

Lincat

Installation, Operating and Servicing Instructions

REFIGERATED CABINETS AND WORK TABLES
BPSM7, BPSM14, BPSB7, BPSB14
BPETM2, BPETM3



Please make a note of your product details for future use:

Date Purchased: _____

Model Number: _____

Serial Number: _____

Dealer: _____

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IMPORTANT INFORMATION



Read these instructions carefully before using this product, paying particular attention to all sections that carry warning symbols, caution symbols and notices. Ensure that these are understood at all times.



WARNING!

This symbol is used whenever there is a risk of personal injury.



CAUTION!

This symbol is used whenever there is a risk of damaging your Lincat product.



NOTE:

This symbol is used to provide additional information, hints and tips.

KEEP THIS MANUAL FOR FUTURE REFERENCE

WARNINGS AND PRECAUTIONS

1.1 TESTING AND INTENDED USE

This equipment is tested in compliance with established regulations and then shipped ready for use.

“If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.”

1.2 INTRODUCTION

This manual provides all instructions required for the correct use of the equipment and to keep it in optimal condition. It also contains important user safety information. The following professional roles are explained in order to define individual responsibilities:

Installer: a qualified technician who installs the equipment in accordance with these instructions.

User: the person who, after having read this manual carefully, uses the equipment in accordance with the intended specification of use described in this manual. User's responsibilities: ensure that the product is kept at suitable temperatures in an ambient environment less than +40°C (104°F); be aware of the regulations governing the conservation of products to refrigerate and to observe any whatsoever hygiene indications that may be applicable. The user is obliged to carefully read the manual and refer to its information at all times. Particular attention must be paid to safety warnings (refer to Section 1.5).

Routine maintenance technician: qualified operator able to perform routine maintenance of the equipment by following the instructions in this manual.

Service engineer: qualified technician, authorized by the manufacturer to perform extraordinary maintenance of the equipment.

The symbol  appears at certain points in the manual to draw the reader's attention to important safety information.

The manufacturer declines any responsibility in case of improper use of the equipment deviating from the reasonably construed intended use, and for all operations carried out that are not in compliance with the instructions reported in the manual.

This manual must be stored in an accessible and known place for all operators (installer, user, routine maintenance technician, service engineer).

1.3 PRODUCT DESCRIPTION

The equipment comprises a single body with paneling in various materials and insulation with expanded polyurethane foam. The equipment instruments are located on the front panel where the electrical wiring is housed. The motor unit and the evaporator unit are housed on the top of body. The interior parts are fitted with suitable supports for shelves. The doors are fitted with an automatic return device and magnetic seal elements. During the design and construction stage all measures have been adopted to implement total

safety including radius interior corners, funnel-shaped base panel to convey condensate to exterior, no rough surfaces, fixed guards protecting moving or potentially dangerous parts.

1.4 GENERAL SAFETY REGULATIONS

Read this manual carefully and follow the instructions contained herein.

The user assumes full responsibility in case of operations carried out without observing the instructions in the manual.



Do not use this product with flammable gases or flammable solvents.



Do not store flammable gases, flammable liquids or flammable solids in these units.

Primary general safety regulations:

- D
o not touch the unit with wet hands and/or feet. Do not use the equipment with bare feet;
- D
o not insert screwdrivers or other pointed objects between guards or moving parts of the equipment;
- D
o not pull the power cord to disconnect the equipment from the electrical mains Make sure that the equipment is not used by unsuitably qualified persons;
- B
efore performing any cleaning or maintenance on the equipment disconnect it from the electrical mains by switching off the main switch and extracting the plug;
- **N**
ever use any metallic scouring pads, brushes, abrasive cleaners or strong alkaline solution on any surface.
- T
he relocation of the unit must be performed by qualified personnel. Do not shift the refrigerator from side to side as this may create leakage point across the cooling unit piping.
- I
n case of faults or malfunctions, switch off the equipment and do not attempt to repair it by yourself as doing so may void the warranty. All service and repair operations must be performed exclusively by a manufacture's authorized engineer. (Authorized service technician, trained service personnel, authorized service personnel)
- P
ropane fridge/freezer, like any other appliance, must have access to fresh air/oxygen;
- D
Keep clear of obstruction all ventilation openings in the appliance enclosure or in the structure for building-in.
- D
o not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

- **ARNING: Do not damage the refrigerant circuit.**



Do not use FLAME to check for gas leak.



Do not under any circumstances try to modify or repair valves, regulator, connectors, controls or any other appliance. Doing so creates the risk of a gas leak.

1.5 CUSTOMER'S RESPONSIBILITIES

The customer is required to:

- Execute the electrical connection of the equipment Prepare the place of installation;
- Provide consumable materials for cleaning Perform routine maintenance;
- In the case of power failures or malfunctions do not open the doors, in order to maintain the internal temperature for as long as possible. If the problem persists for more than a few hours, move the contents to a more suitable place.

1.6 CUSTOMER SERVICE REQUESTS

- For all technical problems and any requests for technical service, refer exclusively to the manufacturer's authorized personnel;

1.7 ORDERING OF SPARE PARTS

- Orders of spare parts should be made by consulting the part reference code and the serial number of your unit. Consult your dealer.

1.8 PRODUCT CONFIGURATION

- The unit is designed solely for products storage, which requires various controls and warning in case of sudden alteration of temperature.



PRODUCTS MUST BE STORED IN ORDER TO ENSURE EFFICIENT AIR CIRCULATION INSIDE THE UNIT AND SHALL NOT COME OUT OF THE SHELF PERIMETER.

- All uses outside of manufacturer's intended use in section 1.1 shall be construed as "improper use" for which the manufacturer declines all responsibility.
- It's allowed to accommodate on the shelf a maximum of 45 kg per shelf according to the **UL60335** regulation.

1.9 MATERIALS AND REFRIGERANTS

- Materials in contact or potentially in contact with products are in compliance with the relevant directives. The equipments designed and built so that contact parts can be cleaned before each use. The refrigerants utilized comply with established regulations.

1.10 WARNING LABELS

Electrical Shock	LABEL A
	Use of this equipment involves power supplies which convert line voltage to low voltage power. Do not modify or use power supplies other than OEM equipment. Connection of the power supply may require a properly grounded receptacle. Potential for electrical shock or equipment damage exists if precautions are not followed.
Hot Surface	LABEL B
	Avoid contact with the hot surfaces potential for skin's burns.
Cold Surface	LABEL C
	Avoid contact with cold freezer surfaces potential for cold burns or skin sticking to cold surfaces.
Safety Alert	LABEL D
	Important operating instructions. To reduce the risk of injury or poor performance of the unit read the user manual before putting the equipment into operation.
Warning	
	Indicates an immediately hazardous situation, which if not avoided, will result in death or serious injury.
Caution	
	Indicates an immediately hazardous situation, which if not avoided, may result in minor to moderate injury
Battery	LABEL E
	Indicates the location of the back-up battery
Risk of fire	LABEL F
	Risk of fire or explosion. Flammable refrigerant used. Follow handling instruction carefully. To be repaired only by trained service Personnel. Do not puncture Refrigerant Tubing.

This unit is intended for use in laboratories in commercial, industrial or institutional occupancies as defined in the Safety Standard for Refrigeration Systems,

Conformément à la Norme de sécurité pour les systèmes de réfrigération (ASHRAE 15), cette unité est destinée à un usage dans les laboratoires d'établissements commerciaux,

Refrigerating equipment

Refrigerating Equipment intended for laboratory use.

CAUTION - Risk Of Fire or Explosion due to Flammable Refrigerant Used. Follow Handling Instructions Carefully in Compliance with U.S. Government Regulations.

AVERTISSEMENT - Risque d'incendie ou d'explosion dû au fluide frigorigène inflammable utilisé. Suivre les instructions de manutention conformément à la réglementation gouvernementale des États-Unis.

Packaging markings

Packaging markings
(Label attached upon the carton box)

DANGER - Risk Of Fire or Explosion. Flammable Refrigerant Used. To Be Repaired Only By Trained Service Personnel. Do Not Puncture Refrigerant Tubing.

AVERTISSEMENT - Risque de feu ou d'explosion. Fluide frigorigène inflammable utilisé. Doit être réparé uniquement par le personnel de service formé. Ne pas perforer le tubage de réfrigérant.

Service markings 1

Service markings.
(Label located near the cooling unit compartment)

CAUTION - Risk Of Fire or Explosion. Flammable Refrigerant Used. Consult Repair Manual/Owner's Guide Before Attempting To Install or Service This Product. All Safety Precautions Must be Followed.

PRUDENCE - Risque de feu ou d'explosion. Fluide frigorigène inflammable utilisé. Consulter le manuel de réparation/guide du propriétaire avant de tenter d'installer ou de procéder à l'entretien de ce produit. Toutes les

Service markings 2

Service markings
(Label located near the cooling unit compartment)

CAUTION - Risk Of Fire or Explosion.
Dispose Of Properly In Accordance With
Federal Or Local Regulations. Flammable
Refrigerant Used.

PRUDENCE - Risque de feu ou
d'explosion. Éliminer correctement
conformément aux règlements fédéraux
ou locaux. Fluide frigorigène inflammable
utilisé.

