
SOLENOIDE VALVE
SOLENOIDVENTIL
VANNE SOLENOIDE

PB1
SONDA AMBIENTE
AMBIENT PROBE
UMGEBUNGSSONDE
SONDE AMBIANTE

PB2
SONDA SBRINAMENTO
DEFROST PROBE
SONDE ENTFROSTUNG
SONDE DE DÉGIVRAGE

REC
RESISTENZA EVAPORAZIONE ACQUA CONDENSA
EVAPORATING HEATING ELEMENT FOR CONDENS. WATER
VERDUNSTUNGSWIDERSTAND KONDENSWASSE
RESISTANCE EVAPORATION EAU CONDENSEE

SCHEMA ELETTRICO/WIRING DIAGRAM FB 1x ELIWELL



POS.	NAME	DESCRIPTION/DESCRIZIONE
1	MC	COMPRESSOR/MOTOCOMPRESORE
2	VC	CONDENSER FAN/VENTILATORE CONDENSATORE
3	VE	EVAPORATOR FAN/VENTILATORE EVAPORATORE
4	VS	SOLENOID VALVE/VALVOLA SOLENOIDE
5	LC	ROOM LIGHT/LUCE CELLA
6	HPC	HIGH PRESSURE SWITCH/PRESSOSTATO COMPRESSORE HP
7	PB1	TEMPERATURE PROBE/SONDA AMBIENTE
7	PB2	DEFROST PROBE/SONDA DEFROST
8	MSP	MICROSWITCH
9	REC	HEATING ELEMENT FOR CONDENSIG WATER/RESISTENZA
10	K1	COMPRESSOR RELAY/RELE' COMPRESSORE MC

DIAGRAM EL. FB-DI R290 1X IWP750 P_F

Descr	Material	Material Finish	CODE
DIAGRAM EL. FB-DI R290 1X IWP750 P_F			92680031
SCHEMA EL. FB-DI R290 1X IWP750 P_F			
SCHEMA EL. FB-DI R290 1X IWP750 P_F			

Epta — Spec./ Regul. nr. — Dest.

Drawn by: 92680031

A 00 — rev. / ver. — Unit

Status: PO-WIP | Date | App. by | Dossier | Modify Descr

Scale: 2:2 — TOL. ±0.5

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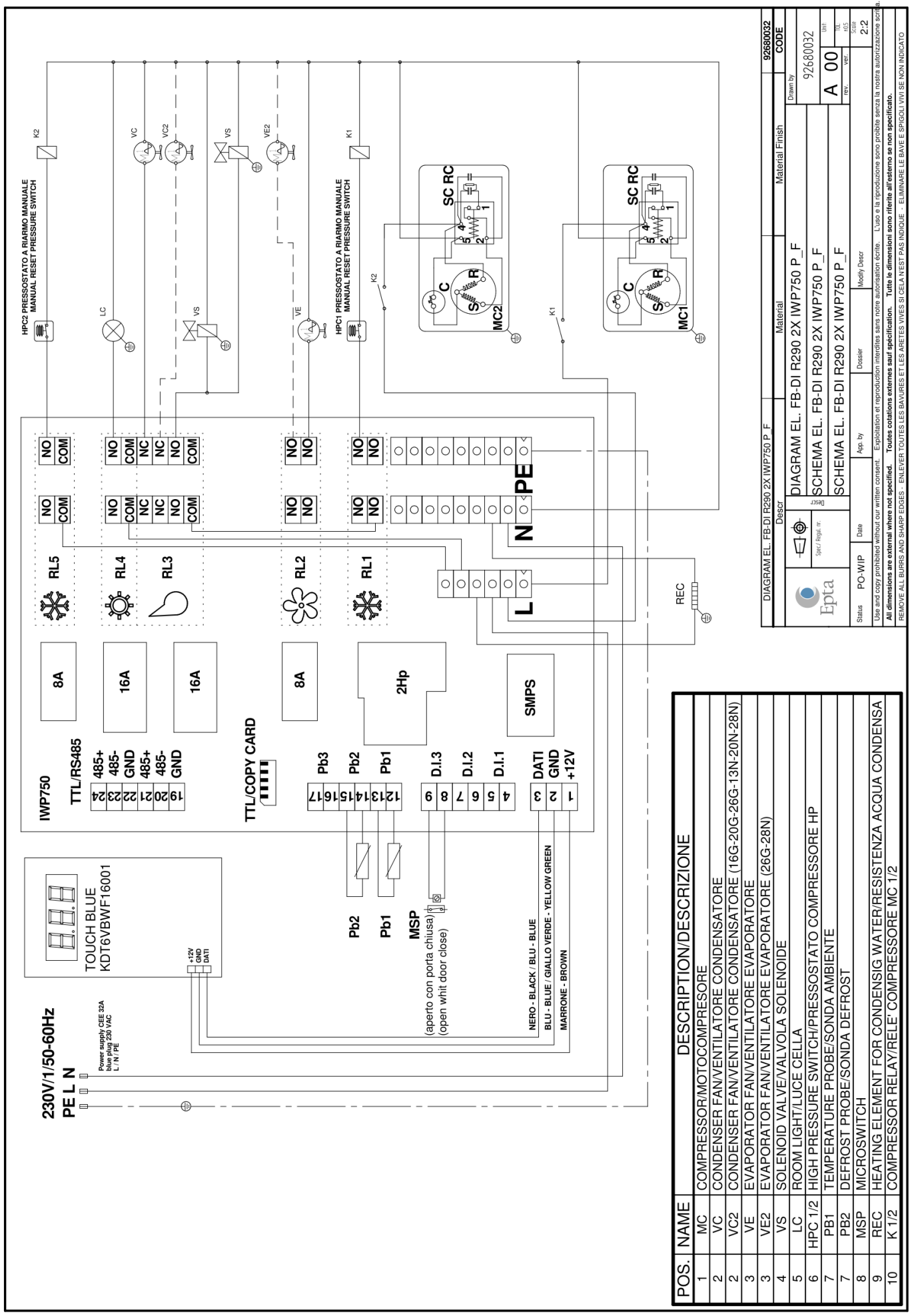
REMOVE ALL BURRS AND SHARP EDGES - ENLEVER TOUTES LES BAVURES ET LES ARETES VIVES SI CELA N'EST PAS INDIQUE - ELIMINARE LE BAVE E SPIGOLI VIVI SE NON INDICATO