Disposal

Disposal
(Marking attached upon the exterior of the cabinet)

↓ Max. Level ↓


Max high load

TECHNICAL DATA

Up-right cabinet freezers

Adjustable temperature control range: lowest T = -25°C (-13°F), highest T = -10 °C (14°F)

Operating temperature: -22°C to -20°C (-7,6°F to -4°F)

Factory pre-set to: -22°C (-4°F)

Models: *BPSB7, BPSB14*

Up-right cabinet chillers

Adjustable temperature control range: lowest T = -2 °C (-28°F), highest T = 8 °C (46°F)

Operating temperature: 0°C to 2°C (32°F to 36°F)

Factory pre-set to: 2°C (36°F)

Models: *BPSM7, BPSM14*

Under counter chillers

Adjustable temperature control range: lowest T = -2 °C (-28°F), highest T = 8 °C (46°F)

Operating temperature: 0°C to 2°C (32°F to 36°F)

Factory pre-set to: 2°C (36°F)

Models: *BPETM2, BPETM3*

Environmental Operating Conditions

-Nominal environmental operating condition: **Climatic class 5** (40°C, HR%=40%);

- Ambient temperature operating range: **10°C~40°C**;

- Humidity: **60% maximum, non-condensing**;

-Electrical supply: **110~127V/60Hz; 220~230V/50Hz; 220V/60Hz**;

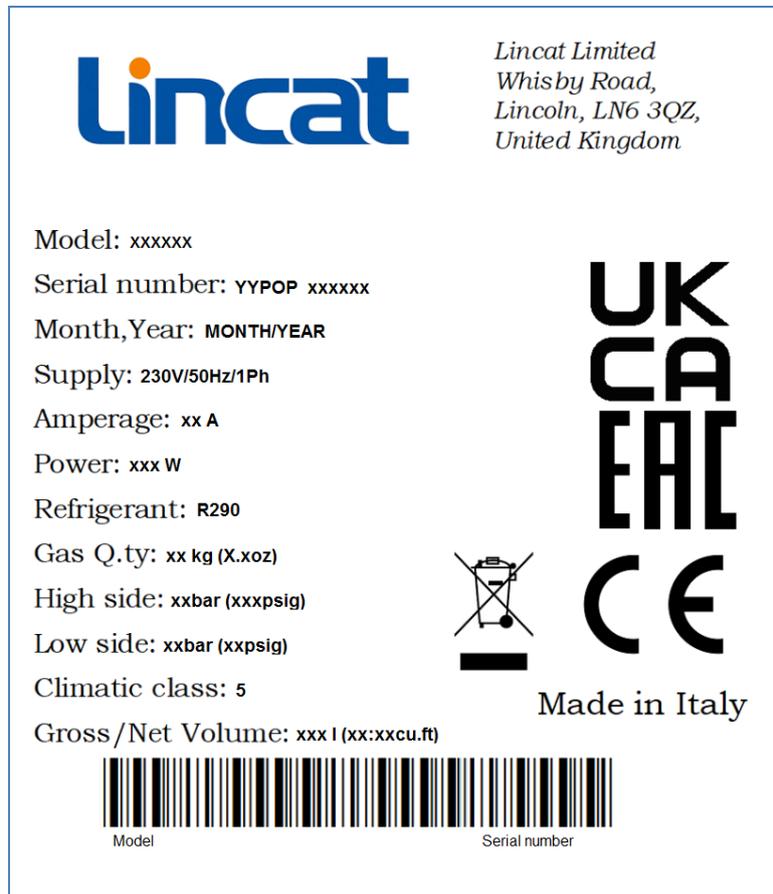
-Altitude: **2000 meters MSL** (Mean Sea Level);

- Usage: **This product is intended for use indoors only.**

Model	W [cm]	D [cm]	H [cm]	Ref. volume[Lt]	Elec. V/Ph/Hz	Amperage [A]	Ab.power [W]
<i>BPSM7</i>	68,3	80	207	700	230/1/50	1,6	300
<i>BPSM14</i>	133,6	80	207	1400	230/1/50	3,3	550
<i>BPSB7</i>	68,3	80	207	700	230/1/50	2,5	400
<i>BPSB14</i>	133,6	80	207	1400	230/1/50	2,5	400
<i>BPETM2</i>	131,5	70	85	275	230/1/50	2	300

BPETM3	177,5	70	85	428	230/1/50	1,7	270
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Note: All relevant data referring to these products can be found on the data label visible either on the rear part of the cabinet or inside the cooled compartment . Here is an example of the label:



How to read the Serial Number:

YY
Last two numbers of the production year
POP
XXXXXX
Progressive serial number of 6 digits

INSTALLATION AND COMMISSIONING

2.1 TRANSPORTATION AND HANDLING

⚠ The equipment must be transported and handled exclusively in upright position, in observance of the instructions printed on the packing.

This precaution is necessary to avoid contamination of the refrigerant circuit with compressor lube oil with resulting valve and heat exchanger coil failure and problems starting the electric motor or the risk of a gas leak. The manufacturer is not responsible for any problems due to transport executed in conditions other than those specified herewith.

The equipment is secured to a wooden pallet base, wrapped in a plastic film and packaged into a three waves carton box..

The equipment must be handled using a fork lift truck or a pallet truck with suitable forks (fork length at least equal to 2/3 length of unit).

2.2 POSITIONING

Incorrect positioning can cause damage to the equipment and generate hazardous conditions for personnel. The installer must therefore observe the following general regulations:

- Make sure you maintain a minimum of 11,8" (30cm). clearance from the walls and 31,5" (80 cm) from the ceiling. The room must be well ventilated.
- Keep well away from sources of heat. Avoid direct sunlight
- Remove packing material.
- Remove accessories from inside the unit.
- Carton box or Wood base removal: using a hammer, tilt the cabinet to one side and loosen the two thread-forming screws, drag the cabinet from the back side holding the base still until the four castors have gone out from the containing holes, slightly tilt the cabinet backward and take the base away pulling it from the front side.



Use gloves when handling the 3 Waves carton box or the wooden base to protect the hands from splinters.

- Position the equipment with the help of a level. Remove the protective PVC film from the external surfaces of the unit.
- Position the shelf runners in the holes in the uprights. Insert the shelves in the runners.

Note: the shelves included are n.03 of GN2/1 per each door.

The maximum load of each is 48 kg. (30kg for the 12 cu.ft)

2.3 WIRING AND ELECTRICAL HOOK-UP

Receptacle installation and electrical wiring operations must be performed by a qualified electrician. For safety reasons adhere to the following indications:

- Check that the electrical plant is suitably sized for the absorbed power of the unit.
- If the electrical socket and the plug on the equipment power cord are incompatible, call technical service or your local distributor.
- The power cord set included with the appliance meets the requirements for use in the country of purchase. Use the power cord that shipped with the appliance (*Nema 5-15*). If this appliance is to be used in another country, purchase an AC power cord set that is approved for use in that country



The power cord must be rated for the product and for the voltage and current marked on the product's electrical ratings label. The voltage and current rating of the cord should be greater than the voltage and current rating marked on the product.

- Do not use reductions or multi-way adapters (Fig.1)



It is important to connect the equipment correctly to an efficient earth system executed in compliance with the relevant legislation.

- The equipment must be positioned so that plug can be easily reached

If the SUPPLY CORD is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

2.4SET UP OPERATIONS

To avoid errors and accidents, perform a series of checks for possible damage sustained during transport, installation and hook-up operations before starting up the unit.

PRELIMINARY CHECKS

- Check the condition of the power cord (no cut or chaffing). Check that the door hinges and shelf support are stable.
- Check the door seals and shelves are not damaged (broken or scratched) and that the door closes and seals properly.
- Make sure all copper tubing, unions are in perfect condition.

FOR OPTIMAL PERFORMANCE

- Do not block the motor compartment air vents. Do not lay objects on the top of the equipment Before storing products wait until they are cold.
- Arrange the products on suitable shelves or in containers. Do not place products directly on the base or against the walls, doors or fixed guards of the unit.
- Make sure doors are kept closed.
- Keep the defrost water drain outlet clear.
- Limit the frequency and duration of opening; each time the door is opened the internal temperature will alter.
- Load products at ambient temperature gradually to allow correct refrigeration. Perform routine maintenance regularly.

2.5RE- INSTALLATION

Observe the following procedure:

- Disconnect the power cord from the electrical outlet.
- Handle the equipment in accordance with the instructions in Section 2.1.
- Follow the instructions in Section 2.2 for positioning and hook-ups in the new location.

2.6SCRAPPING AND DISPOSAL

These units may contain materials, which at the end of the working life of the apparatus, must be disposed at one of the recycling centres nominated by your Local National Health Department or as specified by the law in force. Scrapping and disposal of the equipment must be carried out in full observance of established legislation in your country.

In particular, the apparatus may contain the following materials:

- Iron
- Copper
- Aluminium
- Non-biodegradable plastics
- Fibre glass for printed circuits
- Ferrite
- Batteries
- CFC-free refrigeration gas

➤ Electrical and electronic equipment (WEEE)



The manufacturer shall not be chargeable for any disposal of the apparatus at the end of its working life.

In line with EU Directive 2002/96/EC for waste electrical and electronic equipment (WEEE), this electrical product must not be disposed of as unsorted municipal waste. Please dispose of this product by returning it to your local municipal collection point for recycling.

OPERATING INSTRUCTIONS

Before switching ON the unit, check that the electrical connections have been made correctly and above all, that the ground connection is available and working properly.

Please read before using this manual

- This manual is part of the product and should be kept near the instrument for easy and quick reference.
- Digital controller with defrost and fans management shall not be used for purpose different from those described hereunder. It cannot be used as a safety device.
- Check the application limits before proceeding.

Safety precautions

- Check the supply voltage is correct before connecting the instrument.
- Do not expose to water or moisture: use the controller only within the operating limits avoiding the temperature changes with high atmospheric humidity to prevent formation of condensation.



Warning

- Disconnect all the electrical connections before any kind of maintenance.
- In case of failure or faulty operation contact technical service or Dealer.
- Consider the maximum current which can be applied to each relay.
- Ensure that the wired for probes, loads and the power supply are separated and far enough from each other, without crossing or intertwining.

3.1 CONTROLLER GENERAL DESCRIPTION

The controller is a microprocessor based controller suitable for normal and low temperature air- ventilated application.

It has dimensions 74 x 32 x 59 mm, snap-in bracket to be fitted on the panel, four electro-mechanical relays to control the compressor, defrost hot gas valve, evaporator fan and an auxiliary relay used as a dry contact.

The controller is also provided with 2 probe inputs either NTC type: the probe "**Pb1**" defined as "*Control probe*" and used for the compressor activation, the "**Pb2**" defined as "*Evaporator probe*" and used to control the evaporator fan operation and the defrost cycle; The device has also an additional input configurable as analogue input ("*Auxiliary probe*" **Pb3**) or digital input ("*Door switch/multi-function input*")

Technical Data

Case: Black color, self-extinguishing.

Heat and fire resistance category: D.

Connections: Fixed screws terminal blocks for wires up to 2,5 mm²; removable screw terminal blocks for wires up to 2,5 mm² (by request); Micro-MaTch connectors.

Maximum length allowed to the connection cables: 10 meters (32,8ft) for power supply cord; 10 meters (32,8ft) for Analogue inputs; 10 meters (32,8ft) for Digital inputs; 10 meters (32,8ft) for Digital outputs.

Operating temperature: from -5°C to 55°C (from 23 to 131°F)

Operating humidity: Relative humidity without condensate from 10 to 90%.

Pollution status of the device: 2.

Power supply: 230VA (±10%) 50/60 Hz

Over voltage category: II.

Analogue input: 2 for NTC/PTC nodes (Cabinet probe and Evaporator probe)

Sensor range: NTC: from -50°C to 110°C (from -58 to 230°F)

Sensitivity: 0,1°C (1°F)

Digital inputs: 1 (microport) for NO/NC contact

Terminals: screw/disconnectable terminals for cables with a diameter of 2.5mm²

Connectors: TTL for connection of Copy Card + D.I.2

Digital outputs: 3 electro-mechanical relays

Compressor relay: 12A res. @250VCA (NO contact)

Evaporator fan relay: 8A res @250VCA(NO contact) - 6A res @250VCA(NC contact)

Auxiliary relay: 5A res @250VCA

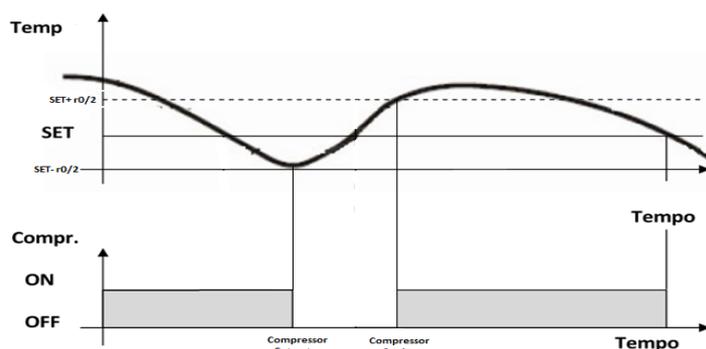
Alarm buzzer: Incorporated.

3.1.1 REGULATION

Once set a desired temperature required for the products storage within the operational range of each models, the regulation of the cooling system is controlled by the temperature measured by the control probe with a positive differential from the set point: when the temperature rises up to the set point plus differential the compressor starts to pull down the temperature and it turns off when the desired set point is reached again.

*In case of faulty probe the compressor activation is timed through the parameter “**Ont**” and*

*“**OfT**”*



3.1.2 CONTROLLER USER INTERFACE AND MAIN FUNCTION



Use of LEDs

	Reduced Set/Economy Set Permanently ON: Energy Saving ON Blinking: Reduced set point active Rapid blinking: access to level 2 password OFF: Otherwise		Fan LED Permanently ON: Fan active OFF: Otherwise
	Compressor LED Permanently ON: Compressor active Blinking: delay, protection or start-up blocked OFF: Otherwise		Alarm LED Permanently ON: alarm present Blinking: Alarm acknowledged OFF: Otherwise
	Defrost LED Permanently ON: defrost active Blinking: activated manually or by digital input OFF: Otherwise	AUX	Auxiliary input LED Permanently ON: Aux output active Blinking: deep cooling cycle active OFF: Otherwise
°F	°F readout LED Permanently ON: °F reading active (dro=1) OFF: Otherwise	°C	°C readout LED Permanently ON: °C reading active (dro=0) OFF: Otherwise

Use of Keys



No.	Key	Action pressing and release	Action pressing for at least 5 secs.
1		- Scrolls through menu items - Increases values	- Activates the Manual Defrost function (when outside the menus)
2		- Scrolls through menu items - Decreases values	-No use.
3		- Returns to the previous menu level - Confirms parameter value	- Activates the Standby function (when outside the menus)
4		- Displays any alarms (if active) - Opens Machine Status menu	- Opens Programming menu (User and Installer Parameters) - Confirms commands

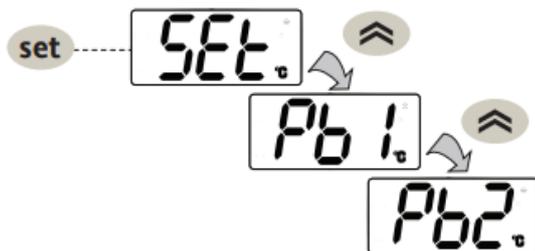
3.1.3 Switching the device ON/OFF

The instrument can be switched off/on by pressing the key  for longer than 5 seconds. Switching off the device, the adjustment algorithms and defrost cycles are disabled and the text "OFF" will appear on the display. Once the device is switched on the display will show the actual air temperature read by the air probe.

3.1.4 "MACHINE STATUS" MENU

Access the *Machine Status* menu by pressing  and releasing the key. If no alarms are active, the "SEt" label appears.

Use the keys  and  to scroll through all the folders in the menu:



AL: alarms folder (only visible if an alarm is active)

SEt: Setpoint setting folder

Pb1: Air probe

Pb2: Evaporator probe (if *H42=y*)

Pb3: Condenser probe (only if *H11=0* and *H43=y*)

SETPOINT SETTING:

To display the Setpoint value press the  key when the "SEt" label is displayed. The Setpoint value appears on the display. To change the Setpoint value, press the  and  keys within 15 seconds. Press  to confirm the modification.

DISPLAYING THE PROBES

When labels Pb1, Pb2 or Pb3 are present, press the  key to view the value measured by the corresponding probe

To quit the Machine status menu, press the  key and release.

3.1.5 MANUAL DEFROST CYCLE ACTIVATION

Hold down the  key for longer than 5 seconds. It is only activates if the temperature conditions are fulfilled. Otherwise, the display will flash three times to indicate that the operation will not be performed.

Propane unit performs a hot gas defrost: when the defrost cycle is active a solenoid valve opens and the compressor runs to by-pass the hot gas from the discharge line into the evaporator coil. The defrost cycle ends when the evaporator reaches the *dSt* temperature or the *dEt* time is elapsed.

3.1.6 DIAGNOSTICS

Alarms are always indicated by the buzzer and the alarm icon .

To switch off the buzzer, press and release any key; the corresponding icon will continue to flash.

Note that if alarm exclusion times have been set the alarm will not be signaled.

- **E1**: In the event of cold room probe faulty (Pb1), the indication "E1" will appear on the display.

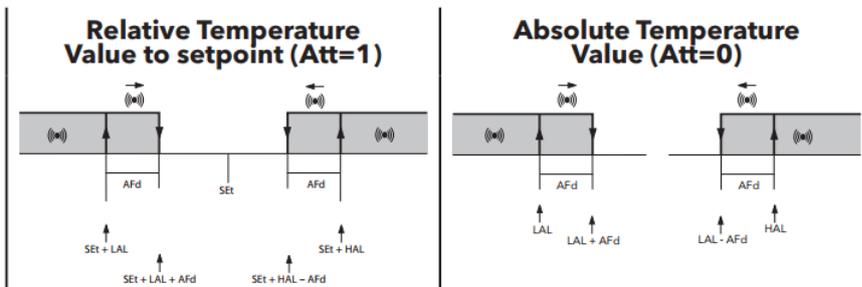
- **E2**: In the event of defrost probe faulty (Pb2), the indication "E2" will appear on the display

3.1.7ALARMS

Label	Fault	Cause	Effects	Remedy
E1	Probe1 faulty (cold room)	-measured values are outside operating range -Probe faulty/short-circuited/open	-Display label E1 -Alarm icon permanently on -Disable max/min alarm controller -Compressor operation based on parameters "Ont" and "OFt"	-check probe type -check probe wiring -replace probe
E2	Probe2 faulty (defrost)	-measured values are outside operating range -Probe faulty/short-circuited/open	-Display label E2 Alarm icon permanently on -The Defrost cycle will end due to Timeout -The evaporator fans will work in Duty Cycle mode.	-check probe type -check probe wiring -replace probe
E3	Probe3 faulty (if enable)	-measured values are outside operating range -Probe faulty/short-circuited/open	-Display label E3:Alarm icon permanently on	-check probe type -check probe wiring -replace probe
AH1	Alarm for HIGH Pb1 temperature	value read by Pb1 > HAL after time of tAO . (see "MAX/MIN TEMPERATURE ALARMS")	-Recording of label AH1 in folder AL -No effect on regulation	-Wait until value read by Pb1 returns below HAL-Afd
AL1	Alarm for LOW Pb1 temperature	value read by Pb1 < LAL after time of tAO . (see "MAX/MIN TEMPERATURE ALARMS")	-Recording of label AL1 in folder AL -No effect on regulation	-Wait until value read by Pb1 returns above LAL+Afd
EA	External alarm	digital input activation ($H11 = \pm 5$)	-Recording of label EA in folder AL -Alarm icon permanently on -Regulation locked if $rLO = y$	-check and remove the external cause which triggered the alarm on the D.I.
OPd	Door open alarm	digital input activation ($H11 = \pm 4$) (for longer than tdO)	-Recording of label Opd in folder AL -Alarm icon permanently on -Controller locked	-close the door
Ad2	end of defrost cycle due to timeout	end of defrost cycle due to timeout rather than due to defrost end temperature being recorded by probe Pb2	-Recording of label Ad2 in folder AL -Alarm icon permanently on	-wait for the next defrost cycle for automatic return
Ad3	end of defrost cycle due to timeout	activation of the defrost for temperature independently dAt . (active if dCt = 3)	-Recording of label Ad3 in folder AL -Alarm icon permanently on	-wait for the next defrost cycle for automatic return
COH	Over Heating alarm	Pb3 value set by parameter SA3 exceeded.	-Display label COH -Alarm icon permanently on -Regulation locked (Compressor)	-wait for the temperature to return to a value of SA3 (Setpoint) minus dA3 (differential).
nPA	General pressure switch alarm	Activation of pressure alarm by general pressure switch. ($H11 = \pm 7$)	-If the number N of pressure switch activations is N < PEN :	-check and remove the cause which triggered the alarm

			-Recording of folder nPA in folder AL, with the number of pressure switch activations -Regulation locked (Compressor and Fans)	on the D.I. (Automatic Reset)
PAL	General pressure switch alarm	Activation of pressure alarm by general pressure switch. (H11 = ±7)	-If the number N of pressure switch activations is N=PE_n : -Display label PAL -Recording of label PA in folder AL -Alarm icon permanently on -Regulation locked (Compressor and Fans)	-Switch the device off and back on again -Reset alarms by entering the functions folder and selecting the rAP function (Manual Reset)

MAX/MIN TEMPERATURE ALARMS



Minimum temperature alarm	Temp. ≤ Set + LAL *	Temp. ≤ LAL (LAL with sign)
Maximum temperature alarm	Temp. ≥ Set + HAL **	Temp. ≥ HAL (HAL with sign)
Returning from minimum temperature alarm	Temp. ≥ Set + LAL + AFd or ≥ Set - LAL + AFd (LAL < 0)	Temp. ≥ LAL + AFd
Returning from maximum temperature alarm	Temp. ≤ Set + HAL - AFd (HAL > 0)	Temp. ≤ HAL - AFd

* if LAL is negative, Set + LAL < Set
**if HAL is negative, Set + HAL < Set

3.1.8 CONTROLLER'S INPUT/OUTPUT

EWplus 974 EO TERMINALS	
AUX	1-3: AUX relay
C	2-3: Compressor relay
3-4	230V~ power supply input
N-L	230V~ power supply
F	5-6: N.O. Fans relay
	5-7: N.C. Fans relay
8-10	Pb2 probe
9-10	Pb1 probe
11-10	Digital Input 1 (H11≠0 and H43=n) or Pb3 probe (H11=0 and H43=y)
TTL	TTL input or Digital Input 2 (H12≠0)

3.1.9 PARAMETERS LIST DESCRIPTION

All parameters necessary for the correct operation of the machine have already been programmed into the control panel. In the event that it becomes necessary to vary some of these parameters, please contact the manufacturer or the authorized service agent.