SCHEMA ELETTRICO/WIRING DIAGRAM FB 2x ELIWELL



POS.	NAME	DESCRIPTION/DESCRIZIONE
1	MC	COMPRESSOR/MOTOCOMPRESORE
2	VC	CONDENSER FAN/VENTILATORE CONDENSATORE
2	VC2	CONDENSER FAN/VENTILATORE CONDENSATORE (16G-20G-26G-13N-20N-28N)
3	VE	EVAPORATOR FAN/VENTILATORE EVAPORATORE
3	VE2	EVAPORATOR FAN/VENTILATORE EVAPORATORE (26G-28N)
4	VS	SOLENOID VALVE/VALVOLA SOLENOIDE
5	LC	ROOM LIGHT/LUCE CELLA
6	HPC 1/2	HIGH PRESSURE SWITCH/PRESSOSTATO COMPRESSORE HP
7	PB1	TEMPERATURE PROBE/SONDA AMBIENTE
7	PB2	DEFROST PROBE/SONDA DEFROST
8	MSP	MICROSWITCH
9	REC	HEATING ELEMENT FOR CONDENSIG WATER/RESISTENZA ACQUA CONDENSA
10	K 1/2	COMPRESSOR RELAY/RELE' COMPRESSORE MC 1/2

DIAGRAM EL. FB-DI R290 2X IWP750 P_F		Material	Material Finish		92680032
Descr					CODE
Epta	Spec/ Regul. nr.	DIAGRAM EL. FB-DI R290 2X IWP750 P_F		Drawn by	92680032
	Descr	SCHEMA EL. FB-DI R290 2X IWP750 P_F		A 00	UM: TOL:
Status PO-WIP	Date	App. by	Dossier	SCHEMA EL. FB-DI R290 2X IWP750 P_F	rev. ver. scale 2:2