CAUTION! The modification of a level 2-parameter without authorization of the manufacturer causes the lost of guarantee.

Parameter	Description	Range	Unit of M.
Compressor parameters (CP folder)			
dIF	Differential: Compressor relay activation differential. N.B.: diF cannot be equal to 0.	0,1 ... 30,0	°C/°F
HSE	Maximum value that can be assigned to the Setpoint. N.B.: The two Setpoints are interdependent: HSE cannot be less than LSE and vice-versa.	LSE ... 320	°C/°F
LSE	Minimum value that can be assigned to the Setpoint. N.B.: The two Setpoints are interdependent: LSE cannot be higher than HSE and vice-versa.	-67,0 ... HSE	°C/°F
Ont	Controller on time for faulty probe. - if Ont = 1 and OFt = 0, the compressor remains ON, - if Ont > 0 and OFt > 0, it runs in duty cycle mode.	0 ... 250	Min
OFt	Controller off time for faulty probe. - if OFt = 1 and Ont = 0, the compressor remains OFF, - if Ont > 0 and OFt > 0, it runs in duty cycle mode.	0 ... 250	Min
dOn	Compressor relay activation delay after request.	0 ... 250	Secs
dOF	Delay after switching off and subsequent activation.	0 ... 250	Min
dbi	Delay between two consecutive compressor activations.	0 ... 250	Min
OdO	Delay in activating outputs after the instrument is switched on or after a power failure. 0 = not active	0 ... 250	Min
dFA	Delay time in activating compressor and condenser fans after request	0 ... 255	Secs
Defrost parameters (DEF folder)			
dtY	Type of defrost. 0= electric defrost - compressor OFF during defrost cycle 1= cycle inversion defrost (hot gas) - compressor ON during defrost cycle 2= 'Free': defrosting independently of compressor	0/1/2	Num
dit	Interval between the start of two consecutive defrost cycles. 0 = function disabled (defrosting NEVER performed)	0 ... 250	Hours
dCt	Selects the count mode for the defrost interval: -0 = compressor hours of operation (DIGIFROST® method); Defrost active ONLY when the compressor is on. N.B.: compressor operation time is counted separately from the evaporator probe (count active also when evaporator probe missing or faulty). -1 = appliance running hours = the defrost count is always active when the machine is on and starts at each power-on; -2 = compressor stop Every time the compressor stops, a defrost cycle is performed according to parameter dtY; -3 = temperature	0/1/2/3	Num
dOH	Defrost start delay time after request.	0 .. 59	Min
dEt	Defrost time-out; determines the maximum defrost duration.	1 .. 250	Min
dSt	Defrost end temperature (determined by the evaporator probe).	-67,0 ... 320	°C/°F
dPO	Determines whether the instrument must enter defrost mode (if the temperature measured by the evaporator allows this operation). -n = no, does not start defrosting at start-up; -y = yes, starts defrost at start-up.	n/y	Flag

Parameter	Description	Range	Unit of M.																																																						
dSE	Temperature threshold for start of defrost	-67.0 .. 320	°C/°F																																																						
dt	Time for which the temperature of the evaporator must remain below dSE	0 .. 250	Min																																																						
Fan regulator parameters (FAn folder)																																																									
FPt	Characterizes the "FSt" parameter that can be expressed or as an absolute temperature value or as a value related to Setpoint. 0 = absolute; 1 = relative	0/1	Flag																																																						
FSt	Fan lock temperature; if Pb2 > FSt , the fans are stopped. The value is either positive or negative and, depending on parameter FPt , can be either the absolute temperature or the temperature relative to the Setpoint	-67,0 ... 320	°C/°F																																																						
FAd	Fan starting differential (see parameters FSt and Fot).	1,0 ... 50,0	°C/°F																																																						
Fdt	Delay time in activating fans after a defrost operation.	0 ... 250	Min																																																						
dt	drainage time. Dripping time.	0 ... 250	Min																																																						
dFd	Allows to select the evaporator fans exclusion during defrost. y = yes; n = no.	n/y	Flag																																																						
FCO	Evaporator fans operating mode. The state of the fans will be: <table border="1" data-bbox="338 790 991 1088"> <thead> <tr> <th colspan="2"></th> <th colspan="2">DAY</th> <th colspan="2">NIGHT</th> </tr> <tr> <th>H42</th> <th>FCO</th> <th>COMPRESSOR ON</th> <th>COMPRESSOR OFF</th> <th>COMPRESSOR ON</th> <th>COMPRESSOR OFF</th> </tr> </thead> <tbody> <tr> <td rowspan="4">H42 = y</td> <td>0</td> <td>Regulated by Pb2</td> <td>OFF</td> <td>Regulated by Pb2</td> <td>OFF</td> </tr> <tr> <td>1</td> <td>Regulated by Pb2</td> <td>Regulated by Pb2</td> <td>Regulated by Pb2</td> <td>Regulated by Pb2</td> </tr> <tr> <td>2</td> <td>Regulated by Pb2</td> <td>Dutycycle Day</td> <td>Regulated by Pb2</td> <td>Dutycycle Night</td> </tr> <tr> <td>3</td> <td>Dutycycle Day</td> <td>Dutycycle Day</td> <td>Dutycycle Night</td> <td>Dutycycle Night</td> </tr> <tr> <td rowspan="4">H42 = n</td> <td>0</td> <td>ON</td> <td>OFF</td> <td>ON</td> <td>OFF</td> </tr> <tr> <td>1</td> <td>ON</td> <td>Dutycycle Day</td> <td>ON</td> <td>Dutycycle Night</td> </tr> <tr> <td>2</td> <td>ON</td> <td>Dutycycle Day</td> <td>ON</td> <td>Dutycycle Night</td> </tr> <tr> <td>3</td> <td>Dutycycle Day</td> <td>Dutycycle Day</td> <td>Dutycycle Night</td> <td>Dutycycle Night</td> </tr> </tbody> </table> <p>Dutycycle Day: controlled by means of parameters "Fon" and "FoF". Dutycycle Night: controlled by means of parameters "Fnn" and "FnF"</p>			DAY		NIGHT		H42	FCO	COMPRESSOR ON	COMPRESSOR OFF	COMPRESSOR ON	COMPRESSOR OFF	H42 = y	0	Regulated by Pb2	OFF	Regulated by Pb2	OFF	1	Regulated by Pb2	Regulated by Pb2	Regulated by Pb2	Regulated by Pb2	2	Regulated by Pb2	Dutycycle Day	Regulated by Pb2	Dutycycle Night	3	Dutycycle Day	Dutycycle Day	Dutycycle Night	Dutycycle Night	H42 = n	0	ON	OFF	ON	OFF	1	ON	Dutycycle Day	ON	Dutycycle Night	2	ON	Dutycycle Day	ON	Dutycycle Night	3	Dutycycle Day	Dutycycle Day	Dutycycle Night	Dutycycle Night	0/1/2/3	Num
		DAY		NIGHT																																																					
H42	FCO	COMPRESSOR ON	COMPRESSOR OFF	COMPRESSOR ON	COMPRESSOR OFF																																																				
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	3	Dutycycle Day	Dutycycle Day	Dutycycle Night	Dutycycle Night																																																				
FdC	Evaporator fans switch-off delay after compressor disabled	0 .. 99	Min																																																						
Fon	Fans ON time in duty cycle. Fans used in duty cycle mode; valid when FCO = dc and H42=1 (Pb2 probe present)	0 .. 250	secs*10																																																						
FoF	Fans OFF time in duty cycle. Fans used in duty cycle mode; valid when FCO = dc and H42=1 (Pb2 probe present)	0 .. 250	secs*10																																																						
Fnn	Fans ON time in night duty cycle. Fans used in duty cycle mode; valid when FCO = dc and H42=1 (Pb2 probe present)	0 .. 250	secs*10																																																						
FnF	Fans OFF time in night duty cycle. Fans used in duty cycle mode; valid when FCO = dc and H42=1 (Pb2 probe present)	0 .. 250	secs*10																																																						
Alarms parameters (AL folder)																																																									
Att	Parameters HAL and LAL intended as the absolute temperature value or differential in relation to the setpoint. 0 = absolute value; 1 = relative value. N.B.: In case of relative values (para. Att=1) parameter HAL should be set to positive values, whilst parameter LAL should have only negative values (-LAL).	0/1	Num																																																						
AFd	Alarm differential.	1,0 .. 50,0	°C/°F																																																						
HAL (!)	Maximum temperature alarm. Temperature value (intended either as distance from Setpoint or as an	LAL to 320	°C/°F																																																						

Parameter	Description	Range	Unit of M.
	absolute value based on Att) which, if exceeded in an upward direction, triggers the activation of the alarm signal. See " Max/Min Temperature Alarms ".		
LAL (!)	Minimum temperature alarm. Temperature value (intended as distance from the set point or as an absolute value based on Att) which, when exceeded downwards, triggers the activation of the alarm signal. See " Max/Min Temperature Alarms ".	-67,0 to HAL	°C/°F
PAO (!)	Alarm exclusion time after instrument switch on, after a power failure. This parameter refers to high/low temperature alarms only.	0 .. 10	Hours
dAO	Temperature alarm exclusion time after defrost.	0 .. 999	Min
OAO	Alarm signaling delay (low and high temperature) after digital input disabling (door close).	0 .. 10	Hours
tdO	Alarm activation delay time open door.	0 .. 250	Min
tAO	Temperature alarm signal delay time. This parameter refers to high/low temperature alarms only.	0 .. 250	Min
dAt	Alarm for defrosting ended due to time out. n = alarm deactivated; y = alarm activated	n/y	flag
rLO	External alarm locks controllers. n = does not lock; y =locks	n/y	Flag
AOP	Alarm output polarity. 0 = alarm active and output disabled; 1 = alarm active and output enabled.	0/1	Num
SA3	Probe Pb3 Alarm Setpoint.	-67,0 ... 320	°C/°F
dA3	Probe Pb3 alarm activation differentia	1,0 ... 50,0	°C/°F
Cool protection parameters (CPr folder)			
CPS	Cool protection setpoint	-67,0 ... 320	°C/°F
CPd	Cool protection differential	0,1 ... 30,0	°C/°F
CPT	Time that the temperature remains below the cool protection Setpoint (CPS)	0 ... 255	Min
LIGHTS & DIGITAL INPUTS parameters(Lit folder)			
dOd	Enable utility switch-off on activation of door switch. -0 = disabled -1 = disables fans -2 = disables the compressor -3 = disables fans and compressor	0/1/2/3	Num
dAd	Activation delay for digital input	0 ... 255	Min
dCO	Compressor deactivation delay after door opened	0 ... 255	Min
dCd	Fans activation delay after door closed	0 ... 250	Secs
PRESSURE SWITCH parameters(PrE folder)			
PEn	Number of errors allowed for general pressure switch input. 0 = disabled	0 ... 15	Num
PEI	Minimum/maximum pressure switch error count interval	1 ... 99	Min
PEt	Delay in activating compressor after pressure switch deactivation	0 ... 255	Min
DEEP COOLING parameters(dEC folder)			
dCA	Enable deep cooling (0 = disabled; 1 = manual; 2 = automatic).	0/1/2	Num
dCS	Deep cooling setpoint	-67,0 ... 320	°C/°F
tdC	Deep cooling duration	0 ... 255	Min
dcc	Defrost delay after deep cooling	0 ... 255	Min
Sid	Deep cooling start threshold	-67,0 ... 320	°C/°F
toS	Over-threshold time for deep cooling start	0 ... 255	Min

Parameter	Description	Range	Unit of M.
ENERGY SAVING parameters (EnS folder)			
ESt	Energy Saving mode: -0= disabled; -1= Offset on setpoint; -2= Offset on differential; -3= Offset on setpoint and differential; -4= Bottle cooler open front' algorithm; -5= Bottle cooler glass door' algorithm; -6= Vertical display cabinet' algorithm	0 ... 6	Num
ESA	AUX output status in energy saving mode: -0 = disabled (no effect on AUX); -1 = AUX off; -2 = AUX on	0/1/2	Num
ESF	Night mode activation (Energy saving) for fans. n = disabled; y =enabled if energy saving mode is active (ESt ≠ 0)	n/y	Flag
Cdt	Door close time	0 ... 255	Min*10
ESo	Cumulative door open time for disabling Energy Saving mode	0 ... 10	Num
OSP	Offset on setpoint	-30,0 ... 30,0	°C/°F
OdF	Intervention differential correction	0,0 ... 30,0	°C/°F
dnt	Duration of night mode	0 ... 24	Hours
dFt	Duration of fast cooling mode	0 ... 24	Hours
SPn	Night mode setpoint	LSE ... HSE	°C/°F
dFn	Night mode offset	0,1 ... 30,0	°C/°F
SPF	Fast cooling setpoint	LSE ... HSE	°C/°F
dFF	Fast cooling offset	0,1 ... 30,0	°C/°F
ESP	Virtual door regulator's sensitivity	0 ... 5	Num
dOt	Maximun Time Door Open with virtual door switch	0 ... 255	Secs
COMMUNICATION parameters (Add folder)			
PtS (!)	Communication protocol selection (t = Televis; d = ModBus).	t/d	Flag
dEA (!)	Device address: indicates the device address to the management protocol.	0...14	Num
FAA (!)	Family address: indicates the device family to the management protocol.	0...14	Num
Pty (!)	Modbus parity bit setting (n = none; E = even; o = odd)	n/E/o	Flag
StP (!)	Modbus stop bit setting.	1b/2b	Flag
DISPLAY parameters(diS folder)			
LOC	LOCK. Setpoint change shutdown. There is still the possibility to enter into parameters programming and modify these, including the status of this parameter to permit keyboard shutdown. n = no; y = yes.	n/y	Flag
PS1	PAssword 1. When enabled (PS1 ≠ 0), this is the access key to level 1 parameters (User).	0...250	Num
PS2	PAssword 2. When enabled (PS2 ≠ 0), this is the access key to level 2 parameters (Installer).	0...250	Num
ndt	Display with decimal point. n = no (integers only); y = yes (displayed with decimal point).	n/y	Flag
CA1	Calibration 1. Positive or negative temperature value added to the value read by Pb1 . This sum is used both for the temperature displayed and for regulation.	-12,0...12,0	°C/°F
CA2	Calibration 2. Positive or negative temperature value added to the value	-12,0...12,0	°C/°F

Parameter	Description	Range	Unit of M.
	read by Pb2 . This sum is used both for the temperature displayed and for regulation.		
CA3	Calibration 3. Positive or negative temperature value added to the value read by Pb3 . This sum is used both for the temperature displayed and for regulation.	-12,0...12,0	°C/°F
ddL	Display mode during defrost. -0 = display the temperature read by Pb1 ; -1 = locks the reading on the temperature value read by Pb1 when defrosting starts, and until the next time the SEt value is reached; -2 = displays the label deF during defrosting, and until the next time the SEt value is reached. (or until Ldd has elapsed).	0/1/2	Num
Ldd	Timeout value for display unlock - dEF label	0 ... 255	Min
dro	Select °C or °F for displaying the temperature read by probes. 0 = °C, 1 = °F. NOTE: switching between °C and °F or vice-versa DOES NOT modify the SEt, diF values, etc. (e.g. Setpoint=10°C becomes 10°F).	0/1	Num
ddd	Selection of type of value to be displayed. -0 = Setpoint; -1 = probe Pb1; -2 = probe Pb2; -3 = probe Pb3.	0/1/2/3	Num
CONFIGURATION parameters (CnF folder)			
N.B.: the instrument must be switched off and then on again each time folder CnF parameter configuration is modified to prevent any malfunction of the configuration and/or current timer operations.			
H08	Stand-by operating mode. -0 = display switch off; the loads are active and the device reactivates the display to signal any alarms; -1 = display switch off, loads and alarms stopped; -2 = display with OFF label, loads and alarms stopped.	0/1/2	Num
H11	Configuration of digital input 1/polarity (D.I.1). 0 = disabled; ± 1 = defrost; ± 2 = reduced SET; ± 3 = AUX; ± 4 = door switch; ± 5 = external alarm; ± 6 = stand-by (ON-OFF); ± 7 = pressure switch; ± 8 = deep cooling; ± 9 = energy saving; ± 10 = door switch + energy saving. N.B.: - the "+" sign indicates that the input is active if the contact is closed- the "-" sign indicates that the input is active if the contact is open	-10 ... 10	Num
H12	Configuration of digital input 2/polarity (D.I.2). Same as H11.	-10 ... 10	Num
H21	Configurability of digital output 1 (A). 0 = disabled; 1 = compressor; 2 = defrost; 3 = Fans; 4 = alarm; 5 = AUX; 6 = Stand-by; 7 = not used; 8 = condenser fan change rotation; 9 = retain valve.	0 ... 9	Num
H22	Configurability of digital output 2 (B). Analogo a H21.	0 ... 9	Num
H23	Configurability of digital output 3 (C). Analogo a H21.	0 ... 9	Num
H25	Enable/Disable buzzer. 0 = disabled; 4 = enabled; 1-2-3-5-6-7-8-9 = not used	0 ... 9	Num
H32	Configurability of DOWN key. 0 = disabled; 1 = defrost; 2 = AUX; 3 = reduced SET; 4 = Stand-by; 5 = deep cooling; 6 = energy saving	0 ... 6	Num
H33	Configurability of ESC key. Same as H32	0 ... 6	Num
H42	Evaporator probe present (Pb2). n = not present; y =	n/y	Flag

Parameter	Description	Range	Unit of M.
	present.		
H43	Probe 3 present (Pb3). n= not present; y= present.	n/y	Flag
reL	reLease firmware. Device version: read-only parameter	/	/
tAb	tAble of parameters. Reserved: read-only parameter	/	/

MAINTENANCE AND CLEANING

Maintenance and repair must be carried out by qualified personnel authorized by the manufacturer.



The manufacturer declines any responsibility for jobs carried out by unauthorized personnel or the use of non-original spare parts.

4.1 ROUTINE MAINTENANCE

Prohibited to remove the guards and safety devices: It's strictly forbidden to remove guards or safety devices when performing routine maintenance operation. The manufacturer disclaims all liability that may arise this regulation is not observed.

In case of FIRE:

- Disconnect the unit from the electrical power socket.
- Do not use water to extinguish the fire.
- Use powder or foam extinguishers.

Cleaning the interior and exterior of the appliance

The appliance is designed for the products storage so it is important to keep it clean. The equipment is thoroughly cleaned at the factory before being shipped. We recommend, however, to clean the interior cabinet before the first start up of the appliance. **Before attempt any cleaning operation make sure the power cord is disconnected.**

-Cleaning product: use soft clean cloth wet with water and neutral detergent only. **Do not use solvent or bleach.**

-Rinsing: use a soft cloth or sponge soaked with fresh clean water. **Do not use water jet.**

-Wipe with a soft, clean towel to prevent water spotting.

Stainless door panels, handles and frames can discolor when exposed to chlorine gas, pool chemicals, saltwater or cleaners with bleach.

Keep your stainless unit looking new by cleaning with a good quality all-in-one stainless steel cleaner and polish monthly. Some installation may require cleaning weekly.

Do not clean with steel wool pads.

Do not use cleaners not specifically intended for stainless steel on stainless steel surfaces.

Condenser cleaning

The condenser is a heat exchanger. If it is dirty or clogged the air cannot circulate freely through the same, it cannot discharge heat properly so reducing proportionally the performance and the efficiency of the refrigeration system.

FOR THOSE REASONS IT IS IMPORTANT TO KEEP CLEAN THE CONDENSER COIL, TYPICALLY MONTHLY.

! Always switch off the unit and disconnect power cord before cleaning, it is dangerous to do it with power ON: fan may start suddenly at any time.

Use a convenient ladder to reach the condenser. Use an air jet or vacuum with a soft dry brush if necessary and remove any dust or fluff from the heat exchanger fins.

After cleaning, start the equipment.



During the cleaning operation wear gloves and safety glasses to protect yourself from any injury

TROUBLESHOOTING

The Chart shows the most frequent breakdowns , possible causes and relative remedies:

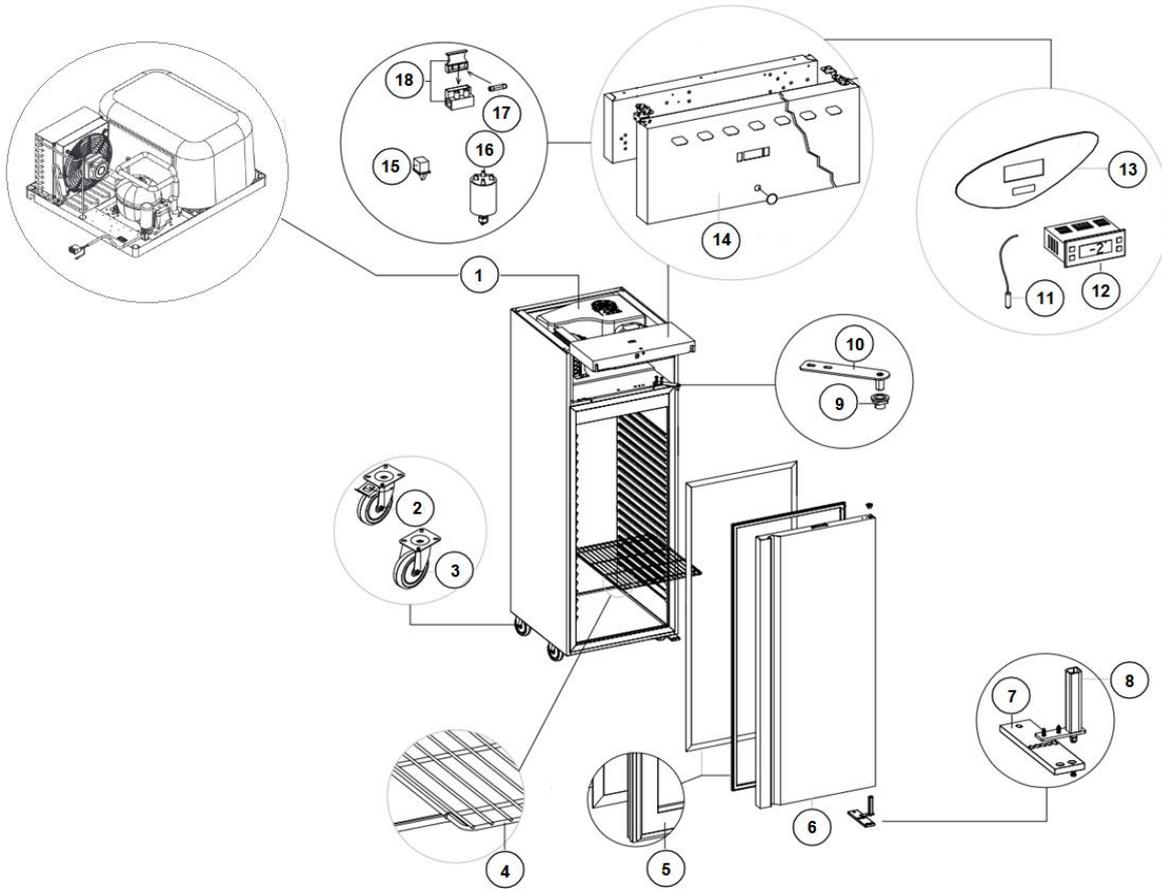
PROBLEM DESCRIPTION	POSSIBLE CAUSE	SOLUTION
The appliance does not come on	The main switch is "off" There is no tension Other	Main switch "on" Check plug, socket, electric connection Contact technical assistance
The refrigerator unit does not start	Set temperature is reached Defrosting is in operation Control Panel is broken Other	Set new temperature Wait for end of cycle, switch off and switch back on Contact technical assistance Contact technical assistance
The refrigerator is continuously working but does not reach the set temperature	Room is too hot Condenser is dirty Refrigerant fluid is insufficient Condenser fan has stopped Door not properly closed Evaporator is frosted up Defrost valve is open	Air better Clean condenser Contact technical assistance Contact technical assistance Check door seals Manual defrosting Contact technical assistance
Refrigerator does not stop at set temperature	Control Panel is broken Temperature probe is broken Door is not airtight	Contact technical assistance Contact technical assistance Close door
Ice blocks on evaporator	Improper use Control Panel is broken	Contact technical assistance Contact technical assistance
Appliance is noisy	Appliance not levelled Contact with external bodies Screws or nuts loose Other	Check that appliance is level. Check that no tube or ventilator fan is in contact with external bodies. Tighten Contact technical assistance

**IN ORDER TO GUARANTEE THE EFFICIENCY OF THE APPLIANCE AND ITS CORRECT FUNCTIONING THE MANUFACTURER'S INSTRUCTIONS MUST BE FOLLOWED AND PERIODIC SERVICING MUST BE CARRIED OUT BY PROFESSIONALLY QUALIFIED PERSONNEL.
(LEGAL REQUIREMENT FOR THE PREVENTION OF ACCIDENTS AT WORK AND THE INSTALLATION OF ELECTRICAL APPLIANCES)**

IT IS OBLIGATORY TO BE IN ACCORDANCE WITH POWER SUPPLY REGULATIONS

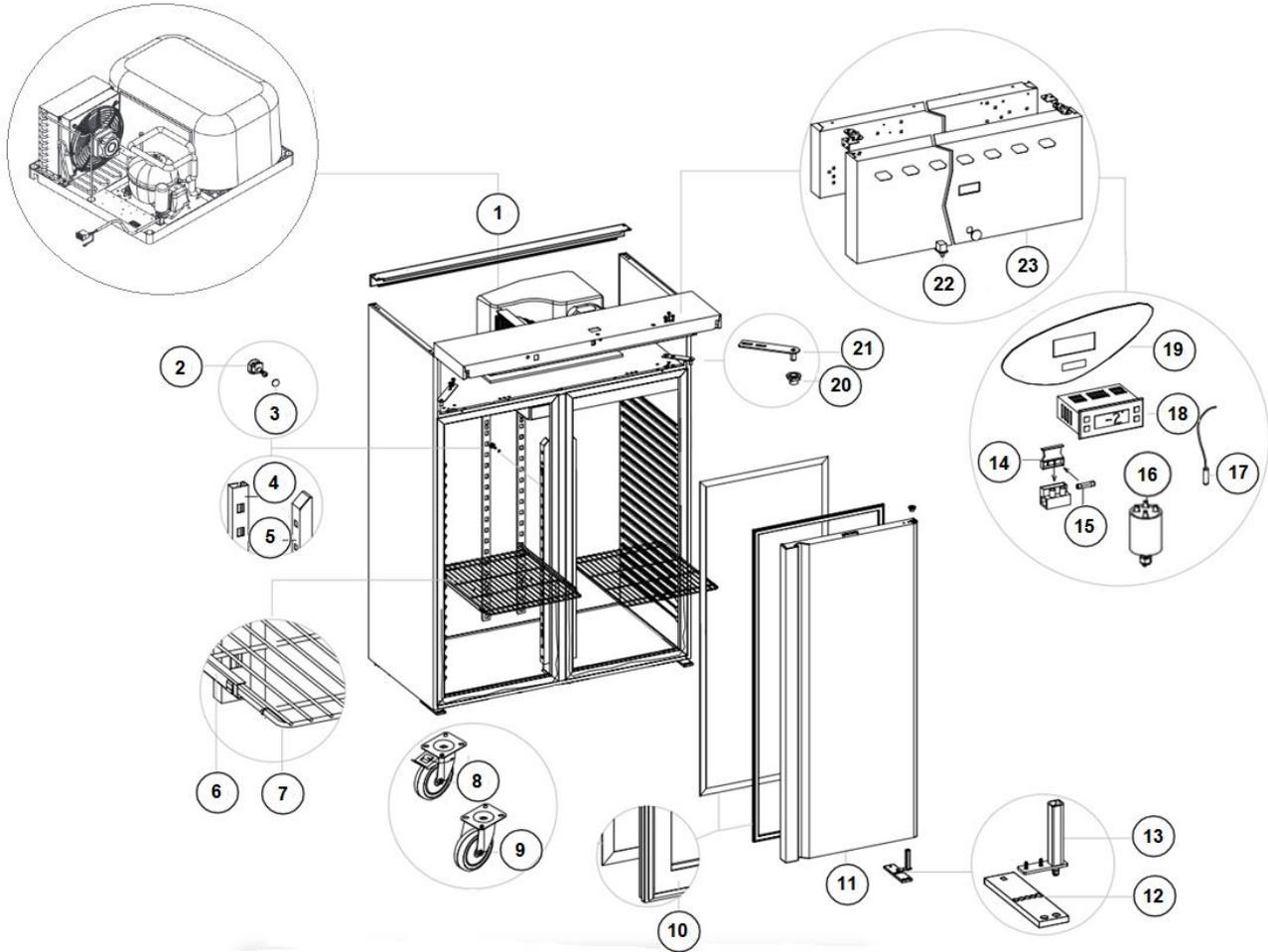
SPARE PARTS LIST

BPSM7



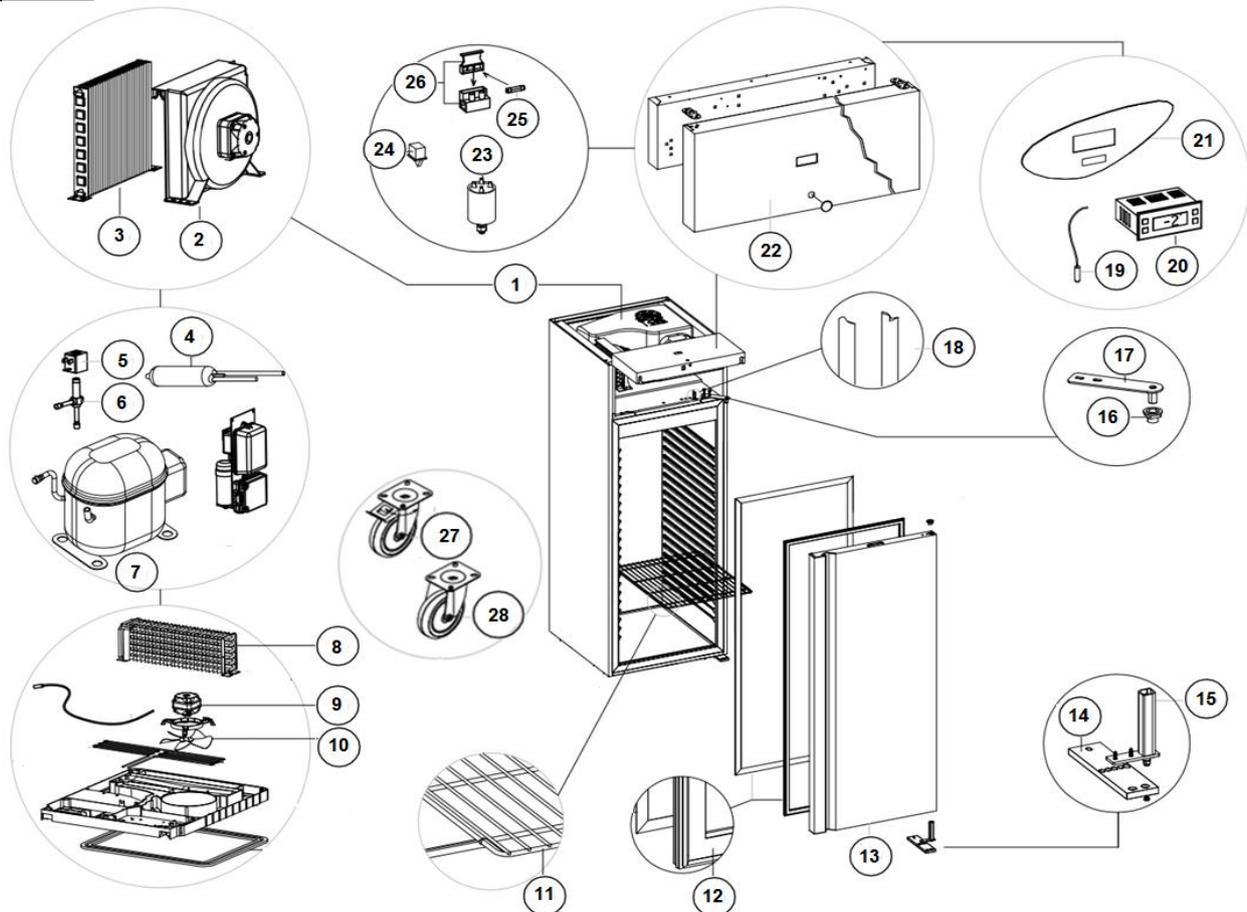
Item n.	Description
1	MONOBLOCK MOD. 25cu.ft (700lt) NT R290 220V/50Hz
2	SWIVEL CASTOR W/BRAKE
3	SWIVEL CASTOR W/OUT BRAKE
4	PLASTIC COATED SHELF MOD. 530x650mm
5	DOOR GASKET
6	R/L DOOR FOAMED PANEL
7	ALUMINUM DOOR BOTTOM BRACKET
8	DOOR SPRING HINGE KIT
9	DOOR UPPER HINGE BUSH
10	DOOR UPPER HINGE W/PIVOT
11	NTC TEMPERATURE PROBE
12	CONTROLLER MOD. EWP974 EO 230V
13	LINCAT LOGO STICKER
14	TOP FACADE
15	DOOR SWITCH
16	NET FILTER
17	FAST FUSE
18	FUSE HOLDER

BPSM14



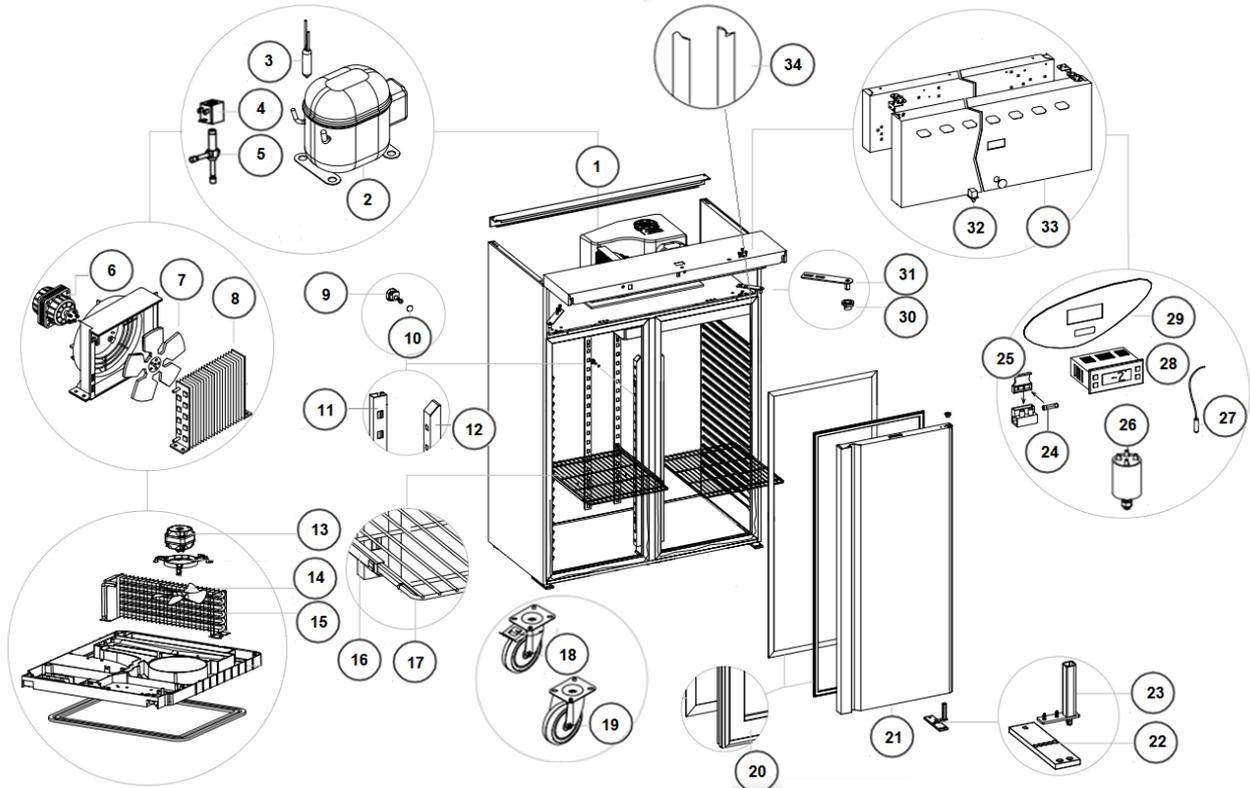
Item n.	Description
1	MONOBLOCK MOD. 49cu.ft. NT 220V/50Hz R290
2	PILASTER HOOK MOD. L26x23PP
3	PILASTER HOOK'S CAP MOD. EP132
4	REAR GUIDE PILASTER
5	FRONT GUIDE PILASTER
6	R/L SHELF GUIDE
7	PLASTIC COATED SHELF MOD. 530x650mm
8	SWIVEL CASTOR W/BRAKE
9	SWIVEL CASTOR W/OUT BRAKE
10	DOOR GASKET
11	R/L DOOR FOAMED PANEL MOD. EMBOSSED GUIDE 25cu.ft CABINET
12	ALUMINUM DOOR BOTTOM BRACKET
13	DOOR SPRING HINGE KIT
14	FUSE HOLDER
15	FAST FUSE
16	NET FILTER
17	NTC TEMPERATURE PROBE
18	CONTROLLER MOD. EWP974 EO 230V
19	LINCAT LOGO STICKER
20	DOOR UPPER HINGE BUSH
21	DOOR UPPER HINGE W/PIVOT
22	DOOR SWITCH
23	TOP FACADE

BPSB7



Item n.	Description
1	MONOBLOCK MOD.STADS5NLV22 25cu.ft LT R290 220V/50Hz
2	CONDENSER FAN ASSY
3	CONDENSER COIL
4	FILTER DRIER
5	SOLENOID VALVE COIL
6	HOT GAS SOLENOID VALVE BODY
7	COMPRESSOR
8	EVAPORATOR COIL
9	EVAPORATOR FAN MOTOR
10	FAN BLADE
11	PLASTIC COATED SHELF MOD. 530x650mm
12	DOOR GASKET
13	R/L DOOR FOAMED PANEL MOD. EMBOSSED GUIDE 25cu.ft CABINET
14	ALUMINUM DOOR BOTTOM BRACKET
15	DOOR SPRING HINGE KIT
16	DOOR UPPER HINGE BUSH
17	DOOR UPPER HINGE W/PIVOT
18	DOOR FRAME HEATER MOD. 44W 230V L=4400mm
19	NTC TEMPERATURE PROBE
20	CONTROLLER MOD. EWP974 EO 230V
21	LINCAT LOGO STICKER
22	TOP FACADE MOD. 49cu.ft UP-RIGHT CABINET
23	NET FILTER
24	DOOR SWITCH
25	FAST FUSE
26	FUSE HOLDER
27	SWIVEL CASTOR W/BRAKE
28	SWIVEL CASTOR W/OUT BRAKE

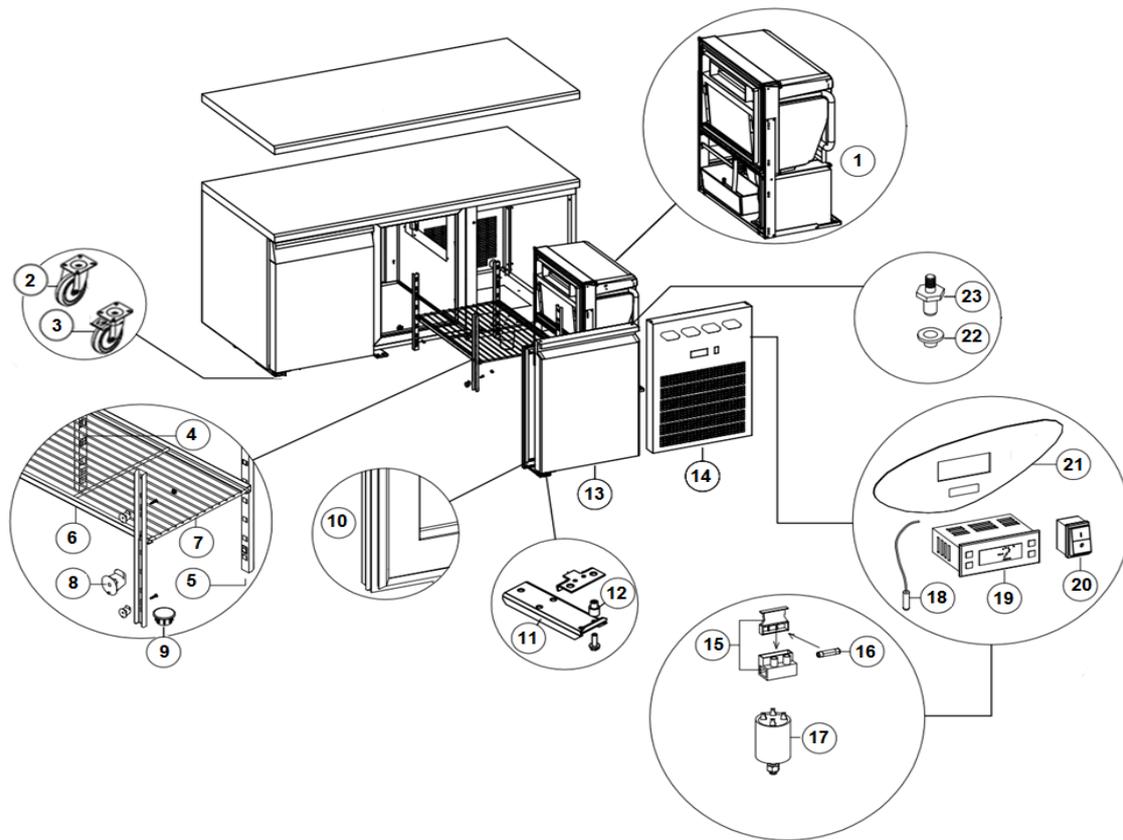
BPSB14



Item n.	Description
1	MONOBLOCK MOD. 49cu.ft LT R290 230V
2	COMPRESSOR
3	FILTER DRIER
4	HOT GAS SOLENOID VALVE COIL
5	HOT GAS SOLENOID VALVE
6	CONDENSER FAN MOTOR
7	CONDENSER FAN BLADE
8	CONDENSER COIL
9	PILASTER HOOK MOD. L26x23PP
10	PILASTER HOOK'S CAP MOD. EP132
11	REAR GUIDE PILASTER
12	FRONT GUIDE PILASTER
13	EVAPORATOR FAN MOTOR
14	EVAPORATOR FAN BLADE
15	EVAPORATOR COIL
16	R/L SHELF GUIDE
17	PLASTIC COATED SHELF MOD. 530x650mm
18	SWIVEL CASTOR W/BRAKE
19	SWIVEL CASTOR W/OUT BRAKE
20	DOOR GASKET
21	R/L DOOR FOAMED PANEL MOD. EMBOSSED GUIDE 25cu.ft CABINET
22	ALUMINUM DOOR BOTTOM BRACKET
23	DOOR SPRING HINGE KIT
24	FAST FUSE
25	FUSE HOLDER
26	NET FILTER
27	NTC TEMPERATURE PROBE
28	CONTROLLER MOD. EWP974 EO 230V
29	LINCAT LOGO STICKER
30	DOOR UPPER HINGE BUSH
31	DOOR UPPER HINGE W/PIVOT
32	DOOR SWITCH

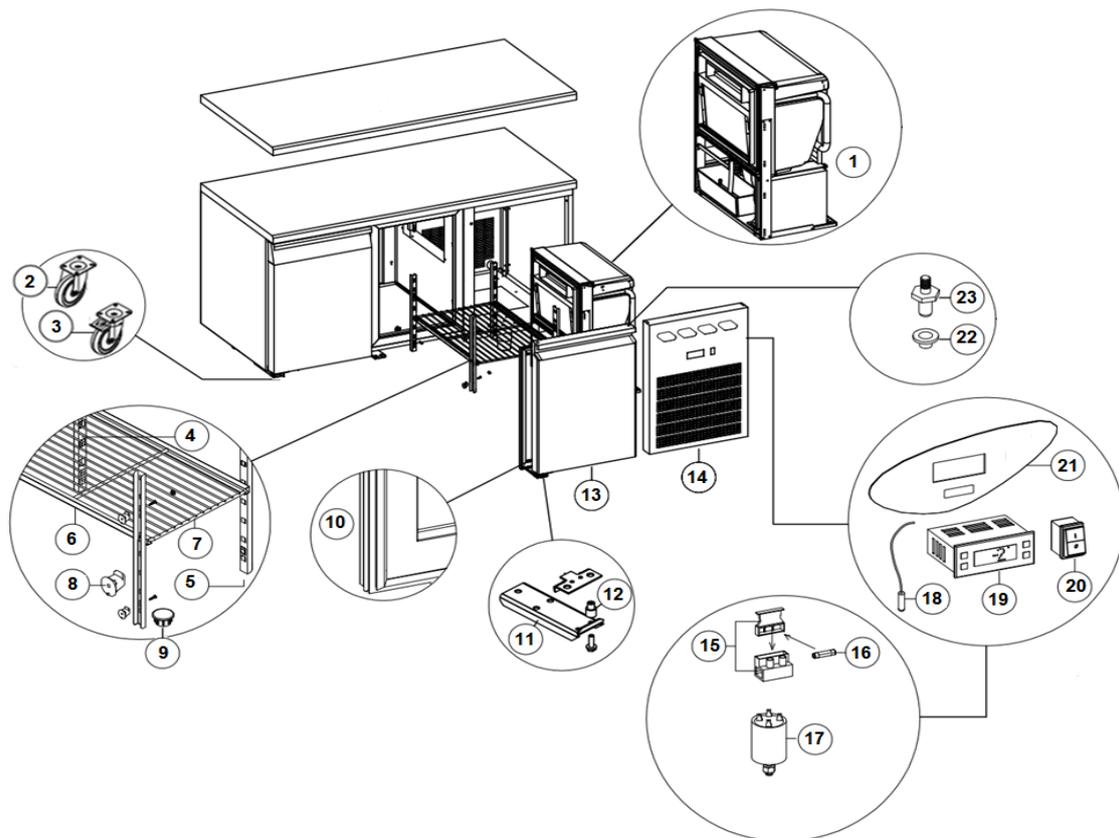
33	TOP FACADE MOD. 49cu.ft UP-RIGHT CABINET
34	DOOR FRAME HEATER MOD. 44W 230V L=4400mm

BPETM2



Item n.	Description
1	MONOBLOCK MOD. NT COUNTER 220V 50/60Hz R290
2	SWIVEL CASTOR W/OUT BRAKE
3	SWIVER CASTOR W/BRAKE
4	REAR GUIDE PILASTER
5	FRONT GUIDE PILASTER
6	SHELF GUIDE
7	PLASTIC COATED SHELF MOD. 325x530mm
8	PILASTER HOOK MOD. L26x23PP
9	PILASTER HOOK'S CAP MOD. EP132
10	DOOR GASKET
11	R/L DOOR BOTTOM BRACKET
12	DOOR BOTTOM HINGE MOD. BRASS NUT 21x9x12x6x13M6
13	DOOR FOAMED PANEL
14	MOTOR COMPARTMENT FRONT PANEL
15	FUSE HOLDER
16	FAST FUSE
17	NET FILTER
18	NTC TEMPERATURE PROBE
19	CONTROLLER MOD. EWP974 EO 230V
20	FAN uR% SWITCH
21	LINCAT LOGO STICKER
22	UPPER HINGE BUSH
23	UPPER HINGE PIVOT MOD. BRASS 24,5x7,9xM6

BPETM3



Item n.	Description
1	MONOBLOCK MOD. NT COUNTER 220V 50/60Hz R290
2	SWIVEL CASTOR W/OUT BRAKE
3	SWIVER CASTOR W/BRAKE
4	REAR GUIDE PILASTER
5	FRONT GUIDE PILASTER
6	SHELF GUIDE
7	PLASTIC COATED SHELF MOD. 325x530mm
8	PILASTER HOOK MOD. L26x23PP
9	PILASTER HOOK'S CAP MOD. EP132
10	DOOR GASKET
11	R/L DOOR BOTTOM BRACKET
12	DOOR BOTTOM HINGE MOD. BRASS NUT 21x9x12x6x13M6
13	DOOR FOAMED PANEL
14	MOTOR COMPARTMENT FRONT PANEL
15	FUSE HOLDER
16	FAST FUSE
17	NET FILTER MOD. 16S7D-A147410 16A
18	NTC TEMPERATURE PROBE
19	CONTROLLER MOD. EWP974 230V
20	FAN uR% SWITCH
21	LINCAT LOGO STICKER
22	UPPER HINGE BUSH
23	UPPER HINGE PIVOT MOD. BRASS 24,5x7,9xM6

SERVICE INFORMATION

For help with the installation, maintenance and use of your **Lincat** equipment, please contact our service department:

☎ UK: 01522 875520

For non-UK customers, please contact your local Lincat dealer

All service work, other than routine cleaning should be carried out by one of our authorised service agents. We cannot accept responsibility for work carried out by other persons.

To ensure your service enquiry is handled as efficiently as possible, please tell us:

- Brief details of the problem
 - Product code
 - Type number
 - Serial number
- } All available on serial plate

Lincat reserve the right to carry out any work under warranty, given reasonable access to the appliance, during normal working hours, Monday to Friday, 08:30 to 17:00.

GUARANTEE

This unit carries a comprehensive UK mainland 2 year warranty. The guarantee is in addition to, and does not diminish your statutory or legal rights.

The guarantee does not cover:

- Accidental damage, misuse or use not in accordance with the manufacturer's instructions
- Consumable items (such as filters, glass, bulbs, slot toaster elements and door seals.)
- Damage due to incorrect installation, modification, unauthorised service work or damage due to scale, food debris build-up, etc.

The manufacturer disclaims any liability for incidental, or consequential damages. Attendance is based on reasonable access to the appliance to allow the authorised technician to carry out the warranty work.

Service calls to equipment under warranty will be carried out in accordance with the conditions of sale.