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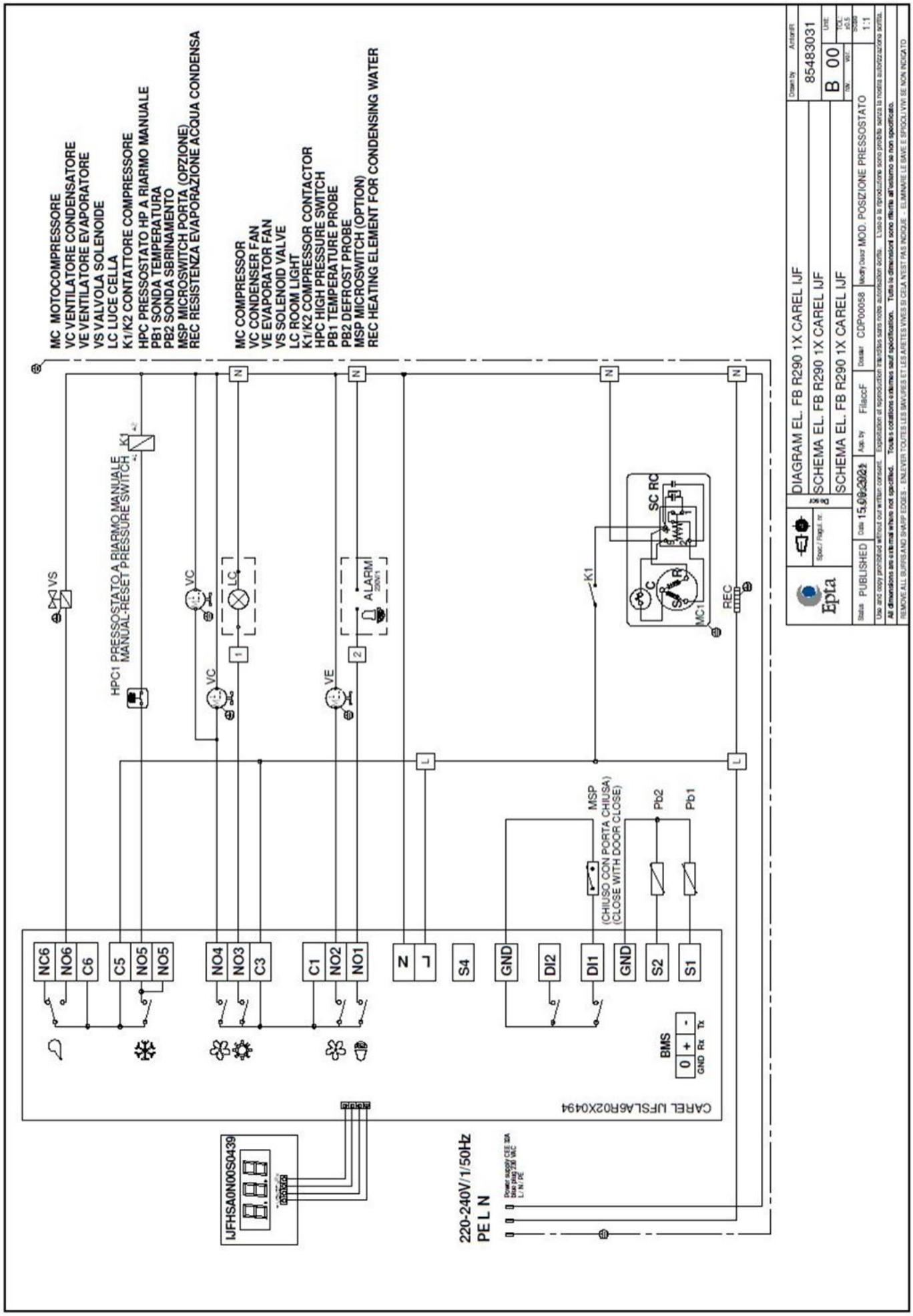
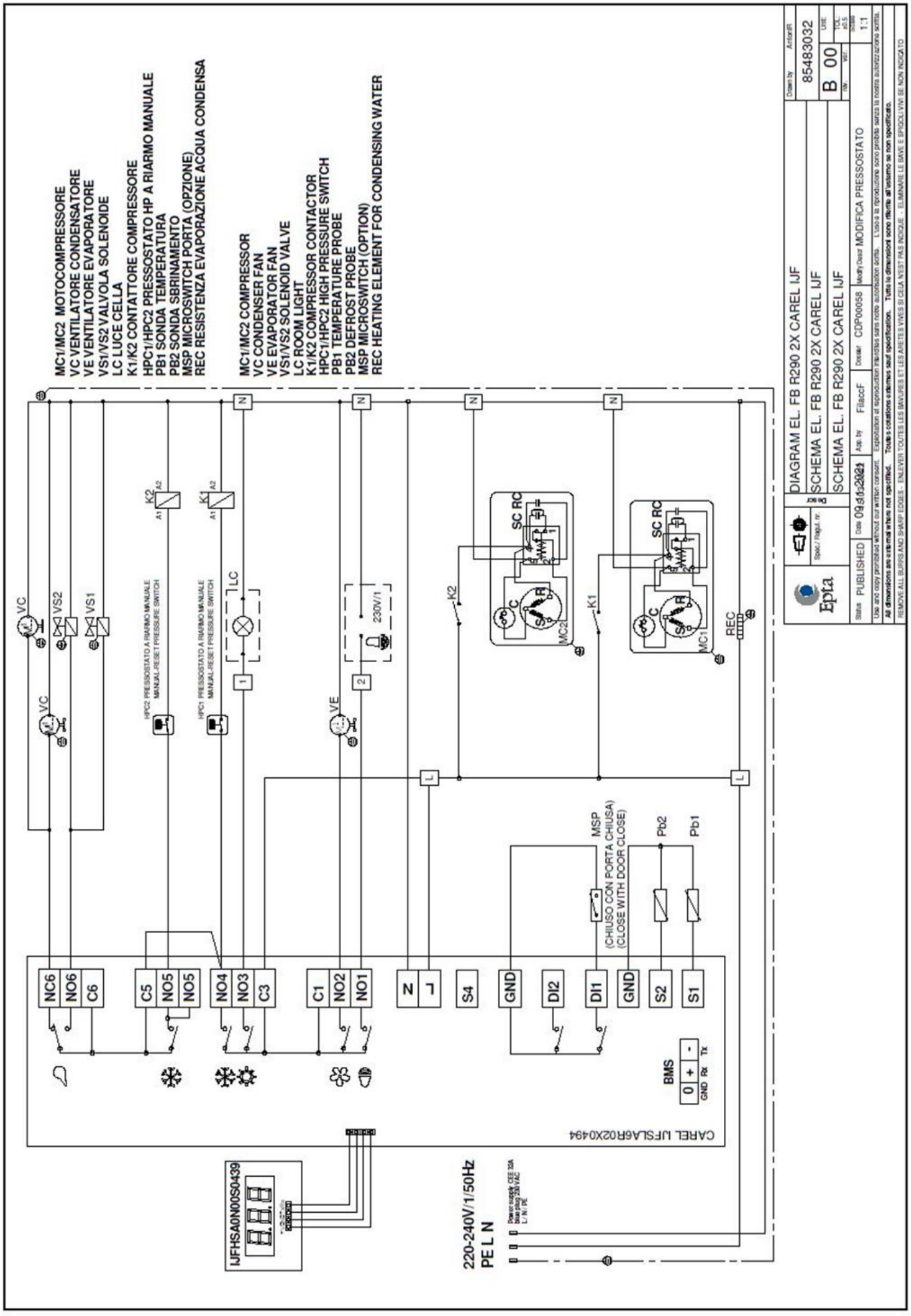
SCHEMA ELETTRICO/WIRING DIAGRAM FB 1x CAREL



SCHEMA ELETTRICO/WIRING DIAGRAM FB 2x CAREL



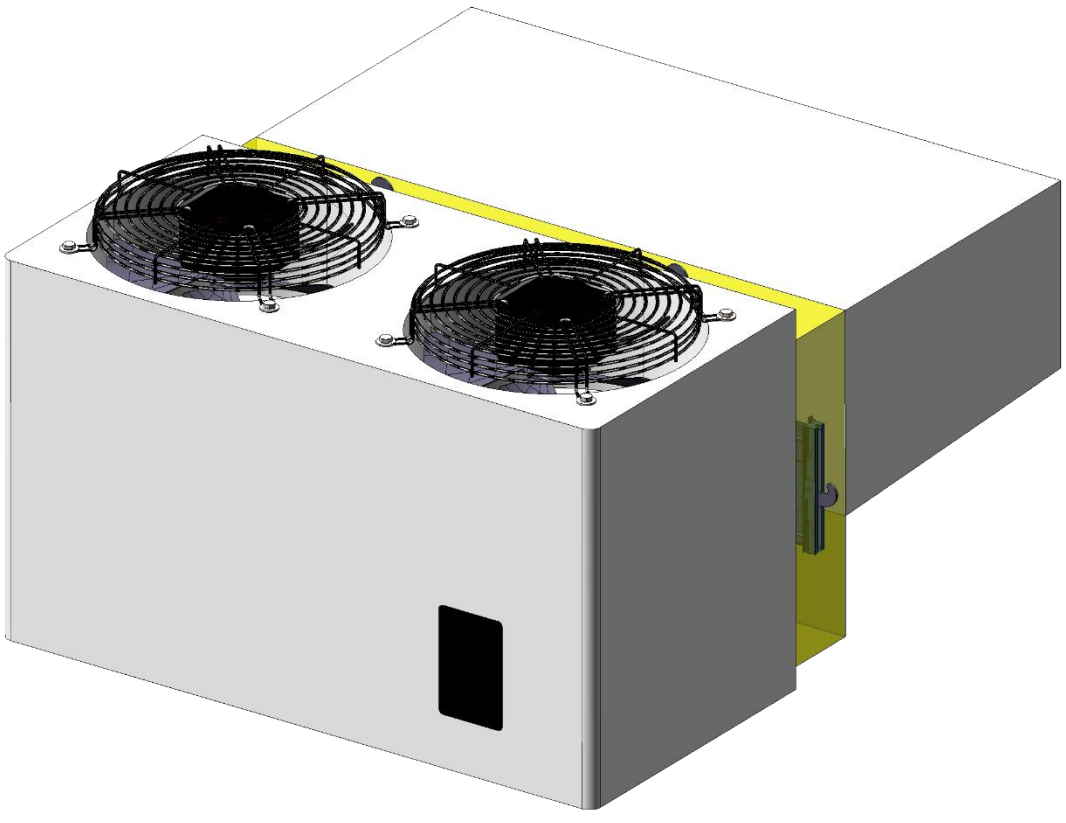
PARTI DI RICAMBIO
SPARE PARTS
ERSATZEILE
PIECES DE RECHANGE

IMPIANTO
UNIT
ANLAGE
SYSTEME

FREEBLOCK

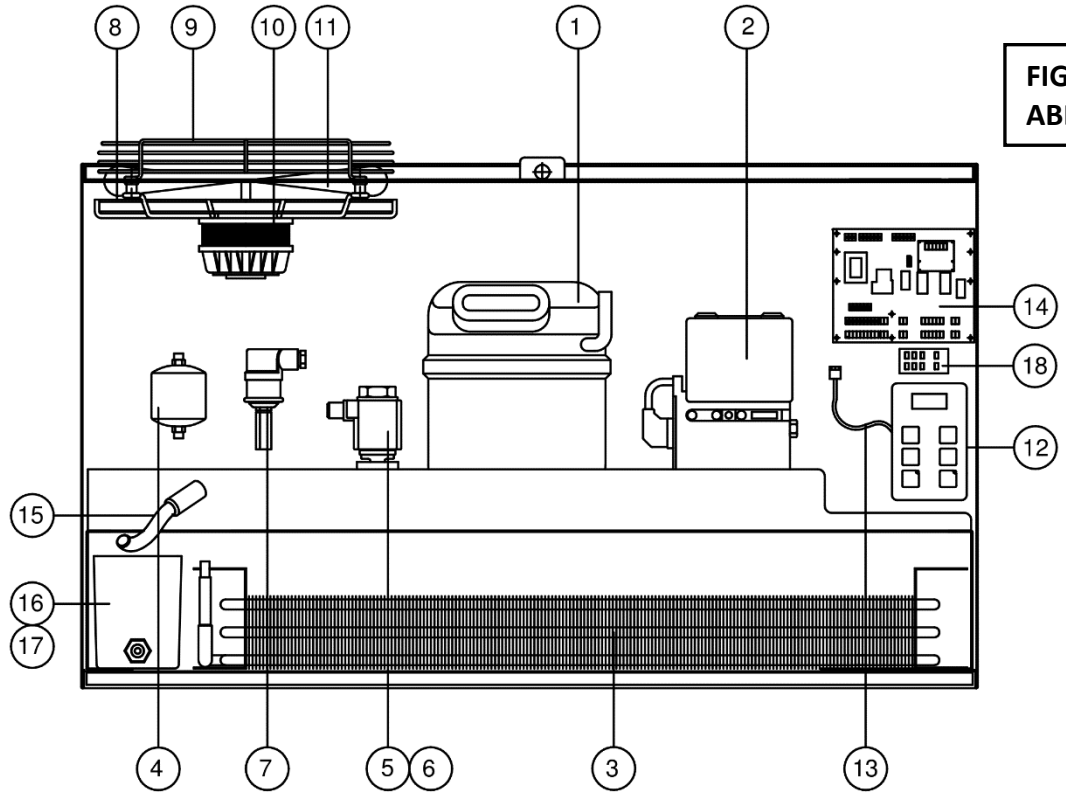
FB 3G	FB 3N
FB 7G	FB 6N
FB 13G	FB 13N
FB 16G	FB 20N
FB 20G	FB 28N
FB 26G	

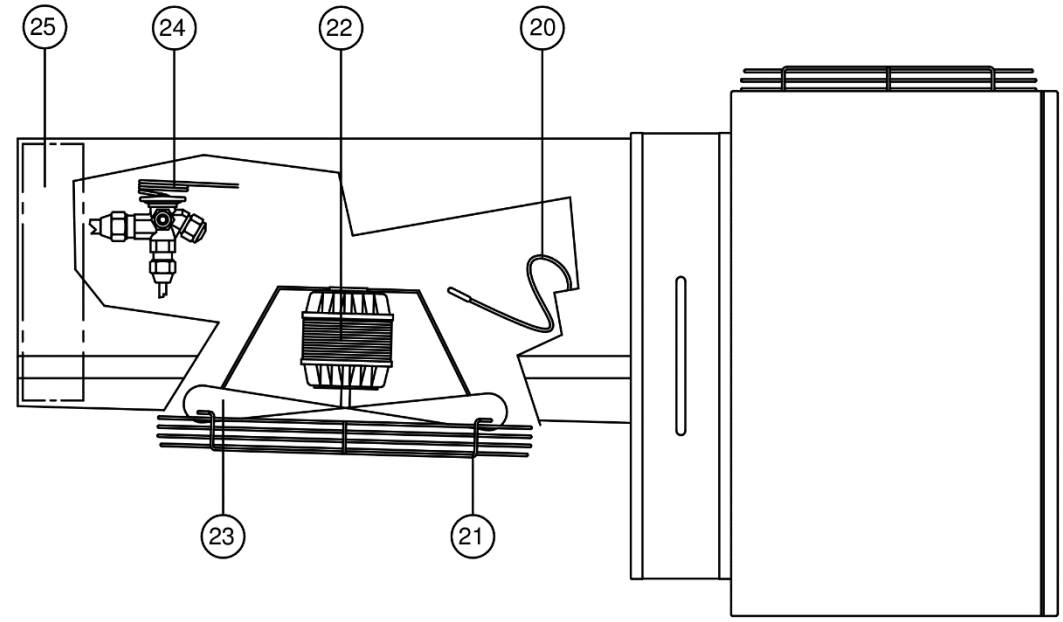
R290

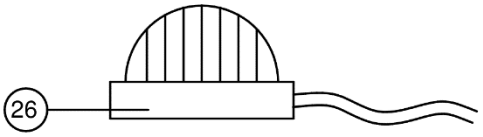


FB 7G - 13G - 6N

FIG.5
ABB.5



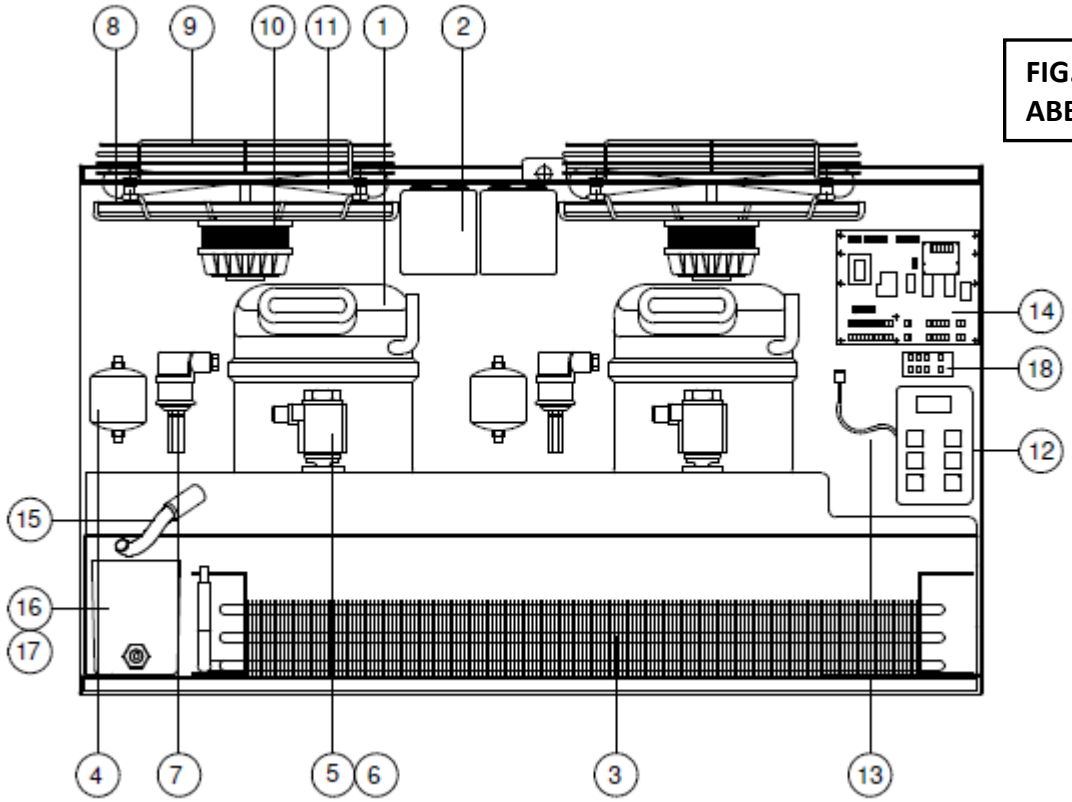


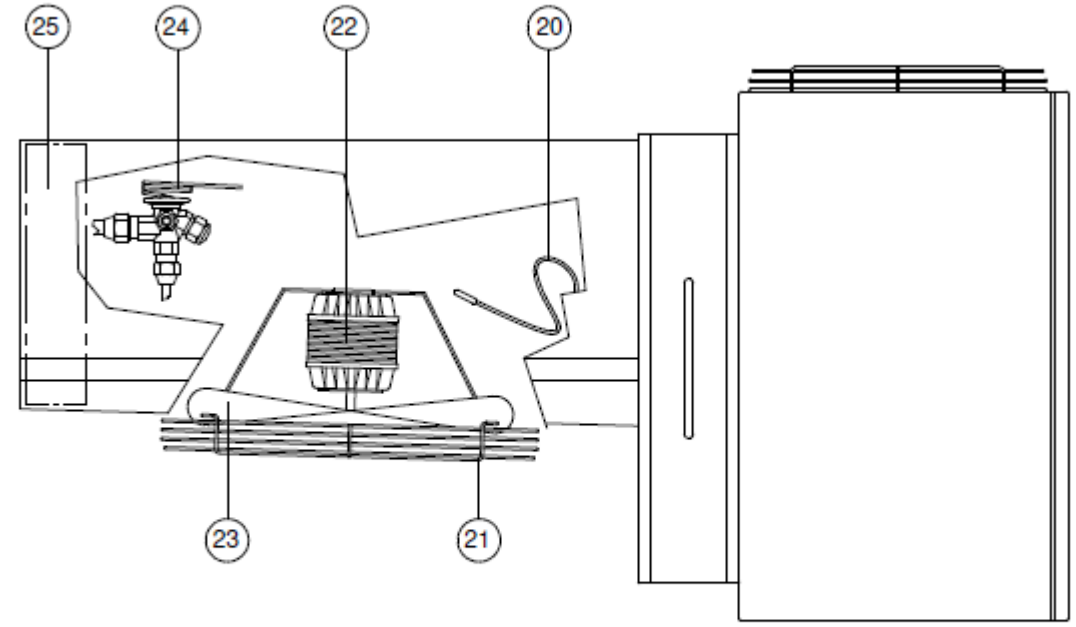


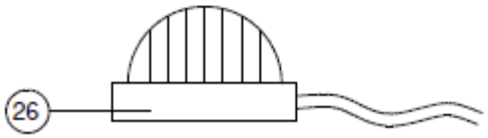
POS. N.	CODE	DESCRIZIONE – DESCRIPTION	7G	13G	6N
1	017981	COMPRESSORE ASPERA NEU6217U CSR 863JA5168AH COMPRESSOR ASPERA NEU6217U CSR 863JA5168AH	X		
1	017982	COMPRESSORE ASPERA NT6222U CSR 842EA0464AZ COMPRESSOR ASPERA NT6222U CSR 842EA0464AZ		X	
1	017985	COMPRESSORE ASPERA NT2210U CSR 843BA0264AZ COMPRESSOR ASPERA NT2210U CSR 843BA0264AZ			X
2	017391	BOX 1272369 NEU6217U CSR	X		
2	017392	BOX 1272005 NT6222U CSR		X	
2	017395	BOX 1272342 NT2210U CSR			X
3	017366	COND.1x 5G2017 12T2R600P25 10211805	X	X	X
4	017835	FILTRO SM3 Gr.30 D.24 TH9 6.2-6.2/6.2 FILTER SM3 Gr.30 D.24 TH9 6.2-6.2/6.2	X	X	X
5	018421	VALVOLA SOLENOIDE CASTEL 1028N/2S.E 1/4"ODS SOLENOID VALVE CASTEL 1028N/2S.E 1/4"ODS	X	X	X
6	018422	BOBINA CASTEL CM2 ATEX 9110EX/RA6 230V COIL CASTEL CM2 ATEX 9110EX/RA6 230V	X	X	X
7	74691000	PRESS. ELIWELL NSDHM11C60001 28 BAR	X	X	X
8	011953	RETE MAVIB 036.0201.0000/ GRID MAVIB 036.0201.0000	X	X	X
9	011926	RETE MAVIB 036.0301.0000/ GRID MAVIB 036.0301.0000	X	X	X
10	016693	MOT. MAVIB EC EFCR21EA.A2C 50-60Hz	X	X	X
11	016816	VENTOLA MAVIB EL5.254.27AP/ FAN MAVIB EL5.254.27AP	X		
11	016821	VENTOLA MAVIB EL5.254.31AP/ FAN MAVIB EL5.254.31AP		X	X
12 Eliwell	017863	TOUCH BLUE KDT6VBWF 16001	X	X	X
13 Eliwell	032674	CAVO CONNESSIONE KDT+IWP CO000011	X	X	X
14 Eliwell	93050031	CONTROL. FB1X TN IWP750 WP35DI3XCDH04 P_F	X	X	
14 Eliwell	93050033	CONTROL. FB1X BT IWP750 WP35DI3XCDH04 P_F			X
12 Carel	83374032	DISPLAY CAREL IJF SMALL IJFHSA0N00S0439	X	X	X
13 Carel	83374033	CAVO CAREL JST MINI 150CM BXOPZC400015	X	X	X
14 Carel	83374031	CONTROL. CAREL IJFSPLIT IJFSLA6R02X0494	X	X	X
15	012500	SCARICO CONDENSA IN GOMMA FB FB CONDENSATION DISCHARGE IN RUBBER	X	X	X
16	032850	BACINELLA ACQUA/ WATER BASIN	X	X	X
17	016419	RESISTENZA PTC 230W 230V PTC RESISTANCE 230W 230V	X	X	X
18	015839	RELE' FINDER	X	X	X
20	017647	SONDA NTC 1.5 MT./ NTC PROBE 1,5m	X	X	X
21	011927	RETE CHIUSA D. 300 VERNICIATA FAN GUARD D.300 PAINTED	X	X	X
22	016694	MOT. MAVIB EC F21EA0000VP21 50-60Hz	X	X	X
23	016819	VENTOLA MAVIB EL.5.300.27AA FAN MAVIB EL5.300.27AA	X	X	X
24	018446	TERM.CA TUBE-5 068U3717			X
25	017371	BATTERIA 1x 7G2125 8T3R640P45 10205800	X		X
25	017369	BATTERIA 1x 7G2125 8T4R640P45 10205799		X	
26	015501	PLAF.ATEX 831072EX LED 7W 8718696705438	X	X	X
27	015210	PLUG SCA218.3233 2P+T IP66/IP67 32A 6H	X	X	X

FB 16G – 20G – 26G – 13N – 20N – 28N

FIG.6
ABB.6



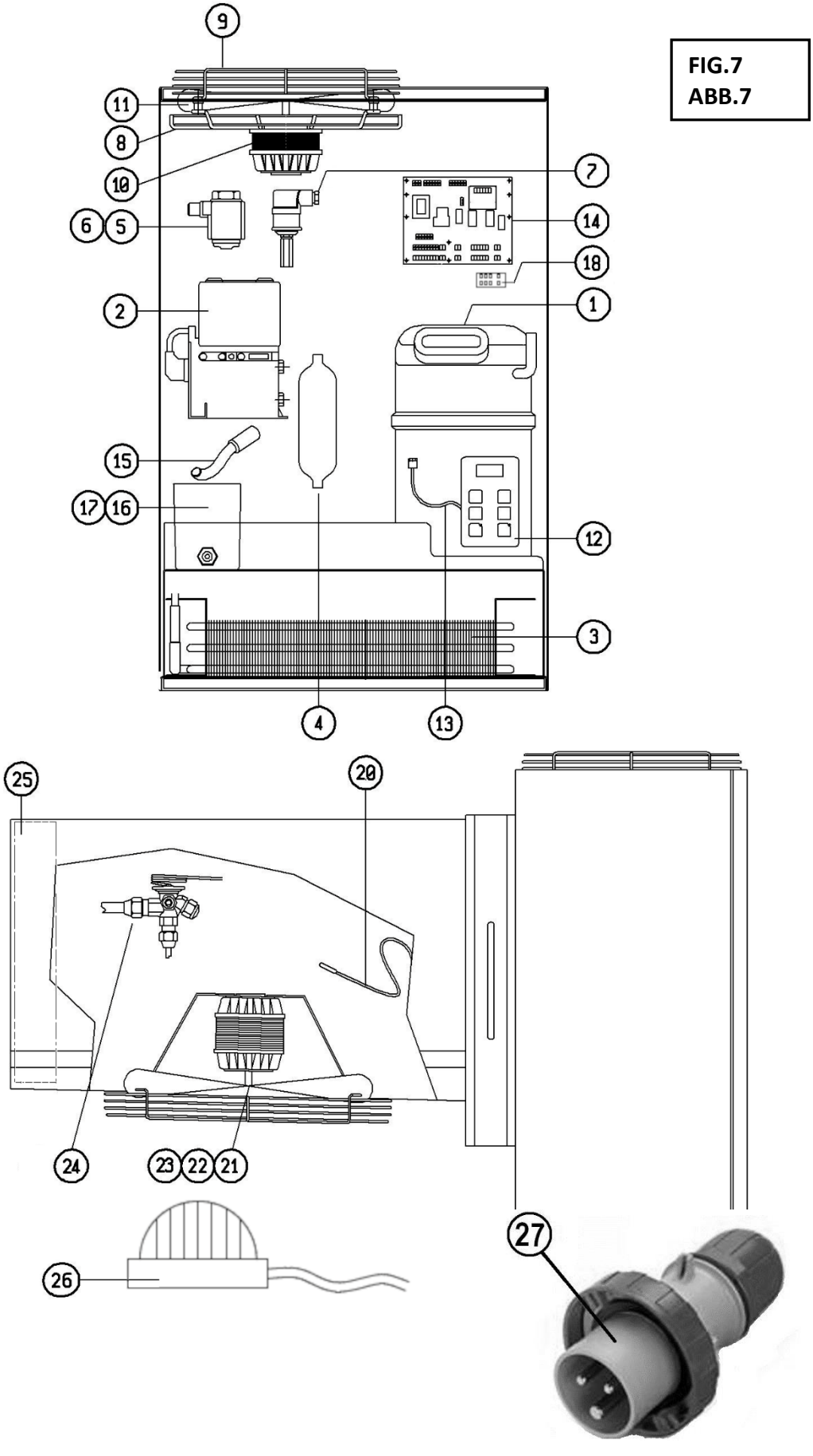




POS. N.	CODE	DESCRIZIONE - DESCRIPTION	16G	20G	26G	13N	20N	28N
1	017980	COMPRESSORE ASPERA NEU6214U CSR 862GA5168AH COMPRESSOR ASPERA NEU6214U CSR 862GA5168AH	X					
1	017981	COMPRESSORE ASPERA NEU6217U CSR 863JA5168AH COMPRESSOR ASPERA NEU6217U CSR 863JA5168AH		X				
1	017982	COMPRESSORE ASPERA NT6222U CSR 842EA0464AZ COMPRESSOR ASPERA NT6222U CSR 842EA0464AZ			X			
1	017983	COMPRESSORE ASPERA NEU2168U CSR 863IA5190AN COMPRESSOR ASPERA NEU2168U CSR 863IA5190AN				X		
1	017984	COMPRESSORE ASPERA NEU2178U CSR 863OA4468AH COMPRESSOR ASPERA NEU2178U CSR 863OA4468AH					X	
1	017985	COMPRESSORE ASPERA NT2210U CSR 843BA0264AZ COMPRESSOR ASPERA NT2210U CSR 843BA0264AZ						X
2	017390	BOX 1272383 NEU6214U CSR	X					
2	017391	BOX 1272369 NEU6217U CSR		X				
2	017392	BOX 1272005 NT6222U CSR			X			
2	017393	BOX 1272379 NEU2168U CSR				X		
2	017394	BOX 1272449 NEU2178U CSR					X	
2	017395	BOX 1272342 NT2210U CSR						X
3	017365	COND.2x 5G1720 12T3R600P25 10212080	X			X		
3	017364	COND.2x 5G2017 12T4R600P25 10211792		X	X		X	X
4	017835	FILTRO SM3 Gr.30 D.24 TH9 6.2-6.2/6.2 FILTER SM3 Gr.30 D.24 TH9 6.2-6.2/6.2	X	X	X	X	X	X
5	018421	VALVOLA SOLENOIDE CASTEL 1028N/2S.E 1/4"ODS SOLENOID VALVE CASTEL 1028N/2S.E 1/4"ODS	X	X	X	X	X	X
6	018422	BOBINA CASTEL CM2 ATEX 9110EX/RA6 230V COIL CASTEL CM2 ATEX 9110EX/RA6 230V	X	X	X	X	X	X
7	74691000	PRESS. ELIWELL NSDHM11C60001 28 BAR	X	X	X	X	X	X
8	011953	RETE MAVIB 036.0201.0000/ GRID MAVIB 036.0201.0000	X	X	X	X	X	X
9	011926	RETE MAVIB 036.0301.0000/ GRID MAVIB 036.0301.0000	X	X	X	X	X	X
10	016693	MOT. MAVIB EC EFCR21EA.A2C 50-60Hz	X	X	X	X	X	X
11	016816	VENTOLA MAVIB EL5.254.27AP/ FAN MAVIB EL5.254.27AP	X	X			X	
11	016821	VENTOLA MAVIB EL5.254.31AP/ FAN MAVIB EL5.254.31AP			X	X		X
12 Eliwell	017863	TOUCH BLUE KDT6VBWF 16001	X	X	X	X	X	X
13 Eliwell	032674	CAVO CONNESSIONE KDT+IWP CO000011	X	X	X	X	X	X
14 Eliwell	93050032	CONTROL. FB2X TN IWP750 WP35DI3XCDH04 P_F	X	X	X			
14 Eliwell	93050034	CONTROL. FB2X BT IWP750 WP35DI3XCDH04 P_F				X	X	X
12 Carel	83374032	DISPLAY CAREL IJF SMALL IJFHSA0N00S0439	X	X	X	X	X	X
13 Carel	83374033	CAVO CAREL JST MINI 150CM BXOPZC400015	X	X	X	X	X	X
14 Carel	83374031	CONTROL. CAREL IJFSPLIT IJFSLA6R02X0494	X	X	X	X	X	X
15	012500	SCARICO CONDENSA IN GOMMA FB FB CONDENSATION DISCHARGE IN RUBBER	X	X	X	X	X	X
16	032850	BACINELLA ACQUA/ WATER BASIN	X	X	X	X	X	X
17	016419	RESISTENZA PTC 230W 230V PTC RESISTANCE 230W 230V	X	X	X	X	X	X
18	015839	RELE' FINDER	X	X	X	X	X	X
20	017647	SONDA NTC 1.5 MT./ NTC PROBE 1,5m	X	X	X	X	X	X
21	011926	RETE MAVIB D. 254 036.0301.0000 NERA FAN GUARD D. 254 036.0301.0000 PAINTED			X			X
21	011927	RETE CHIUSA D. 300 VERNICIATA FAN GUARD D.300 PAINTED	X	X		X	X	
22	016694	MOT. MAVIB EC F21EA0000VP21 50-60Hz	X	X	X	X	X	X
23	016819	VENTOLA MAVIB EL.5.300.27AA FAN MAVIB EL5.300.27AA	X	X		X	X	
23	016807	VENTOLA MAVIB EL.5.254.31AA FAN MAVIB EL.5.254.31AA			X			X
24	018445	TERM.CA TUB-4 068U3735				X	X	
24	018446	TERM.CA TUBE-5 068U3717						X
25	017368	BATTERIA 2x 7G2125 8T4R640P45 10211826				X		
25	017370	BATTERIA 2x 7G2125 8T6R640P45 10206160	X	X			X	
25	017367	BATTERIA 2x 7G2125 12T5R620P45 10206159			X			X
26	015501	PLAF.ATEX 831072EX LED 7W 8718696705438	X	X	X	X	X	X
27	015210	PLUG SCA218.3233 2P+T IP66/IP67 32A 6H	X	X	X	X	X	X

FB 3G - 3N

FIG.7
ABB.7



POS. N.	CODE	DESCRIZIONE – DESCRIPTION	3G	3N
1	017981	COMPRESSORE ASPERA NEU6217U CSR 863JA5168AH COMPRESSOR ASPERA NEU6217U CSR 863JA5168AH	X	
1	017985	COMPRESSORE ASPERA NT2210U CSR 843BA0264AZ COMPRESSOR ASPERA NT2210U CSR 843BA0264AZ		X
2	017391	BOX 1272369 NEU6217U CSR	X	
2	017395	BOX 1272342 NT2210U CSR		X
3	017354	COND.1x 5G1720 12T4R290P30	X	X
4	017835	FILTRO SM3 Gr.30 D.24 TH9 6.2-6.2/6.2 FILTER SM3 Gr.30 D.24 TH9 6.2-6.2/6.2	X	X
5	018421	VALVOLA SOLENOIDE CASTEL 1028N/2S.E 1/4"ODS SOLENOID VALVE CASTEL 1028N/2S.E 1/4"ODS	X	X
6	018422	BOBINA CASTEL CM2 ATEX 9110EX/RA6 230V COIL CASTEL CM2 ATEX 9110EX/RA6 230V	X	X
7	74691000	PRESS. ELIWELL NSDHM11C60001 28 BAR	X	X
8	011953	RETE MAVIB 036.0201.0000/ GRID MAVIB 036.0201.0000	X	X
9	011926	RETE MAVIB 036.0301.0000/ GRID MAVIB 036.0301.0000	X	X
10	016693	MOT. MAVIB EC EFCR21EA.A2C 50-60Hz	X	X
11	016821	VENTOLA MAVIB EL5.254.31AP/ FAN MAVIB EL5.254.31AP	X	X
12 Eliwell	017863	TOUCH BLUE KDT6VBWF 16001	X	X
13 Eliwell	032674	CAVO CONNESSIONE KDT+IWP CO000011	X	X
14 Eliwell	93050031	CONTROL. FB1X TN IWP750 WP35DI3XCDH04 P_F	X	
14 Eliwell	93050033	CONTROL. FB1X BT IWP750 WP35DI3XCDH04 P_F		X
12 Carel	83374032	DISPLAY CAREL IJF SMALL IJFHSA0N00S0439	X	X
13 Carel	83374033	CAVO CAREL JST MINI 150CM BXOPZC400015	X	X
14 Carel	83374031	CONTROL. CAREL IJFSPLIT IJFSLA6R02X0494	X	X
15	012500	SCARICO CONDENSA IN GOMMA FB FB CONDENSATION DISCHARGE IN RUBBER	X	X
16	032850	BACINELLA ACQUA/ WATER BASIN	X	X
17	016419	RESISTENZA PTC 230W 230V PTC RESISTANCE 230W 230V	X	X
18	015839	RELE' FINDER	X	X
20	017647	SONDA NTC 1.5 MT./ NTC PROBE 1,5m	X	X
21	011927	RETE CHIUSA D. 300 VERNICIATA FAN GUARD D.300 PAINTED	X	X
22	016694	MOT. MAVIB EC F21EA0000VP21 50-60Hz	X	X
23	016807	VENT.ASP.MAVIB EL.5.254.31AA FAN MAVIB EL5.254.31AA	X	X
24	018446	TERM.CA TUBE-5 068U3717		X
25	017355	BATTERIA 1x 7G2125 10T6R242P42	X	X
26	015501	PLAF.ATEX 831072EX LED 7W 8718696705438	X	X
27	015210	PLUG SCA218.3233 2P+T IP66/IP67 32A 6H	X	X

Note: