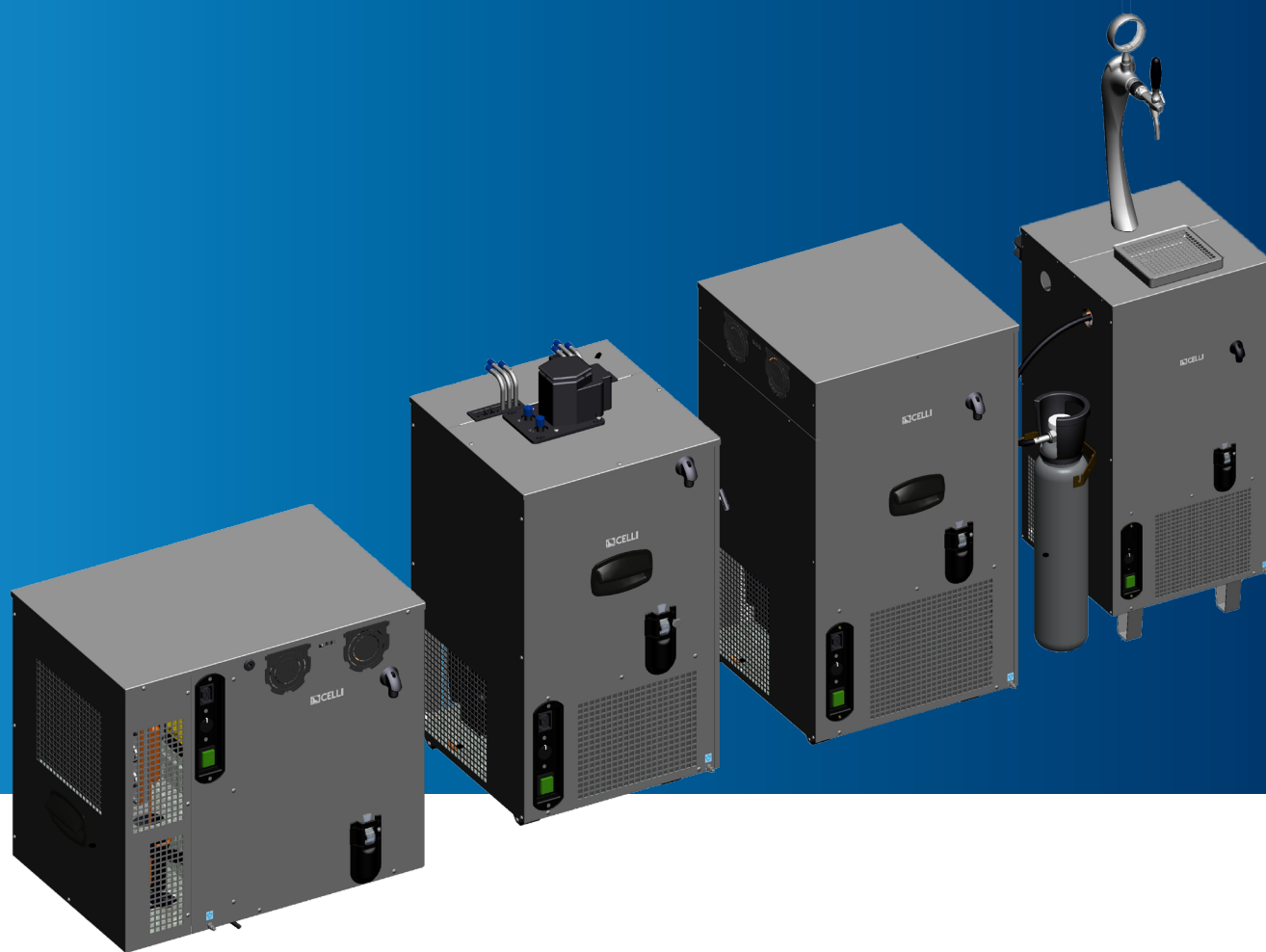


Geo

PRE-MIX 20/27/30/40/50/75



Rev. 9

Date: 06/12/2022

Cod. 073536

Use and maintenance manual

Translation of the original instructions

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1. SAFETY

Do not allow anyone to operate the machine if not properly trained.

Keep the machine in good working order and do not allow any changes to be made to the same without the prior written consent of the Manufacturer.

NOTE

Before using the machine, please read carefully this section of the manual that aims to inform and instruct operators on the proper use of the machine and misuse of the same, which can be dangerous.

1.1 INTENDED USE

The PRE MIX system is used to cool and dispense cold pre-mix drinks.

The machines described in this manual are used to cool and dispense pre-mix drinks.

1.2 IMPROPER USE

This machine has been designed to be used for the purpose and in the conditions provided for in this manual, in compliance with the requirements of the Directives reported in the declaration of compliance.

It is not permitted, for any reason, to use the machine for purposes other than those for which it was designed, nor to use it with methods other than those indicated in the manual.

This machine must not be used by children under the age of 8 and by people with reduced mental capacity. This machine can be used by adults with reduced physical or sensory capacities, or lacking in experience or in the necessary knowledge, provided they are supervised or after they have received instructions concerning the safe use of the appliance and the dangers inherent to it.

Children must not play with the machine. Children must be supervised to ensure that they do not play with the machine. Cleaning and maintenance designed to be carried out by the user must not be carried out by children, not even under surveillance supervision.

For safety purposes and in accordance with the legislation in force, the machine must be repaired by the Service Center.

- Do not tamper with the internal components of the machine; in case of any malfunction, contact the Customer Support centre.
- Do not put any objects on top of the machine.
- Do not put the machine on top of other objects.
- Do not use liquids different than those listed.
- If you notice that the machine is damaged, contact the Customer Support.
- Do not store explosive substances in this machine, such as aerosol cans with a flammable propellant.

1.3 LIST OF HAZARDS

The following hazard list draws attention to the safety aspects that the users of the machine must consider.

DANGER



CO₂ (CARBON DIOXIDE)

CO₂ bottles must always be stored in a well-ventilated place where the air can flow in and out. Great care must be taken to prevent CO₂ leaks throughout the system, including the gas bottles. If a CO₂ leak is suspected, especially in a small area, ventilate the contaminated area at once. Persons exposed to high concentrations of CO₂ will experience trembling, swiftly followed by unconsciousness and suffocation.

DANGER



ELECTRIC NETWORK

Always disconnect the power supply from the machine before carrying out any operation on the same in order to avoid accidents and injury.

DANGER



GAS BOTTLE POSITION

To prevent the risk of injury or damage, the CO₂ bottle must always be kept in a vertical position against a wall, held in place by a chain fixed to a bracket.

Do not expose the bottle to heat sources or very low temperatures.

If you are using a disposable CO₂ bottle, secure it in an upright position to prevent it from falling or tipping over.

DANGER



REFRIGERANT

The refrigerant used is R290 or R134a. To verify which refrigerant is used, refer to the compressor label inside the machine, and the nameplate.

In the case of R290 refrigerant, this is a natural gas with a high degree of environmental compatibility, but it is also combustible. During the transport and installation of the machine, be careful not to damage any part of the refrigerating circuit.

If the refrigerant spurts out, it may catch fire or cause injury to the eyes.

If you notice a leak, do not take any naked flames or potential ignition sources near the machine; air the room for a few minutes.

DANGER



USE OF GLYCOL OR SIMILAR SOLUTIONS

Glycol is an aggressive and corrosive liquid: handle it using dedicated personal protection gear (gloves and glasses). Do not spill glycol outside of the dedicated tank in the machine, particularly not onto electrical components. Clean the outer metallic parts of the tank immediately if they come into contact with the glycol.

Always refer to the glycol manufacturer's safety data sheet before using.

WARNING



REFRIGERANT

To avoid the formation of an inflammable mix of gas and air in the event of a leak in the refrigerating circuit, the size of the room where the machine is located will depend on the amount of refrigerant used.

Never switch the machine on if you notice any trace of damage. If you have any doubts, please contact the Manufacturer.

The room must measure at least 1 m³ for every 8 gr. of R290 refrigerant used in the machine.

The amount of refrigerant in the machine is shown on the nameplate.

WARNING



Hermetically sealed equipment!

WARNING



AUTHORIZED TECHNICAL STAFF

Only trained staff specialised in electrical, hydraulic and refrigeration field can operate on the machine. All wiring and hydraulic components must comply with national and local laws (for replacement of parts, use only genuine parts certified by Manufacturer).

WARNING



PROTECTIVE GROUNDING

The symbol on the side is used to identify any terminal designated to be connected to an electric shock protection conductor, in the event of a fault, or the terminal of a protective grounding electrode.

CAUTION



ELECTRICAL REQUIREMENTS

The electrical circuit must be properly grounded and connected through an appropriate differential switch.

CAUTION



PLUG SUPPLIED

Plug the machine to the mains using the plug supplied.

If it needs to be replaced, use an equivalent model approved in the country of use.

Any replacement must be carried out by the service centre or by qualified technical staff.

CAUTION



SANITIZATION

Before carrying out the sanitisation, carefully read the instructions provided by the manufacturer of the sanitising product, be sure to use personal protective equipment (gloves, masks, etc.). Make sure that the rooms are ventilated properly.

Sanitization must only be carried out by qualified technical service staff.

CAUTION



LOW TEMPERATURE

If the machine is subjected to temperatures below 0°C, the water may freeze inside and damage the machine.

CAUTION



DRINKS CONTAINED IN PRESSURISED KEGS

To avoid any harm to people or damage to property, do not remove the cover from the keg until you have discharged the CO₂ pressure inside.

1.4 RESIDUAL RISKS

During regular operating conditions the machine is safe. There are still residual risks, listed in the hazard list, which are reduced if the machine is used correctly and according to the instructions given in the user's manual.

1.5 PERSONAL PROTECTIVE EQUIPMENT (PPE)

In order to perform particular maintenance procedures and to handle potentially dangerous liquids or gases, the following personal protection equipment is required:



Compulsory use of gloves.



Compulsory use of devices to protect airways.



Compulsory use of protective goggles.

DANGER



Personal protective equipment (PPE) must comply with the regulatory references indicated in the safety data sheets of the products to be handled.

2. GENERAL INFORMATION

The user and maintenance manual is an integral and essential part of the machine and must be delivered to the user. It is important that it is well guarded and carefully consulted because it contains specific information on operation, maintenance and safety of the machine and the people or property that come into contact with it.

If you have any doubts or uncertainties on the indications given in the user's manual, contact the Manufacturer.

The Manufacturer denies any contractual and non-contractual liability for damages caused by errors in the use and installation of the machine or by the failure to observe the instructions provided by the Manufacturer.



NOTE

The Manufacturer reserves the right to modify the product and its documentation without any obligation to third parties and is not liable for any errors or inaccuracies in the contents of this manual.

This version of the operation and maintenance manual describes the characteristics of the standard machine, at the time of going to print.

2.1 MANUFACTURER ID

CELLI S.p.A.

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celli@celligroup.com

The Manufacturer is at your disposal for any technical problem and to request spare parts.

For replacement of spare parts of the machine, it is recommended to use original parts; the Manufacturer declines all liability with regard to a possible drop in performance of the equipment or damage to the machine resulting from the use of non-original spare parts.

NOTE

This manual refers to the standard version of the machine.
Non-standard machines may have minor differences that are not described in this manual.
If in doubt, contact the Manufacturer.

2.2 MACHINE IDENTIFICATION

This manual refers to the following machine:

GEO PRE-MIX UNDERCOUNTER and ON WHEELS COOLER range

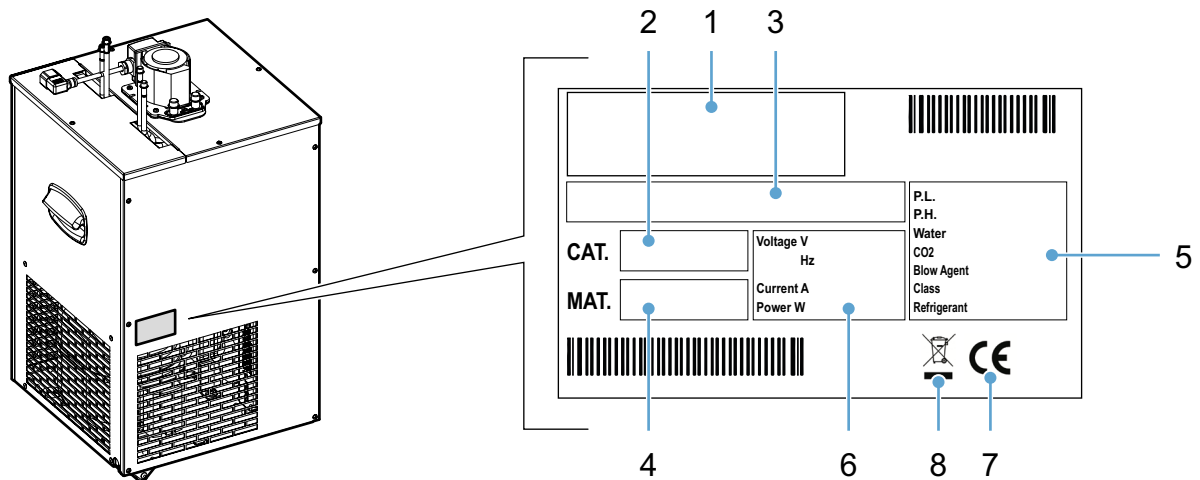
Models:

GEO 20 - GEO 27 - GEO 30 - GEO 40 - GEO 50 - GEO 75

GEO 50 COOLER ON WHEELS - GEO 75 COOLER ON WHEELS

Make sure that the machine delivered is equipped with the identification plate (EC plate) shown below:

- 1) Name of manufacturer
- 2) Model code
- 3) Machine model
- 4) Machine serial number
- 5) Machine features:
 - Maximum pressure on the low-pressure side of refrigerant circuit (present only in some models).
 - Maximum pressure on the high-pressure side of refrigerant circuit (present only in some models).
 - Expanding gas, insulating material.
 - Climate class.
 - Type and weight of refrigerant gas.
- 6) Electrical requisites
- 7) EC Compliance
- 8) Waste disposal



This provides the machine model, serial number and all the technical data needed to request spare parts or to report technical issues to the service centre.

The last two digits of the serial number (matriculation number) show the year of production of the machine.

2.3 WARRANTY

For the conditions and terms of warranty, please read the general sales conditions indicated in the price list of the Manufacturer.

2.4 SYMBOLS USED IN THE MANUAL

The manual lists the following safety signs in order to facilitate reading of all the operations that must be strictly observed to ensure the safety of machine and operators.

DANGER



Warns of an actual danger situation on the machine or in the vicinity of it for the operator or for individuals in general, which could cause serious injury or even be fatal; in any case take the utmost care and proceed with great caution.

WARNING



Warns of a potential danger situation on the machine or in the vicinity of it for the operator or for individuals in general, which could cause serious injury or even be fatal; in any case take the utmost care and proceed with great caution.

CAUTION



Warns of a potential danger situation on the machine or in the vicinity of it for the operator or for individuals in general, which could cause minor or non serious injury, nevertheless take the utmost care and proceed with great caution.

2.5 STAFF QUALIFICATION

To ensure that all works performed on the machine are carried out in conditions of safety, the operators must have the qualifications and meet the requirements for performing the tasks assigned.

The operators are classified as follows:



Specialised maintenance technician

Operator qualified to perform complex operations in particular situations. This is an operator properly trained through specific activities.



Machine operator

Non qualified operator or operator without specific skills, assigned to perform only simple tasks or to use the machine by means of the controls of the same and to carry out simple cleaning and replacement of products, following the instructions in this user's manual when using the machine.

He/she cannot carry out the operations assigned to specialised maintenance operators.

NOTE

The symbol at the beginning of each section indicates the staff authorised to perform the operations described.

3. DESCRIPTION OF THE MACHINE

The machines of the **GEO** range are coolers designed to dispense pre-mix drinks stored in suitable containers (kegs).

This manual deals with the machines of the **GEO PRE-MIX UNDERCOUNTER and COOLER ON WHEELS** range.

They allow the dispensing of:

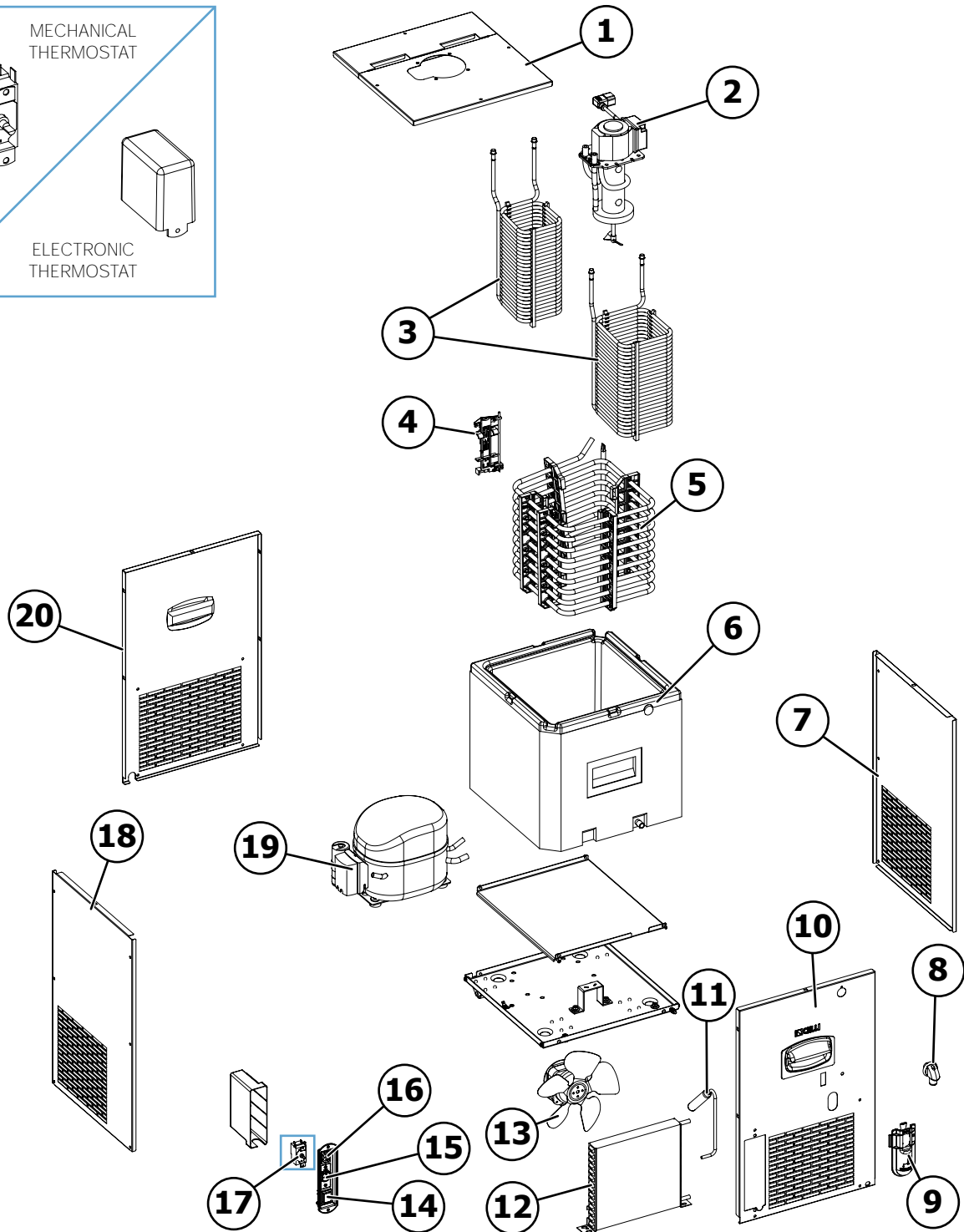
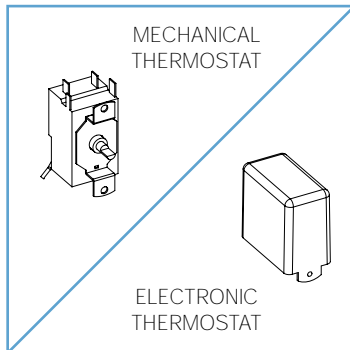
- cold pre-mix drinks.

Inside the machine, the drinks are cooled with the aid of a cooling unit. The drinks are carried - via thermally insulated plastic tubes - from the external environment to the dispensing tower. The insulating tube (known as the "python") and the dispensing tower are not included with the machine.

"Pre-mix drinks" means drinks that are ready for consumption, without needing any further additions or mixing.

Beer, soft drinks and wine are all typical pre-mix drinks.

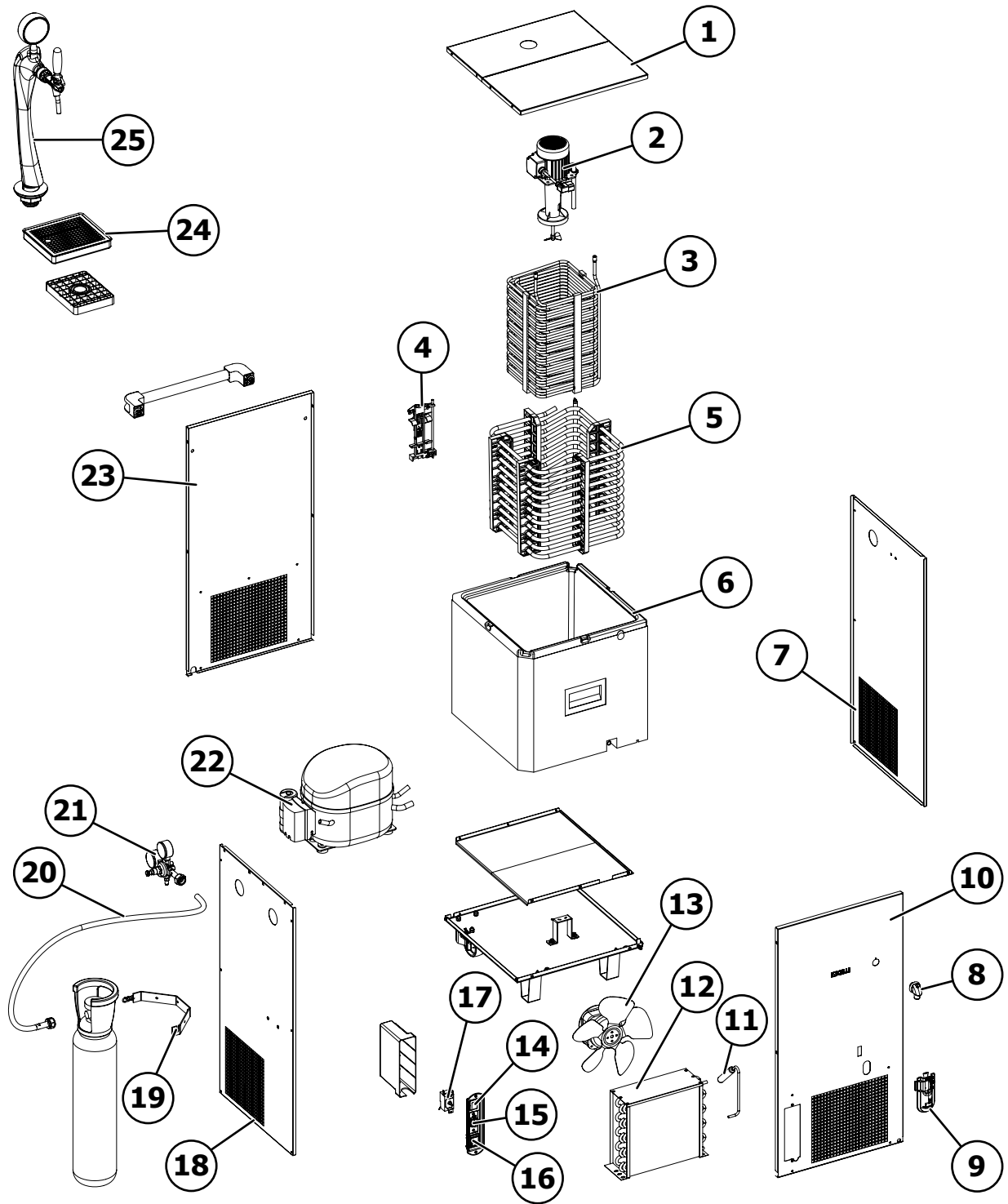
3.1 MAIN COMPONENTS OF THE GEO RANGE



DESCRIPTION OF THE MACHINE

- 1) UPPER COVER
- 2) RECIRCULATION PUMP
- 3) COILS
- 4) BRACKET FOR THERMOSTAT CAPILLARY TUBE
- 5) EVAPORATOR
- 6) INSULATING TANK
- 7) SIDE PANEL
- 8) OVERFLOW DRAINAGE
- 9) DRAINAGE POINT FOR EMPTYING TANK
- 10) FRONT PANEL
- 11) DEHYDRATOR FILTER
- 12) CONDENSER
- 13) FAN UNIT
- 14) ON/OFF LIGHT SWITCH
- 15) THERMOSTAT KNOB
- 16) RECIRCULATION PUMP SOCKET
- 17) MECHANICAL THERMOSTAT/ELECTRONIC THERMOSTAT
- 18) SIDE PANEL
- 19) COMPRESSOR
- 20) REAR PANEL

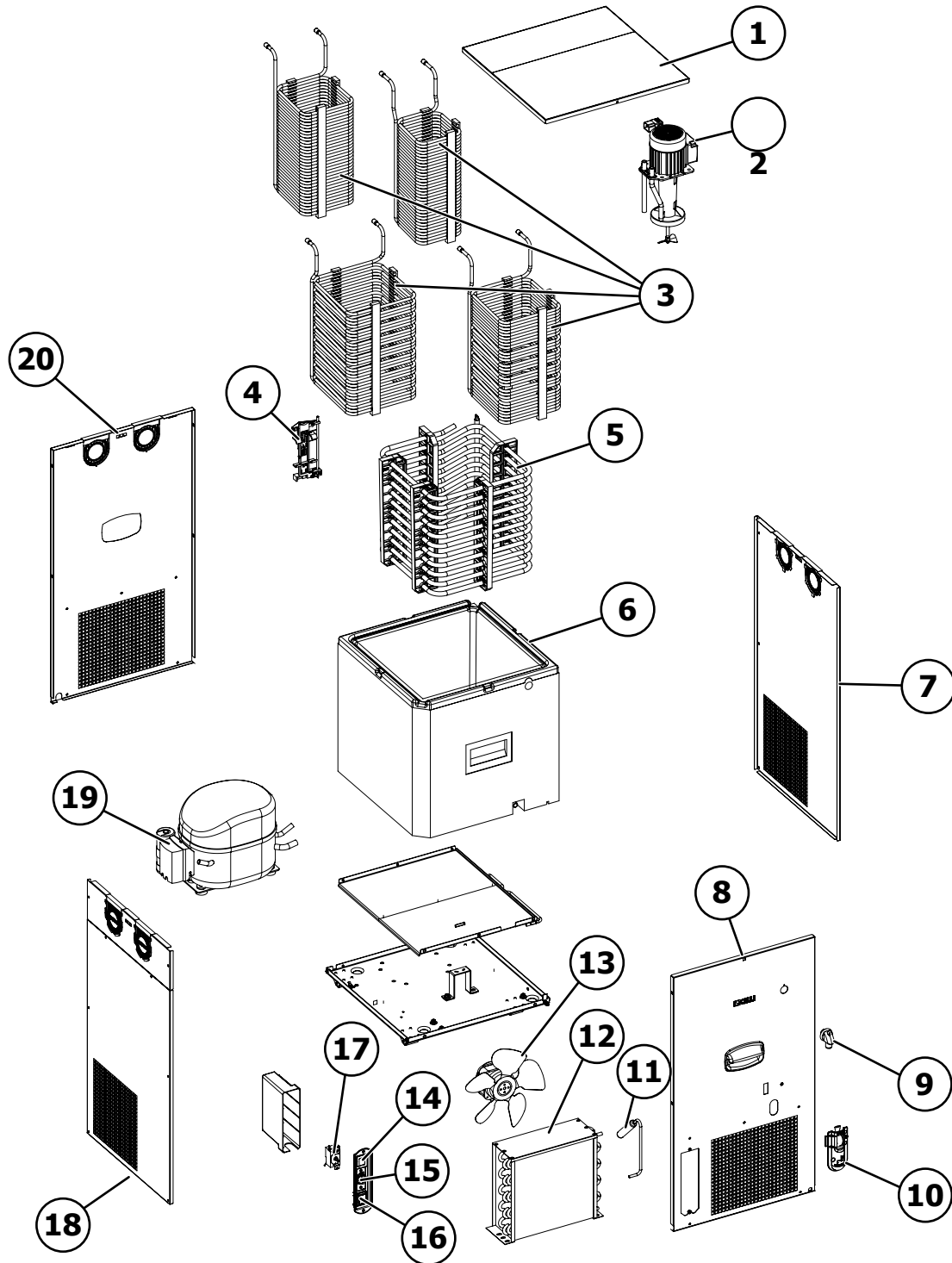
3.2 MAIN COMPONENTS OF THE GEO COOLER ON WHEELS RANGE



DESCRIPTION OF THE MACHINE

- 1) UPPER COVER
- 2) RECIRCULATION PUMP
- 3) COILS
- 4) BRACKET FOR THERMOSTAT CAPILLARY TUBE
- 5) EVAPORATOR
- 6) INSULATING TANK
- 7) SIDE PANEL
- 8) OVERFLOW DRAINAGE
- 9) DRAINAGE POINT FOR EMPTYING TANK
- 10) FRONT PANEL
- 11) DEHYDRATOR FILTER
- 12) CONDENSER
- 13) FAN UNIT
- 14) RECIRCULATION PUMP SOCKET
- 15) THERMOSTAT KNOB
- 16) ON/OFF LIGHT SWITCH
- 17) MECHANICAL THERMOSTAT
- 18) SIDE PANEL
- 19) BRACKET WITH CHAIN FOR FIXING CO₂ CYLINDER (optional)
- 20) HIGH PRESSURE TUBE (optional)
- 21) CO₂ REDUCER (optional)
- 22) COMPRESSOR
- 23) REAR PANEL
- 24) DRIP-TRAY
- 25) DISPENSING TOWER (not included)

3.3 MAIN COMPONENTS OF THE GEO STREAMLINED RANGE



DESCRIPTION OF THE MACHINE

- 1) UPPER COVER
- 2) RECIRCULATION PUMP
- 3) COILS
- 4) BRACKET FOR THERMOSTAT CAPILLARY TUBE
- 5) EVAPORATOR
- 6) INSULATING TANK
- 7) SIDE PANEL
- 8) FRONT PANEL
- 9) OVERFLOW DRAINAGE
- 10) DRAINAGE POINT FOR EMPTYING TANK
- 11) DEHYDRATOR FILTER
- 12) CONDENSER
- 13) FAN UNIT
- 14) RECIRCULATION PUMP SOCKET
- 15) THERMOSTAT KNOB
- 16) ON/OFF LIGHT SWITCH
- 17) MECHANICAL THERMOSTAT
- 18) SIDE PANEL
- 19) COMPRESSOR
- 20) REAR PANEL

3.4 OPERATING PRINCIPLE

The machine consists of a cooling unit and a hydraulic unit. The cooling unit cools the water in the insulating tank, thanks to an evaporator (A) immersed in the tank itself.

The water in the insulating tank acts merely as a means of heat exchange between the coils and the evaporator.

The evaporator is cooled until its temperature is lower than zero, so a layer of ice (the "ice bank") then forms around it; this is in practice a cold reserve, to be used when consumption levels increase.

The thickness of the ice bank is controlled by the thermostat (B), which starts and stops the compressor (C) as necessary.

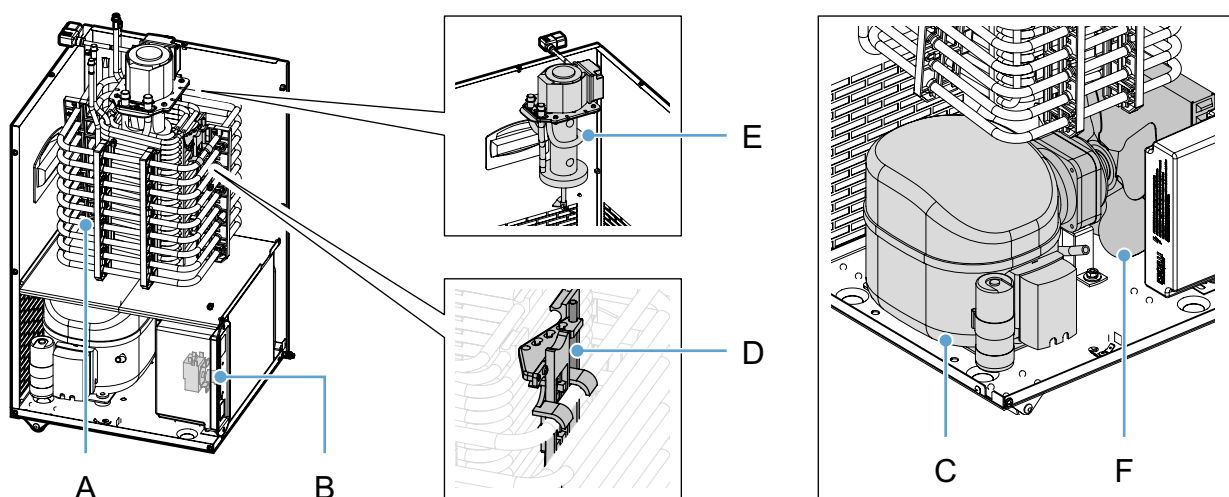
The mechanical thermostat is fitted with an adjustment knob which, when turned to its maximum setting, allows the ice bank to form. The mechanical thermostat has a capillary tube, located on a bracket (D); the position of this bracket determines the thickness of the ice bank.

The coils (that the drinks pass through) are immersed in the water in the tank. One or more stainless steel coils can be housed in the tank. Beer coils usually have a diameter of 7x8 mm, while soft drinks coils have a diameter of 5x6 mm.

The water in the tank is always kept moving thanks to the recirculation pump (E); this facilitates the heat exchange between the coils and the ice bank.

The drinks are contained in steel kegs (outside the machine).

The condenser (F) dissipates the heat extracted from the water and generated by the compressor motor.



For more effective heat dispersal, the condenser has a cooling fan unit.

 **NOTE**

(*) Paragraph 6.5 page 67

It is important not to obstruct the condenser surface, and regularly inspect it for dirt (*) so it can always function well.

In order to operate well, the machine must be continuously powered; switching off the pump-stirrer motor, or the machine itself, during brief periods of non-use will jeopardise both the machine's lifespan and the quality of the first drinks subsequently dispensed. What's more, the machine consumes much more energy to restore the ice bank than to maintain it, so you are advised to leave the machine switched on during the night and during any brief periods of non-use.

To keep the drinks cool on their journey from the machine to the dispensing tower, the drinks pass through plastic tubes with a thermal insulation cover of suitable thickness (the so-called "python"). Inside the python, the drinks tubes are in contact with two tubes with a bigger diameter; these carry cold water pumped from the tank by means of a recirculation pump.

3.4.1 WATER STIRRING AND RECIRCULATION

To ensure that cold drinks are always dispensed from the taps, the water in the insulating tank is continuously stirred and recirculated in the python with the aid of the recirculation pump. This solution ensures that the temperature of the drink remains constant; something that is important in the case of beer, for example, where the right temperature is fundamental.

You are advised to choose a recirculation pump suited to the size of the tank and the distance (and difference of level) between the machine and the dispensing tower.

 **NOTE**

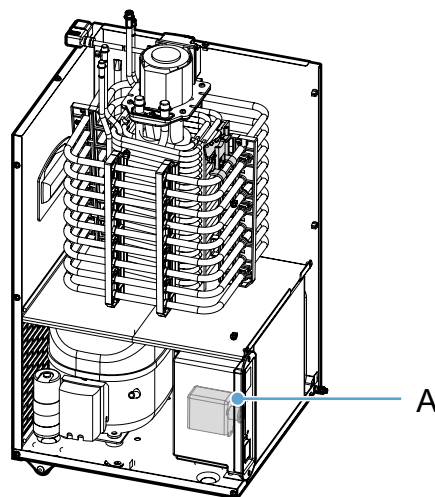
The Manufacturer will suggest the best model to suit your needs.

3.5 UNIT WITH ELECTRONIC THERMOSTAT

The cooling system is controlled by the thermostat, that stops the compressor when the ice bank has formed or when the water in the tank has reached a certain temperature. The electronic thermostat **(A)** is fitted with a sensor with terminals at its end points. The thermostat measures the electrical resistance between the two terminals, thereby recognising the presence of ice (insulator) and water (conductor).

When both pins are covered with ice, the thermostat stops the compressor.

If the tank is empty, the thermostat measures a high degree of electrical resistance between the two terminals (air is an insulator) so the compressor does not start up.



 **NOTE**

Compressor start-up is always delayed by 4 minutes to ensure that pressure in the refrigerator circuit is balanced in all conditions (even if the electricity supply is momentarily disconnected). This reduces the mechanical stress sustained by the compressor, and prolongs its working life.

3.6 UNIT WITH DIGITAL THERMOSTAT TO FUNCTION WITH GLYCOL

In this configuration the machine is designed to function with a glycol solution (or other cooling solutions with freezing points below zero) instead of water in the tank.

This solution is typically adopted to obtain the ICE effect on specifically designed towers or to obtain extra cold beer (that is served at a temperature of around 0°C).

We recommend using fluids recommended by the Manufacturer and to turn to it for technical information about the optimal solution to be adopted.

DANGER



USE OF GLYCOL OR SIMILAR SOLUTIONS

Glycol is an aggressive and corrosive liquid: handle it using dedicated personal protection gear (gloves and glasses). Do not spill glycol outside of the dedicated tank in the machine, particularly not onto electrical components. Clean the outer metallic parts of the tank immediately if they come into contact with the glycol.

Always refer to the glycol manufacturer's safety data sheet before using.

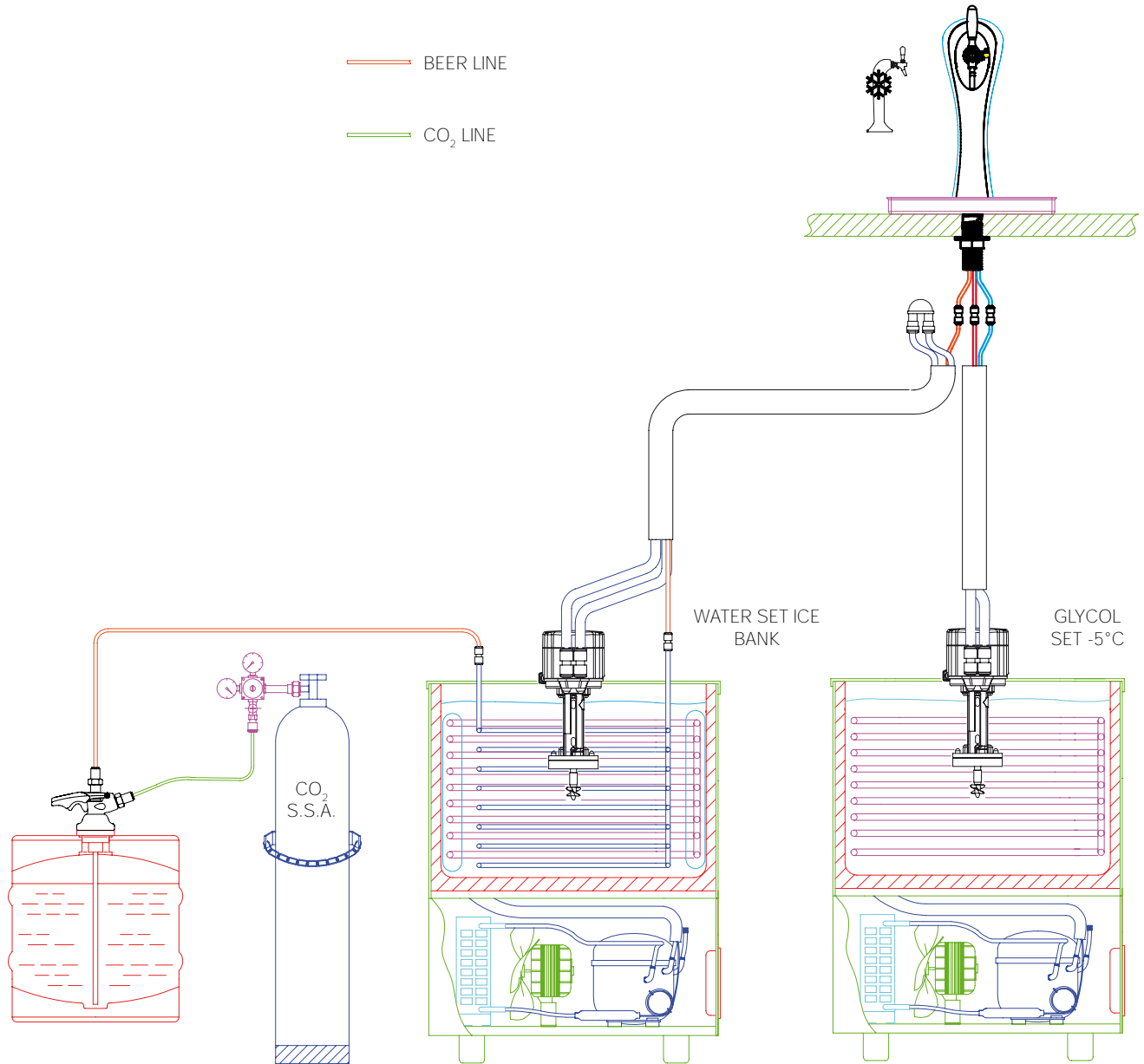
3.6.1 TO OBTAIN AN ICE EFFECT ON THE TOWERS

GENERAL RECOMMENDATIONS:

- Use glycol recommended by the Manufacturer, with freezing point around -30 ° C. Lower freezing points indicated that the glycol concentration will not allow recirculation pump to work in optimal conditions.
- Ensure that the tower is located in an environment with temperatures not exceeding 25°C and that it is not exposed to direct sources of hot air or heat.
- For the connection between machine and tower use pythons with minimum insulation thickness of 19 mm.
- Choose a sufficiently powerful cooler (based on the internal volume of the tower and the distance between the cooler and the tower, which is indicative of thermal dispersion).
- Adjust the thermostat to -5°C. Instructions for calibrating the thermostat are included in the packaging of the coolant.

The beer coils are not normally included in this configuration as the beer usually freezes at a temperature of -5°C.

3.6.2 ICE TOWER CONNECTION DIAGRAM - TE GLYCOL



3.6.3 TO DISPENSE EXTRA COLD BEER

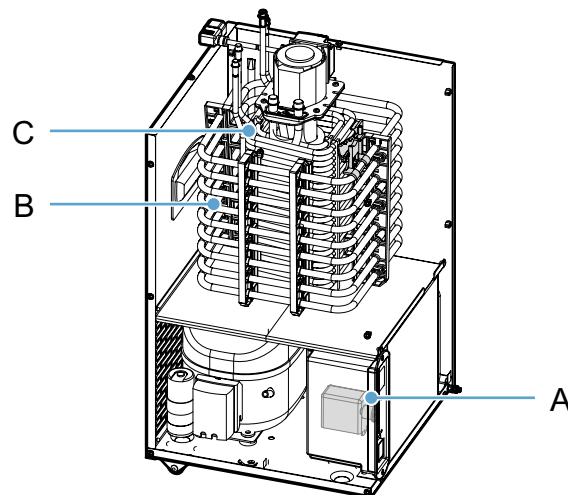
This solution is not applicable to non-alcoholic beers which have a freezing point similar to that of water.

Alternative cooling fluids can be used in this configuration.

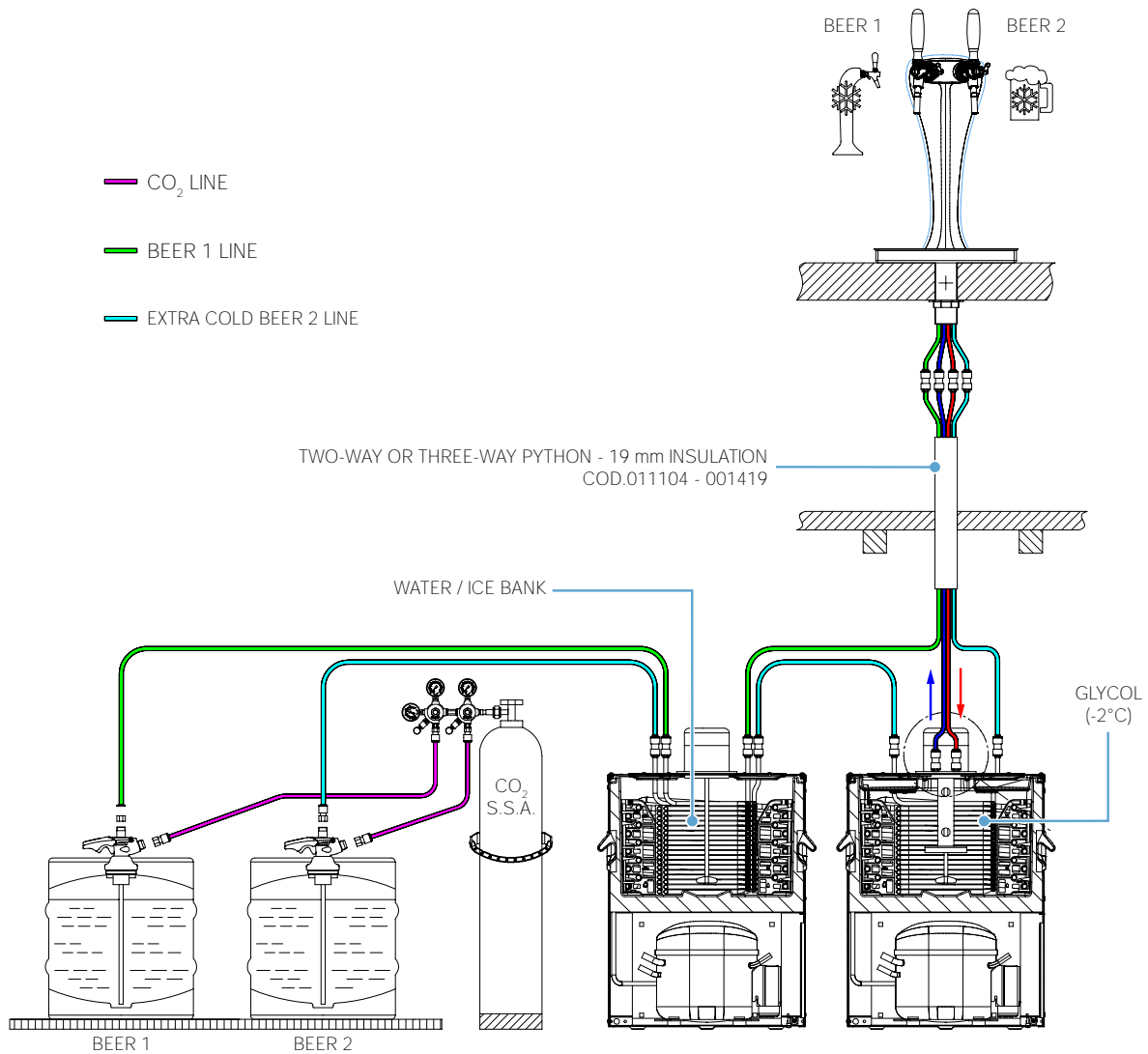
One solution is to use the same fluid that is used to obtain the ICE effect on the towers. In this case the thermostat must be set to approx -2°C to avoid the beer freezing within the coils.

Typically the beer is pre-cooled in a primary cooler (with water and an ice bank) and brought to approx $2/4^{\circ}\text{C}$. The beer then enters the extra cold cooler with digital thermostat **(A)** and is cooled further until it reaches a temperature of around 0°C .

It is also possible to use a special fluid, 2FLOW, with a freezing point of -2°C . In this case it will be possible to obtain an ice bank which will act as a cold reserve for the busiest periods. With 2FLOW the thermostat should be set to -4°C . This will allow the cooling liquid to freeze on the surface of the evaporator **(B)**, while the liquid part (surrounding the beer coils **C**) will remain at a temperature of approx -2°C (2 degrees below zero).



3.6.4 DIAGRAM WITH PRIMARY AND SECONDARY COOLER FOR EXTRA COLD BEER



3.6.5 TO OBTAIN THE ICE EFFECT ON THE TOWERS AND DISPENSE EXTRA COLD BEER

It is also possible to combine the effect of the ICE tower with the dispensation of extra cold beer.

Typically this solution is obtained using two separate coolers, one for freezing the tower (without coils and with glycol at -5°C) and one for obtaining extra cold beer (with glycol at -2°C).

Contact the Manufacturer to find out more about the various options available.

3.7 WATER COOLED CONDENSING UNIT

This solution is typically used when the venue in which the machine is installed has a controlled temperature level, and the user does not wish that the heat produced by the cooler increases the ambient temperature.

In this case a heat exchanger **(A)** (which runs on heat from the venue's water system) is used instead of the finned condenser and fan motor.

The machine must therefore be connected to a clean - and preferably fresh - water supply. The presence of dirt in the water could lead to deposits forming within the heat exchanger which could negatively impact its performance. High temperatures of incoming water would make the heat collected by the circuit more difficult to dispose of.

Exchange water is normally transported to a drainage point or recirculated in a closed circuit of exchange with the external environment.

When the compressor is switched on, the solenoid valve **(C)** enables the passage of condensing water; when the compressor is switched off, the solenoid valve interrupts the passage of the water.

The machine is equipped with a safety thermostat **(B)** which interrupts the operation of the compressor in case of too-high temperature (for example in the absence of condensation water).

In the case of a bimetallic thermostat, when the temperature drops, automatic operation of the machine is restored.

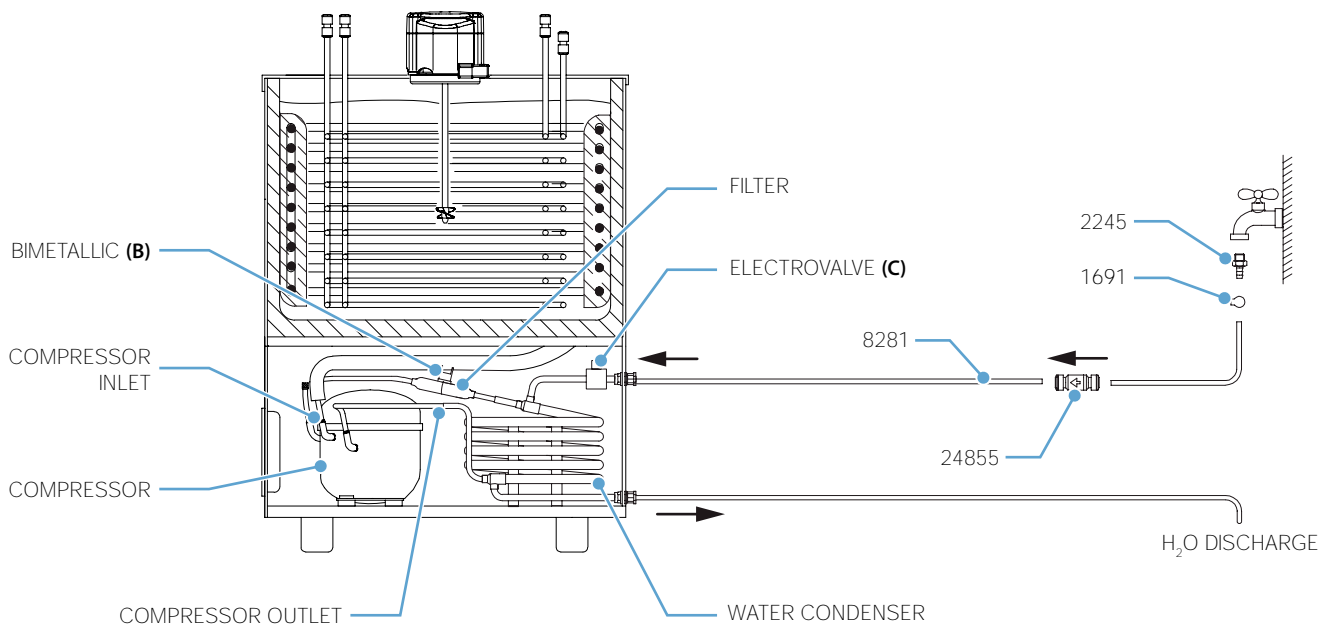
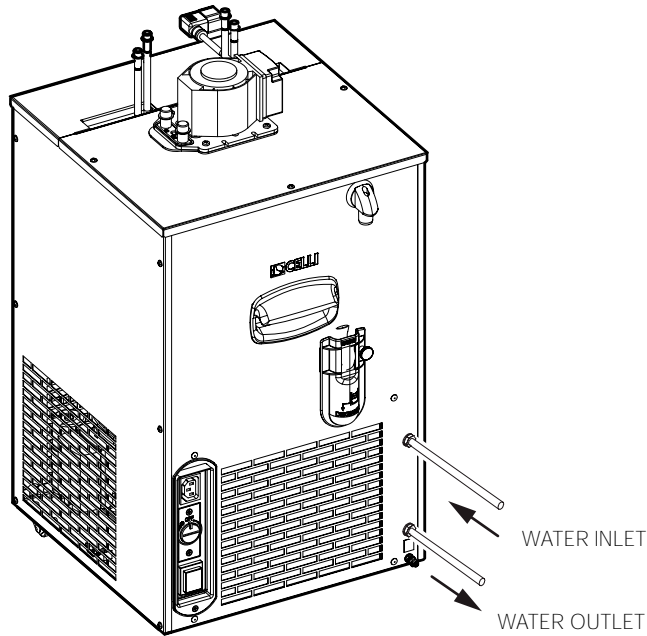
In the case of a manual reset safety thermostat, a technician is required to check the problem and restore operation.



NOTE

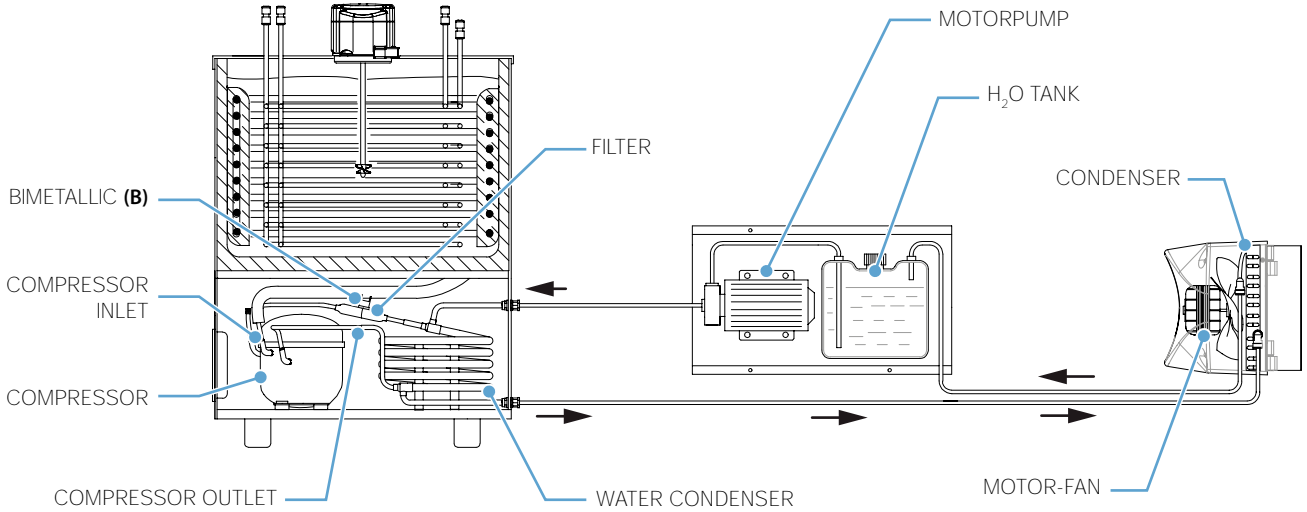
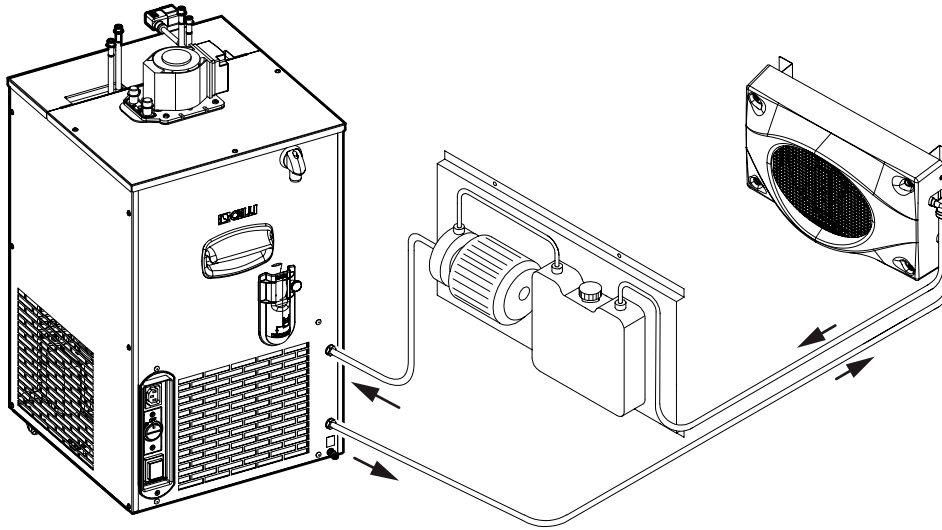
See the connection diagrams for reference.

MACHINE CONNECTION DIAGRAM WITH DISPERSIVE WATER-COOLED CONDENSING



MACHINE CONNECTION DIAGRAM WITH CLOSED CIRCUIT CONDENSING

WATER CONDENSING COOLER WITH DUMPING UNIT



3.8 TECHNICAL DATA

	GEO20	GEO30	GEO50	GEO75	GEO27	GEO40	
Body	STAINLESS STEEL / AISI 430	STAINLESS STEEL / AISI 430	STAINLESS STEEL / AISI 430	STAINLESS STEEL / AISI 430	AISI 430	AISI 430	
Power supply	230 V ~ 50/60 Hz	230 V ~ 50/60 Hz	230 V ~ 50/60 Hz	230 V ~ 50/60 Hz	230 V ~ 50/60 Hz	230 V ~ 50/60 Hz	
Height	Vertical version	22.3 in (567 mm)	25.6 in (652 mm)	27.2 in (692 mm)	27.6 in (702 mm)	26 in (663 mm)	26.6 in (677 mm)
	Horizontal version	18.6 in (474 mm)	21.1 in (538 mm)	21.3 in (542 mm)	22.2 in (564 mm)	n.d.	n.d.
	Streamlined version	26.6 in (676 mm)	29.9 in (760 mm)	31.5 in (801 mm)	31.7 in (807 mm)	n.d.	n.d.
	Cooler on wheels version*	n.d.	n.d.	38.6 in (982 mm)	39.6 in (1008 mm)	n.d.	n.d.
Width	Vertical version	14 in (357 mm)	15 in (383 mm)	17.2 in (439 mm)	21.8 in (556 mm)	15 in (383 mm)	17.2 in (439 mm)
	Horizontal version	21.9 in (557 mm)	22.9 in (583 mm)	25.3 in (645 mm)	30.1 in (767 mm)	n.d.	n.d.
	Streamlined version	14 in (358 mm)	15.1 in (384 mm)	17.2 in (439 mm)	21.9 in (557 mm)	n.d.	n.d.
	Cooler on wheels version*	n.d.	n.d.	17.2 in (439 mm)	21.8 in (556 mm)	n.d.	n.d.
Depth	Vertical version	14 in (357 mm)	15 in (383 mm)	17.2 in (439 mm)	21.8 in (556 mm)	15 in (383 mm)	17.2 in (439 mm)
	Horizontal version	14.1 in (359 mm)	15.1 in (384 mm)	17.3 in (441 mm)	21.9 in (557 mm)	n.d.	n.d.
	Streamlined version	21.1 in (538 mm)	15.1 in (384 mm)	17.2 in (439 mm)	21.9 in (557 mm)	n.d.	n.d.
	Cooler on wheels version*	n.d.	n.d.	20.2 in (515 mm)	21.9 in (557 mm)	n.d.	n.d.

(*) EXCLUDING DISPENSING TOWER

	GEO20	GEO30	GEO50	GEO75	GEO27	GEO40
Shipping weight	66.1 lb (30 kg)	72.7/81.5 lb (33/37 kg)	74.9/83.7 lb (34/38 kg)	105.8/110.2 lb (48/50 kg 55 kg [crl])	81.57 lb (37 kg)	90.38 lb (41 kg)
Tank capacity	4.7 us gal (18 L)	8.4 us gal (32 L)	12.6 us gal (48 L)	20.3 us gal (77 L)	7.13 us gal (27 L)	10.56 us gal (40 L)
Ice bank	17.6 lb (8 kg)	33 lb (15 kg)	48.5 lb (22 kg)	74.9 lb (34 kg)	26.45 lb (12 kg)	33.06 lb (15 kg)
Compressor	1/5 (Hp)	1/4-1/3 (Hp)	1/3-1/2 (Hp)	3/4 (Hp)	1/4 - 1/3 (Hp)	1/2 (Hp)
Compressor cooling power	401 W **	513/571 W **	571/905 W **	1282 W **	513/571 W	905 W
Refrigerant	R134a / R290	R134a / R290	R134a / R290	R134a	R134a / R290	R134a / R290
Coil material	AISI 304 STAINLESS STEEL***	AISI 304 STAINLESS STEEL**	AISI 304 STAINLESS STEEL**	AISI 304 STAINLESS STEEL**	AISI 304 STAINLESS STEEL**	AISI 304 STAINLESS STEEL**

(**) AMBIENT TEMPERATURE 32°C

(***) PICKLED AND PASSIVATED

3.8.1 SOUND EMISSIONS

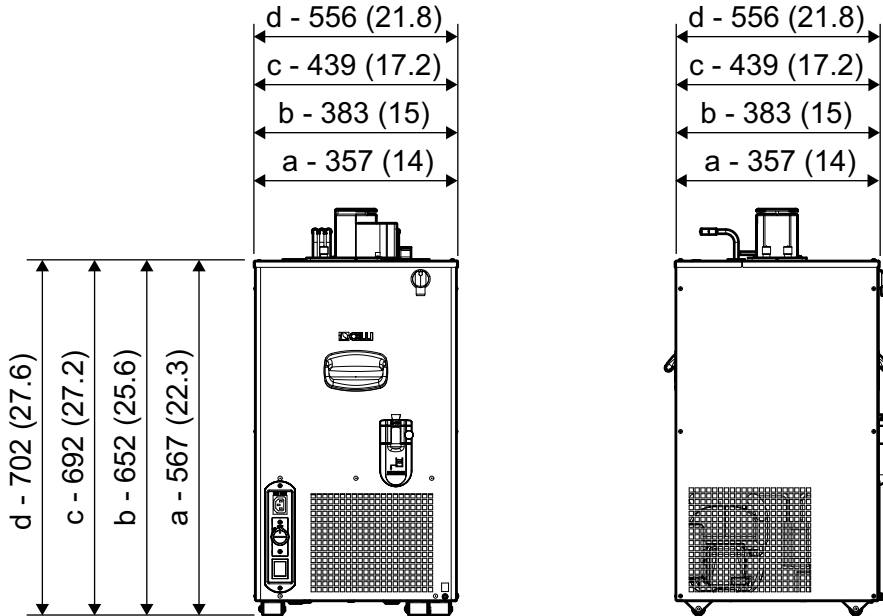
The machine was designed and built to reduce the noise level at source.

The A-weighted sound pressure level is less than 70 dB (A).

3.9 DIMENSIONS IN MM (INCHES)

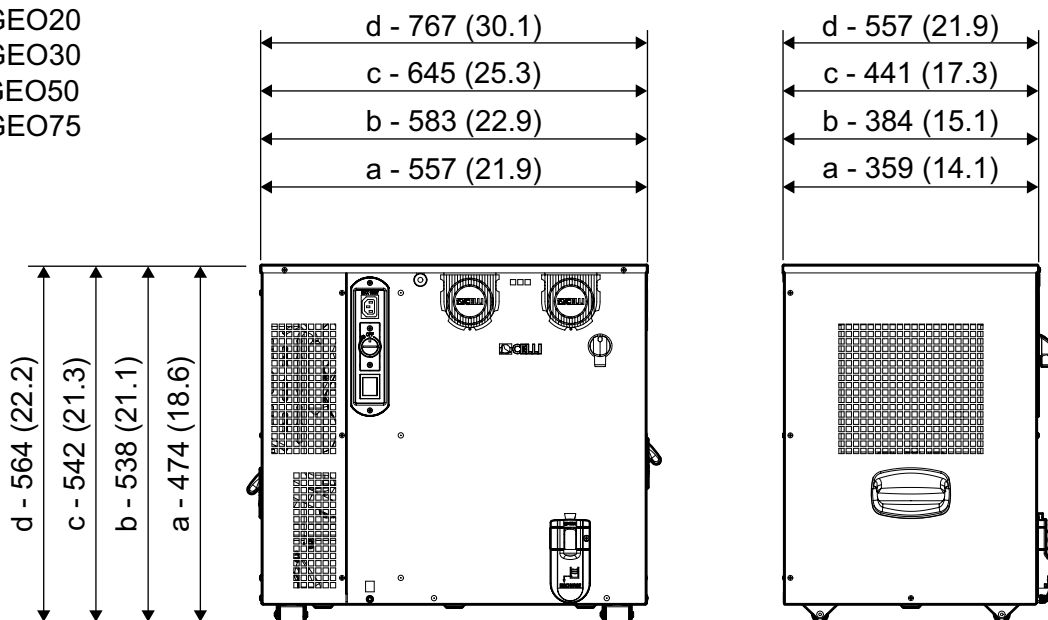
3.9.1 GEO VERTICAL

- a = GEO20
- b = GEO30
- c = GEO50
- d = GEO75



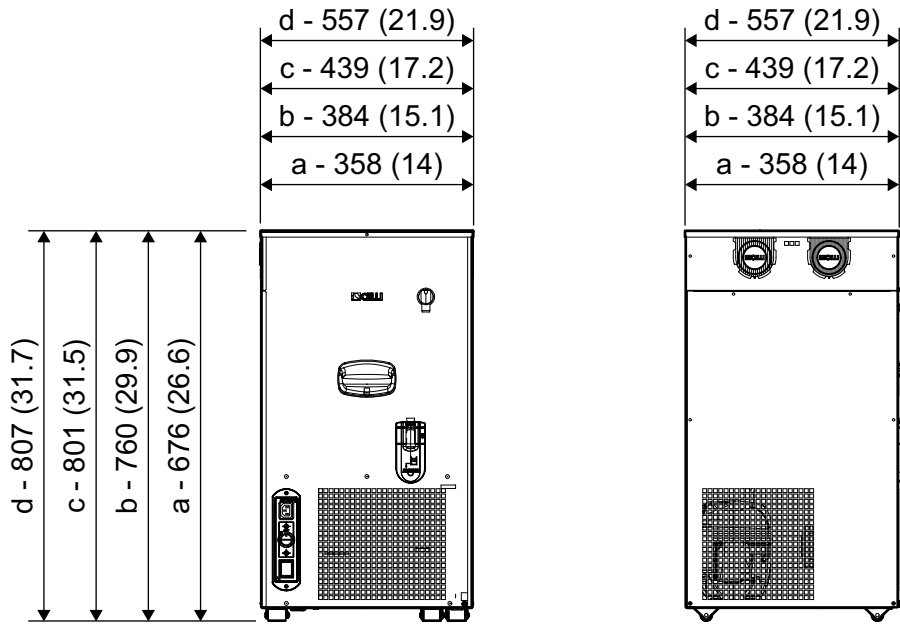
3.9.2 GEO HORIZONTAL

- a = GEO20
- b = GEO30
- c = GEO50
- d = GEO75



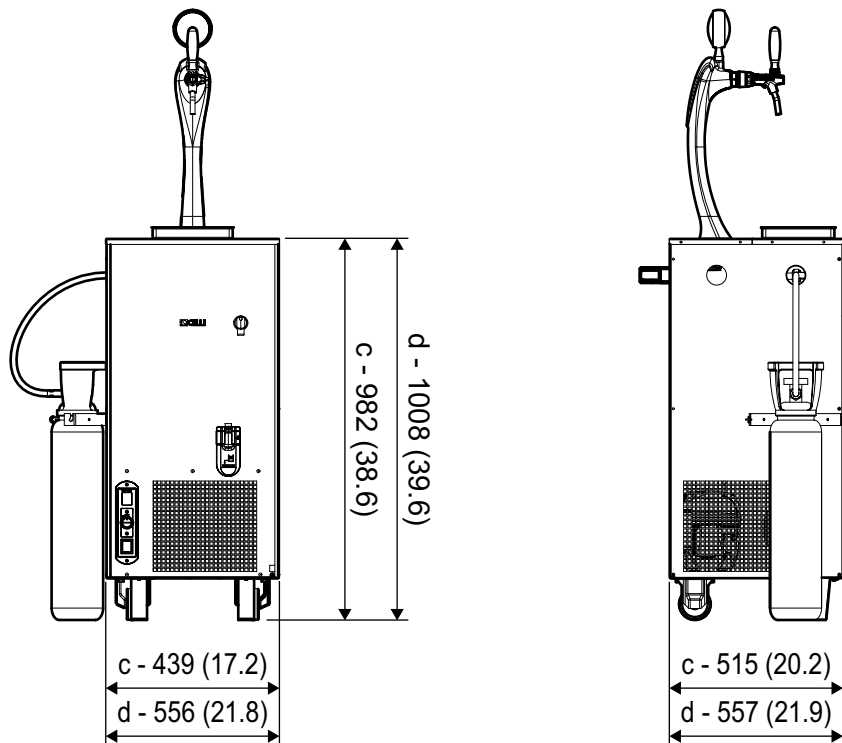
3.9.3 GEO STREAMLINED

- a = GEO20
- b = GEO30
- c = GEO50
- d = GEO75



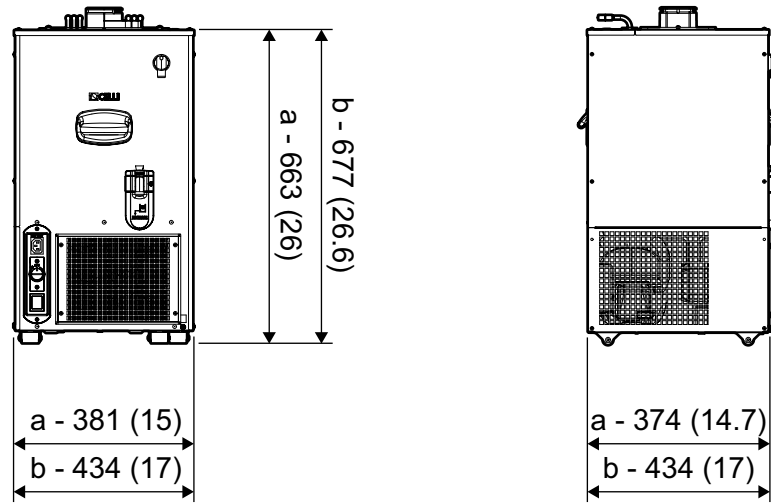
3.9.4 GEO COOLER ON WHEELS

- c = GEO50
- d = GEO75



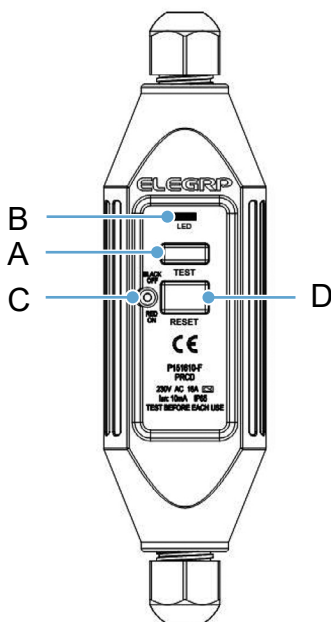
3.9.5 GEO27 - GEO40

a = GEO27
b = GEO40



3.10 DIFFERENTIAL-SWITCH POWER CORD (OPTIONAL)

The differential switch is a safety device designed to cut off power to the machine in the event of a ground fault (electrical leakage) or phase-ground electrocution, thus protecting the people at risk against both direct and indirect electric shock. It does not offer any protection against overload or short circuit between phase and neutral.



The differential switch is equipped with a TEST (A) button that allows you to verify its proper functioning (test before each use).

When you press the TEST button, the power supply to the machine is cut off; the LED (B) turns off and the indicator light (C) next to the RESET button (D) turns black.

Press RESET to reset the differential switch: the machine will be powered, the LED will turn on and the indicator light next to the RESET button will turn red.



4. INSTALLATION

4.1 CHECKING AND REMOVING PACKAGING

You must always check that the machine received corresponds to that indicated in the shipping document.

The machine is shipped in a cardboard box. After unpacking, check that the machine has not been damaged during transport, otherwise report to the carrier any abnormalities.

The Manufacturer denies all liability for any damage due to transportation.

We recommend that you contact the Manufacturer or authorized dealers for original components or spare parts.

 **NOTE**

The packaging of the machine consists of a cardboard box and a proper amount of protective shock-proof material. Dispose it of in compliance with applicable local laws.

Do not burn or dump the packaging materials in the environment.





4.2 POSITIONING

The machine must be placed in a horizontal position on a surface that can support the weight of the machine and of the water.

Positioning must ensure adequate ventilation; for the minimum distance from the walls refer to the figure below.

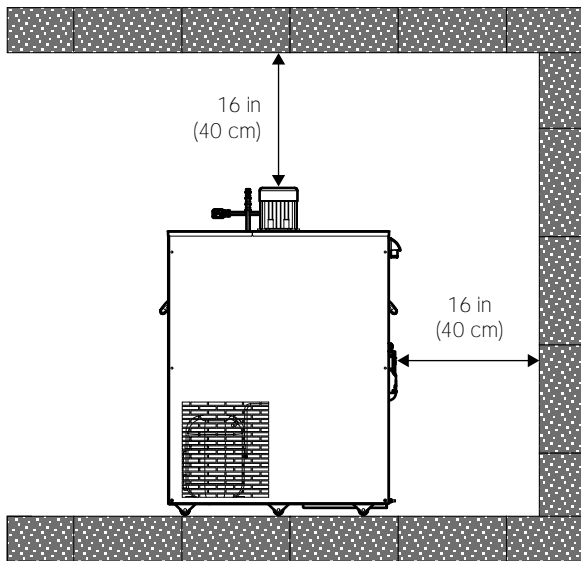
The machine must not be connected close to direct or indirect heat sources (ovens, stoves, radiators, etc.). Power outlets and water mains outlets must be provided close to the machine and placed so that the power cord and the water hose are not getting in the way.

CAUTION

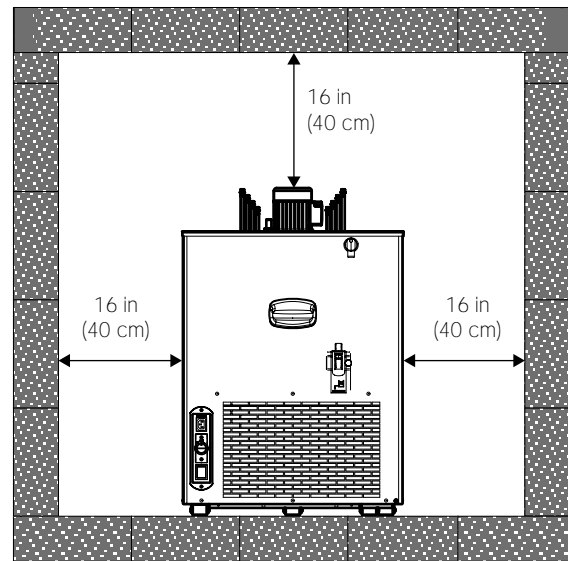


Do not obstruct ventilation openings.

SIDE VIEW



FRONT VIEW



4.3 ENVIRONMENTAL CONDITIONS

The machine must be protected from rain, splashing water and placed in a space with temperature corresponding to the climate class (given on the CE plate), otherwise the warranty is void and the machine failures may be encountered.

The machine is not suitable for external use.

The possible climatic classes are as follows:

- SN - For room temperatures ranging from 10°C to 32°C.
- N - For room temperatures ranging from 16°C to 32°C.
- ST - For room temperatures ranging from 18°C to 38°C.
- T - For room temperatures ranging from 18°C to 43°C.

CAUTION



LOW TEMPERATURE

If the machine is subjected to temperatures below 0°C, the water may freeze inside and damage the machine.



4.4 ELECTRICAL REQUISITES

NOTE

Verify that the electrical requirements are in accordance with the data shown on the identification plate of the machine.

DANGER



ELECTRIC NETWORK

Always disconnect the power supply from the machine before carrying out any operation on the same in order to avoid accidents and injury.

CAUTION



ELECTRICAL REQUIREMENTS

The electrical circuit must be properly grounded and connected through an appropriate differential switch.

CAUTION



PLUG SUPPLIED

Plug the machine to the mains using the plug supplied.

If it needs to be replaced, use an equivalent model approved in the country of use.

Any replacement must be carried out by the service centre or by qualified technical staff.

Should it be necessary to use extension cords, multiple sockets, or adapters in general, use only material with the certification mark of the country of use; the power value of the latter must always be greater than that absorbed by the machine.

If the power cable is damaged, replace it by contacting the Manufacturer's Technical Assistance Service or, in any case, by availing yourself of trained personnel with equivalent qualifications in order to avoid any risk.



4.5 CONNECTIONS

This type of machine has a series of couplings for the inflow and outflow of drinks.

Carry out the connections described with the machine switched off and the power cord unplugged.

4.5.1 PREPARING THE MACHINE

Overflow connection

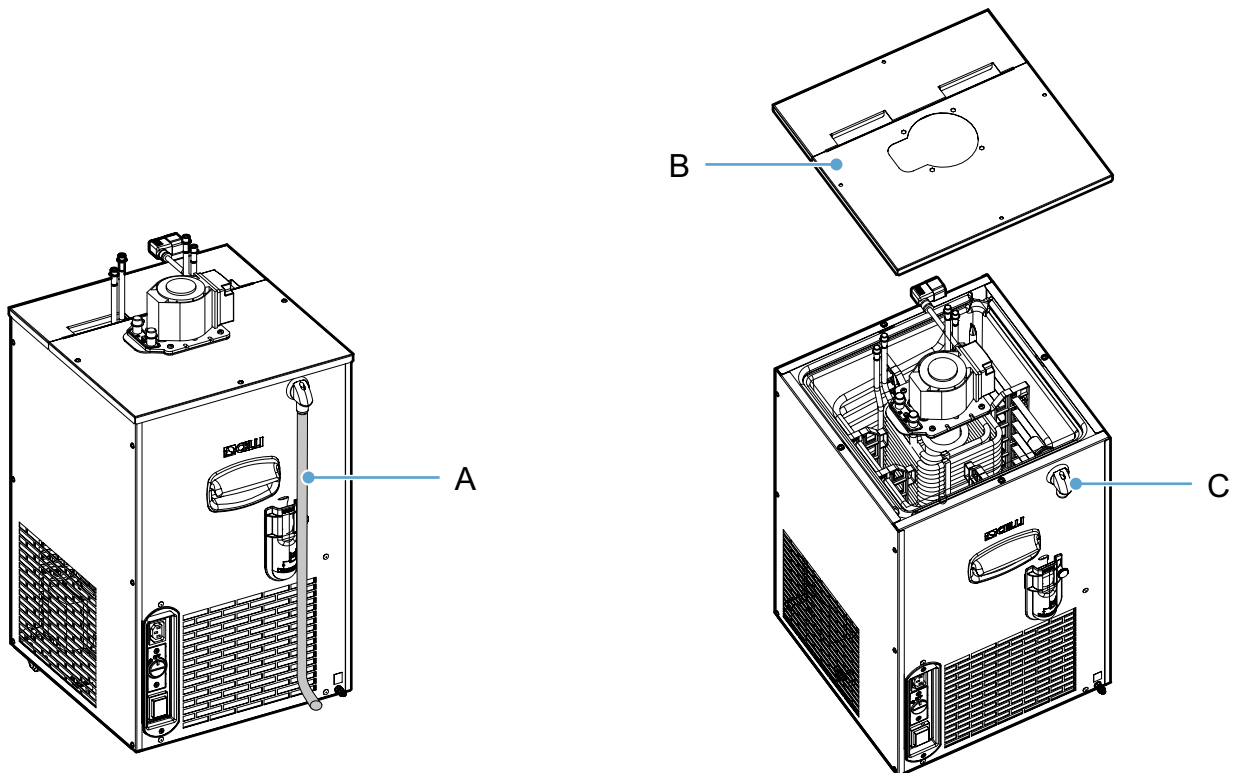
Use a tube to connect the overflow drainage connector **(A)** of the tank to a drainage point or an adequately sized receptacle.

Check the overflow connector is not obstructed.

Filling the water tank

- 1) Remove the upper cover **(B)** by loosening the fixing screws.
- 2) Fill the tank with clean water until the level is about 1 in (2 cm) below the hole **(C)** of the overflow connector.

Make sure no foreign bodies are left in the tank.





4.5.2 CONNECTION TO THE DRINKS KEGS

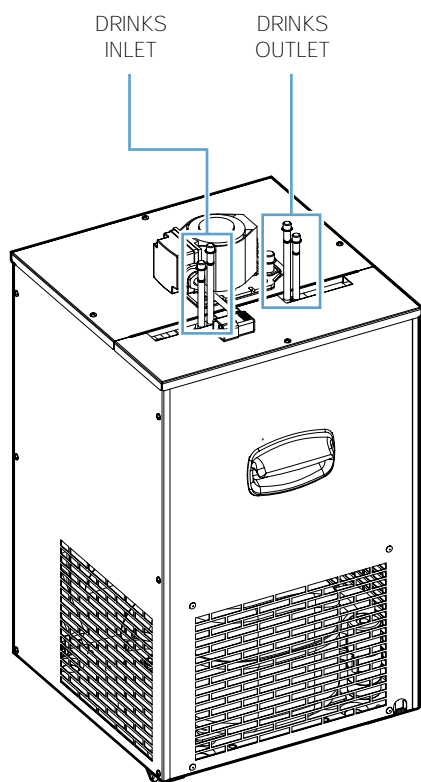
The connection to the keg is made by means of the “heads” or “quick connections”.

Connect the drink inlet couplings on the machine to the relative kegs. As far as possible, avoid section changes and restrictions that could lead to dispensing problems and also create areas where bacteria could build up and then be difficult to remove (*).

(*) Paragraph 6.2 page 64

 **NOTE**

If you use carbon dioxide (CO₂), be sure to air the room.



4.5.3 CONNECTING THE RECIRCULATION LINES

The water recirculation tubes in the python can be recognised by their larger diameter; they are usually red (IN recirculation) and blue (OUT recirculation).

Connect the water system outlet and inlet to the two python tubes with the bigger diameter.

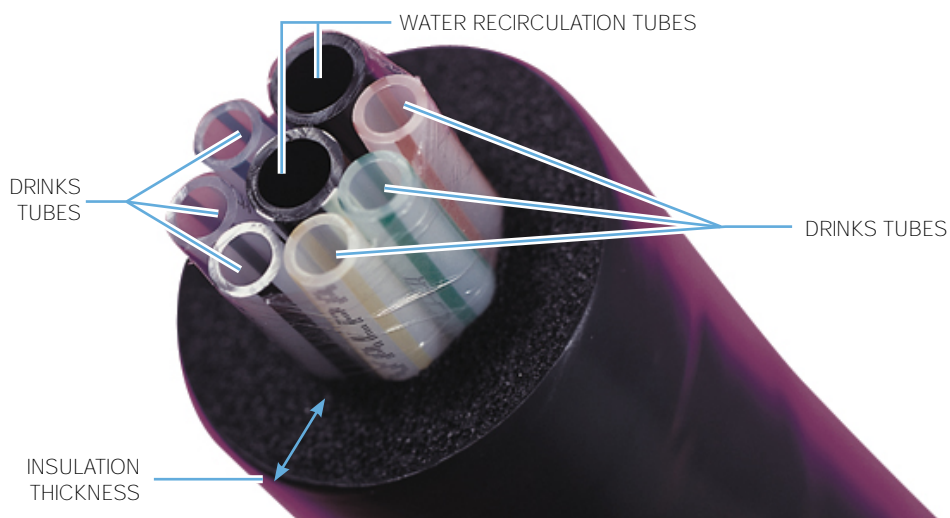


4.5.4 CONNECTING THE PYTHON

Connect the python (with the water recirculation line) to the dispensing tower (not included).

Avoid passing of the python near heat sources, sharp bends and crushing of the same.

The pipes located inside the python are marked with numbers (or different colors) to facilitate the connection between the coils and the inlets of the tap.



Python-insulation thickness depends on the room temperature and humidity.
Refer to the tables below.

INSULATOR THICKNESS (mm)	HEAT ABSORBED BY THE BEVERAGE (W/25 m)	
	ROOM/ BEV. TEMP. AT 32 (°C)	ROOM/ BEV. TEMP AT 43 (°C)
9	388	521
13	288	387
19	197	265
25	141	189
32	97	131

ROOM TEMPERATURE 30°C

RATED INSULATION THICKNESS (mm)	RELATIVE HUMIDITY				
	60%	70%	75%	80%	85%
9	√	X	X	X	X
13	√	√	X	X	X
19	√	√	√	√	X

ROOM TEMPERATURE 23°C

RATED INSULATION THICKNESS (mm)	RELATIVE HUMIDITY				
	60%	70%	75%	80%	85%
9	√	√	X	X	X
13	√	√	√	X	X
19	√	√	√	√	√



4.5.5 CONNECTING THE CARBON DIOXIDE CO₂ (N₂ FOR WINE)

 **NOTE**

To facilitate the connections, the inlets and outlets are identified by special adhesives.

DANGER



CO₂ (CARBON DIOXIDE)

CO₂ bottles must always be stored in a well-ventilated place where the air can flow in and out. Great care must be taken to prevent CO₂ leaks throughout the system, including the gas bottles. If a CO₂ leak is suspected, especially in a small area, ventilate the contaminated area at once. Persons exposed to high concentrations of CO₂ will experience trembling, swiftly followed by unconsciousness and suffocation.

DANGER



GAS CYLINDER LOCATION

To prevent the risk of injury or damage, the CO₂/ N₂ cylinder must always be kept in a vertical position against a wall, held in place by a chain fixed to a bracket.

Do not expose the bottle to heat sources or very low temperatures.

 **NOTE**

Only super-dry food grade CO₂ should be used.

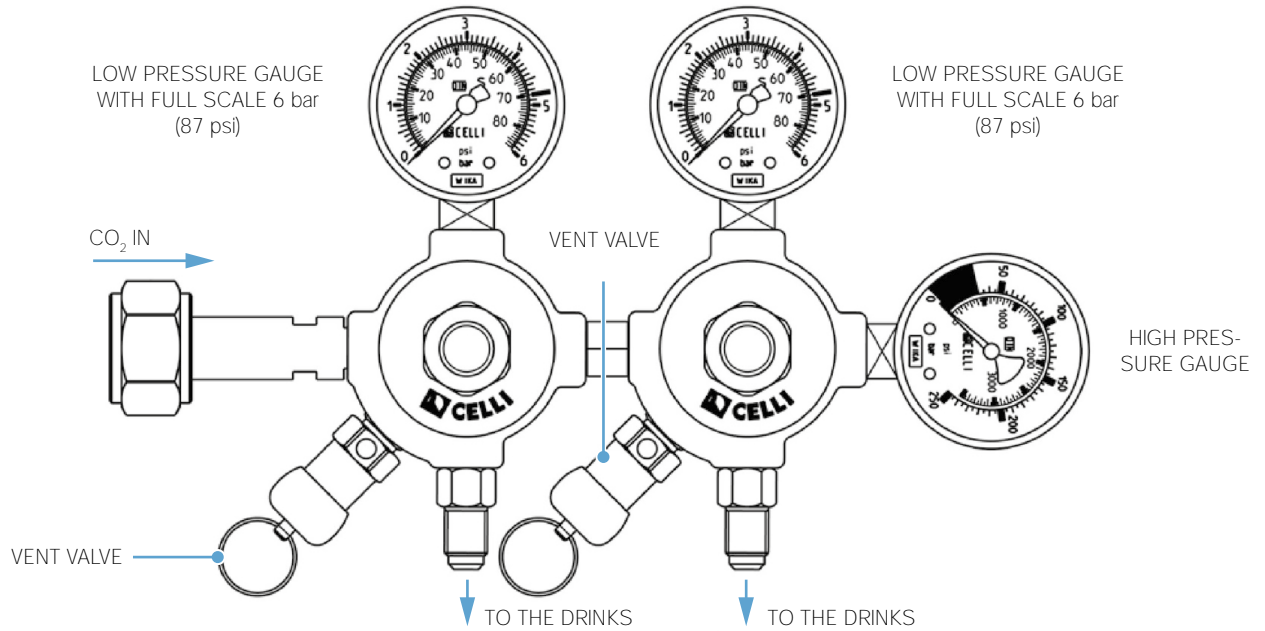
Before connecting the pressure regulator to the cylinder, check that there is no dirt on the valve. If so, remove it carefully.

 **NOTE**

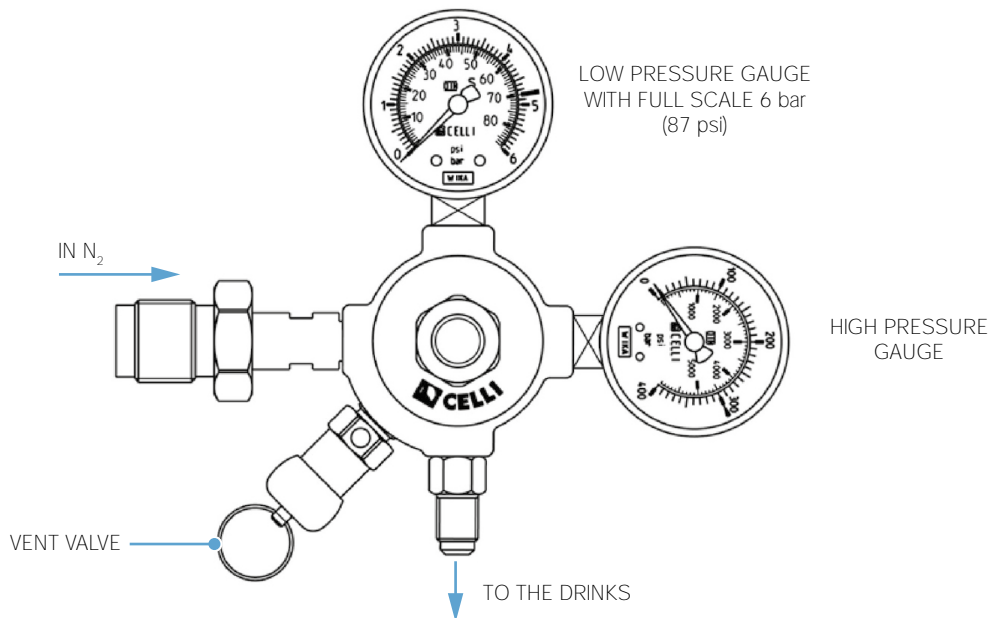
There are different types of CO₂ / N₂ cylinders on the market.

Always obtain a pressure reducer suitable for the type of valve on the cylinder.

CO₂ REDUCER



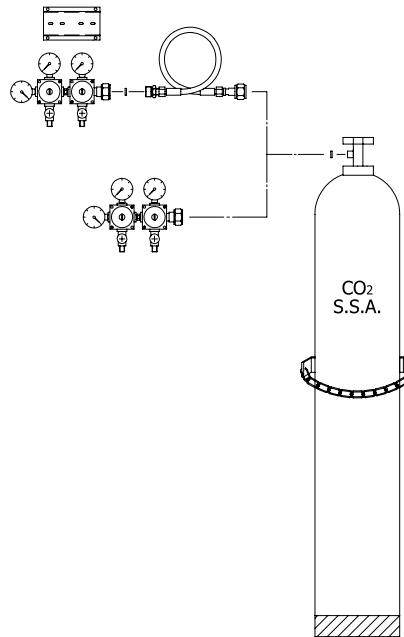
N₂ REDUCER



To make the carbon dioxide (or nitrogen) connection correctly, proceed as follows:

- 1) In the case of pressure reducers with more than 2 bodies, these should be fixed to a wall using a specific bracket and connected to the gas bottle using a flexible tube for high pressures.
- 2) Connect one end of the CO₂ (N₂) tube to the reducer (nut + nipple + conical gasket), and the other end to the drinks keg, using the specific head or a quick connection.
- 3) Slowly open the cylinder valve as far as possible, to avoid any leakage of CO₂ (N₂) from the seal.
- 4) Adjust the equilibrium pressure and delivery pressure by means of the screw on the reducer: turn it clockwise to increase the pressure, or anticlockwise to reduce it.

EXAMPLE OF CO₂ BOTTLE REDUCER CONNECTION



 **NOTE**

Never exceed the pressure of 6.5 bar at the outlet of the reducer in order to prevent compromising the circuit.



4.5.6 ELECTRIC CONNECTION

CAUTION



ELECTRICAL REQUISITES

The electrical circuit must be correctly earthed and connected by means of a suitable differential safety breaker.

CAUTION



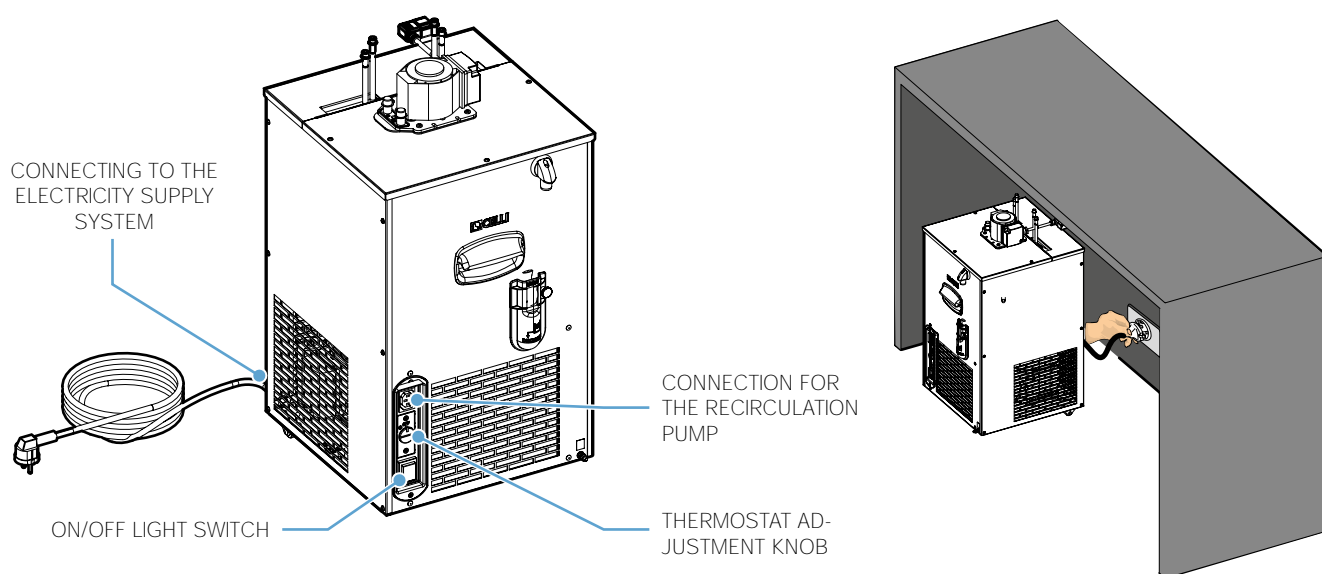
PLUG SUPPLIED

Plug the machine to the mains using the plug supplied.

If it needs to be replaced, use an equivalent model approved in the country of use.

Any replacement must be carried out by the service centre or by qualified technical staff.

Should it be necessary to use extension cords, multiple sockets, or adapters in general, use only material with the certification mark of the country of use; the power value of the latter must always be greater than that absorbed by the machine.



The machines of the GEO range comply with the safety standards in force, and carry the EC mark.

CAUTION



If the machine is installed in a kitchen, European Standard EN 60335-2/75 specifies that it must be connected to an equipotential circuit via a wire with a section measuring 2.5 - 10 mm². This connection must be made by a skilled technician, in compliance with the regulations in force.

If the power cable is damaged, replace it by contacting the Manufacturer's Technical Assistance Service or, in any case, have it done by personnel with equivalent qualifications in order to prevent any risk.

- Connect the plug to a suitable power supply socket, checking that the characteristics of the electricity supply system correspond to the machine's technical data.
- Check that the ON/OFF switch is switched to ON.
- Check that the fan and compressor are working.
- After a few minutes, the surface of the condenser starts to heat up; check that this is happening.
- If the fan unit and/or compressor are not working, call the Technical Service.



4.6 ADJUSTING THE CARBON DIOXIDE (CO₂) AND NITROGEN (N₂)

The CO₂ adjustment pressure depends on the amount of CO₂ in the drink to be dispensed (request the information from the drink distributor), the temperature of the working keg, and the difference in level between the keg and the dispensing tap.

The information about the CO₂ content in the drink must be requested from the drink manufacturer, as it is one of the production parameters of the drink itself. It is good practice to position the keg on a wooden platform and leave it in the work area for at least 24h before connecting it to the dispensing head: this guarantees that the set CO₂ pressure corresponds to the actual keg temperature.

The temperature of the room where the working kegs are housed must be kept constant; strong temperature swings may lead to the over-saturation or under-saturation of the drink. If the temperature tends to fall at night, it is a good idea to either disconnect the CO₂ cylinder from the keg (using a reducer output tap) or disconnect the dispensing head from the keg (simply by raising the head lever).

To calculate the equilibrium pressure, special slide rules are used (A).



When the pressure applied to the keg is high (on the basis of the value calculated with the slide rule) and the flow to the tap creates dispensing difficulties, you must use the tap with a compensator. The use of the compensator slows down the flow of the drink, thereby ensuring professional dispensing.

PLASTIC TAP WITH COMPENSATOR



BRASS TAP WITH COMPENSATOR



For drinks such as still wine, where no CO₂ is involved in their manufacture, nitrogen must be used. Nitrogen is an inert gas and so it does not modify the characteristics of the drink. In this case, the pressure must be sufficient to push the wine as far as the tap, so it can be dispensed.



4.7 CHECKING FOR LEAKS

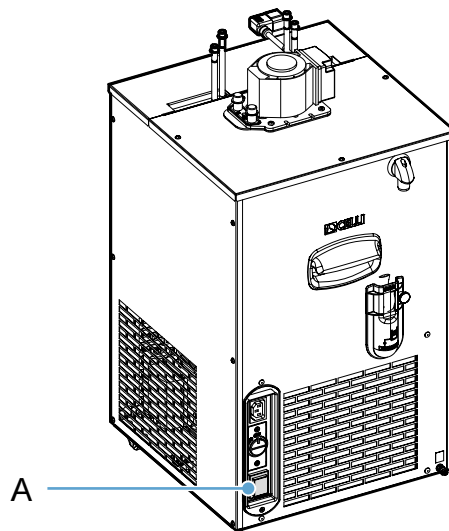
- 1) Check for gas leaks by pressurising the system and closing the gas cylinder valve. Wait a couple of minutes, then check whether the reading on the pressure reducer pressure gauges has dropped below the set value.
- 2) Check that the system has no CO₂ / N₂ or drinks leaks. Check the recirculation line as well.
- 3) If there are no leaks, re-open the valve on the CO₂ / N₂ cylinder.



5. USING THE MACHINE

5.1 START-UP

- 1) After checking that all the connections and adjustments are correct, connect the machine to the electricity supply by inserting the plug in the nearest suitable socket.
- 2) Turn the ON/OFF switch to ON **(A)**.
- 3) Wait the length of time needed for the ice bank to form (about 3 hours), and for the cooling unit to get up to its optimum working speed.



At this point, you can dispense the drinks.

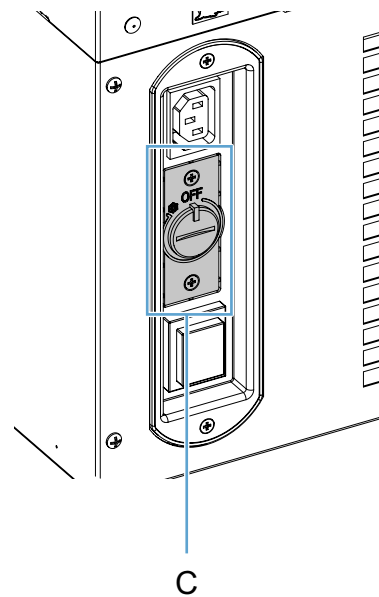
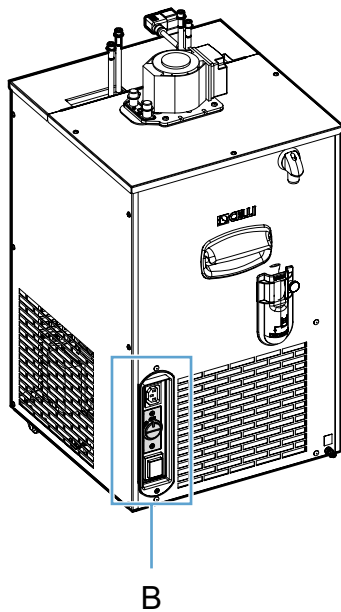
 **NOTE**

Remember that for correct dispensing the tap must be switched on assertively.



5.2 SETTING THE TEMPERATURE

The temperature of the dispensed drinks can be adjusted by means of a thermostat (**B**) located on the front of the machine. Turn the knob (**C**) clockwise to obtain colder drinks, or anticlockwise to raise the temperature. If the thermostat knob is turned fully clockwise, the ice bank will form. For the version with electronic thermostat, the temperature cannot be set because the machine always works with an ice bank.



NOTE

For the version with digital thermostat, refer to the instructions for the thermostat supplied with the machine.



5.3 STOPPING THE MACHINE

REGULAR STOPS

If the machine is to be left unused for a medium-long period, disconnect the plug from the electricity mains.

Disconnect the machine from electricity sources and protect from heat and bad weather. Cover it so that dust and/or splashes of any kind cannot damage it.

Turn off the water supply and close the valve of the CO₂ bottle.

Remove the drink container connections, and wash them.

If the machine needs to be shipped, stored or moved, the circuit must be sanitised (*).

All the water must be removed; very low temperatures might freeze any residues of sanitiser solution or water, which are hazardous since they may damage internal components.

(*) Paragraph 6.6 page 68

NOTE

If the machine is out of order due to a fault or maintenance, or for any other reason, you are advised to inform everyone of this fact by affixing a sign.

Make sure the drink tanks respect the conditions indicated by their suppliers, so the characteristics of the product inside are not jeopardised (check the conditions for proper conservation, and the expiry dates on the products).



6. MAINTENANCE

This chapter contains the complete list of requisites and procedures relating to machine maintenance. Proper maintenance requires daily checks and inspections by the operative and/or staff trained in routine maintenance, and regular procedures including cleaning, adjustment and replacement operations carried out by authorised skilled technical staff.

When replacing components, use only genuine Manufacturer spare parts.

If the information or procedures in this chapter are not clear, contact the Manufacturer for explanations before proceeding.

If machine maintenance is carried out in such a way as to breach the instructions supplied, using non-original parts or without the written authorisation of the Manufacturer, or in any way such as to damage the machine or modify its characteristics, the Manufacturer cannot be held liable for the safety of persons or machine malfunctioning.

Any unauthorised modification invalidates the contractual warranty.

NOTE

Do not carry out any procedure, modification or repair of any kind that is not indicated in this manual.

DANGER



MAINS ELECTRICITY

Always disconnect the machine from the electricity supply before doing any work on it, to prevent damage and health hazards.



6.1 ROUTINE MAINTENANCE

To always ensure good machine operation, certain maintenance procedures (described below) are required.

DAILY MAINTENANCE PROCEDURES:

- 1) Clean the tap spout.

the tap (and especially the spout) must be cleaned every day with warm or hot water, but without using detergents or abrasive sponges.

- 2) Drip-tray basin.

the drip-tray basin under the taps must be emptied every day, and washed with hot water.

- 3) Rinse out the beer lines.

when each keg is finished, rinse out the beer lines with clean drinking water.

- 4) Clean the dispensing tower.

the towers must be regularly cleaned with a damp cloth, without using detergents or abrasive sponges. The brass parts not subjected to treatment or gilding must be regularly cleaned with a soft cloth dipped in a specific cleaning liquid; this will keep them shiny and bright. The treated brass parts must be cleaned with warm water and, if necessary, neutral detergents. Do not use solvents.

- 5) Check the CO₂ / N₂ supply and pressure levels.

check the CO₂ / N₂ sources are full and in good working order, and that the set pressure values are correct (*).

- 6) Check the expiry date of the drinks.

check the conditions for proper conservation, and the expiry dates on the drinks.

(*) Paragraph 4.6 page 54

CAUTION



Do not clean the machine with water under pressure; this could reach electrical parts.

To clean any machines on the external body of the machine, use a non-abrasive cloth moistened with warm water and possibly a neutral and non-aggressive detergent. After treatment, dry the surface thoroughly.

6.1.1 TABLE OF PROCEDURES

The table below details the maintenance procedures required at the stated intervals.

These periods refer to normal conditions of use.

ROUTINE MAINTENANCE VERIFICATION TABLE							
MAINTENANCE OPERATION TO BE CARRIED OUT	TO BE CARRIED OUT...						REFERENCE PARAGRAPH
	at the end of the day	every 15/30 days	every 30/60 days	every 3 months	once a year	When necessary	
Cleaning of tap spout	✓						Paragraph 6.4 page 66
Cleaning of tap		✓					Paragraph 6.7 page 71
Sanitization of beverage lines **			✓				Paragraph 6.6 page 68
Cleaning of condenser				✓			Paragraph 6.5 page 67
Search for leaking					✓		Paragraph 4.7 page 56
Replacement of steel drums						✓	Paragraph 6.2 page 64
Replacement of CO ₂ / N ₂ cylinder						✓	Paragraph 6.3 page 65
Replacement of tank liquid						✓	Paragraph 6.8 page 72
Rinsing of beer lines*						✓	Paragraph 6.9 page 74
NOTES							
(*) The rinsing of the beer lines is to be carried out each time the related steel drum is replaced.							
(**) The sanitation of beverage lines must also be performed at the first start-up of the machine.							



6.2 REPLACING THE STEEL KEGS

If the drink comes to an end, you must replace its tank (steel keg).

To replace it, proceed as follows:

CAUTION



DRINK CONTAINED IN PRESSURISED KEG

To avoid any harm to people or damage to property, do not remove the cover from the keg until you have discharged the CO₂ pressure inside.

- 1) In the case of beer kegs, raise the head lever (A) then remove the head from the keg. In the case of drinks kegs, remove the empty steel keg by first disconnecting the drink tube (B) (black), then the CO₂ tube (C) (grey).
- 2) Rinse the connections or head in hot water to remove all the drink residue.
- 3) In the case of beer kegs, position the head on the connector and lower the lever to connect it. In the case of drinks kegs, position a full steel keg and connect first the CO₂ tube, then the drink tube.



6.3 REPLACING A CARBON DIOXIDE (CO₂) OR NITROGEN (N₂) BOTTLE

When the high pressure gauge needle of the reducer is in the red zone you must replace the cylinder.

- 1) Write down the values of pressure set on the pressure reducer and completely close the cylinder via the valve.
- 2) Slowly loosen the nut of the pressure reducer or the high pressure hose connected to the cylinder. Verify that the cylinder pressure is zero. Remove the pressure reducer (or disconnect the high pressure hose from the cylinder, if present). Check the condition of the gaskets between the reducer and the cylinder or between the high pressure hose and the cylinder. If the gasket is deformed or cracked, call a specialist for replacement.
- 3) Replace the CO₂ cylinder, restore the connections, open it slowly and make sure there are no leaks and then fully open the valve and check that the pressure values are those set initially.

Once you have replaced the cylinder, check that there are no leaks. CO₂ is an asphyxiant gas, heavier than air, and it tends to accumulate in enclosed areas (*).

(*) Paragraph 4.7 page 56



6.4 CLEANING THE TAP SPOUT

Clean the outside of the spout with a cloth. Dip the spout in a glass of clean water to rinse the inside as well.



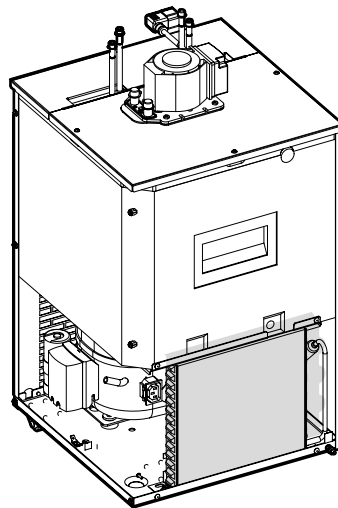


6.5 CLEANING THE CONDENSER

- 1) Disconnect the machine from the electricity supply.
- 2) Remove the front/side panel.
- 3) Use a soft brush, a vacuum cleaner or low-pressure compressed air to clean the condenser fins.
- 4) Remove any dust from the cooling and electrical components.
- 5) Refit the upper panel.
- 6) Reconnect the machine to the electricity supply.

 **NOTE**

The build-up of dust and grease on the cooling condenser may cause overheating, and this in turn could damage the compressor beyond repair. The condenser must always be cleaned when necessary.



 **NOTE**

Do not use high pressure as this may deform the condenser fins.



6.6 SANITISATION OF UNDERCOUNTER PREMIX SYSTEM BEVERAGE LINES

CAUTION



SANITISATION

Before carrying out the following operations, carefully read the instructions provided by the manufacturer of the sterilising product, be sure to use personal protective equipment (gloves, masks, etc.).

Sanitisation of product lines must only be carried out by qualified TECHNICAL SERVICE staff.

During sanitisation, it is recommended to mark the taps of the lines concerned with a warning sign that informs the staff present that sanitation is in progress and it is forbidden to dispense beverages.

Make sure that the rooms are ventilated properly.

(*) Paragraph 6.1.1 page 63

It is good practice to completely sanitize the dispenser at the times indicated in the maintenance operations summary table (*); to perform the sanitization procedure, contact the Retailer or an Authorized Technical Service.

You must use a suitable product (cleaning and sanitising solution).

The cleaning solution should be prepared by mixing 3 grams of liquid cleaner for industrial dishwashers for each liter of drinking water (20-40°C).

The sanitising solution must be prepared by mixing 5 g of 4% sodium hypochlorite solution (unscented bleach) per liter of tap water (20-40°C).

CAUTION



After having flushed the lines with the sanitising solution, allowing it to act for the necessary time, you must rinse thoroughly with clean water to make sure that all traces of sanitising agent have been eliminated completely.

Never exceed the maximum contact times and the maximum concentration specified by the manufacturer.

Check that the pH of the output water is the same as the pH of the input water (check with litmus paper or pH meter).

How to sanitise the PREMIX system lines

- Remove the coupling of the beverage line from the barrel and rinse it with clean drinking water.
- Insert the coupling into the appropriate CELLI wall-mounted rinsing heads. You can also connect the coupling to the steel barrel, filled with clean drinking water. Pressurise the barrel at a pressure similar to that of the beverage.
- Operate the dispensing tap until water flows out only.
- Remove the coupling of the beverage line from the rinsing head and connect it to the barrel containing the previously prepared cleaning product. Pressurise the barrel at a pressure similar to that of the beverage.
- Dispense from the tap corresponds to the line that you intend to sanitise, until the cleaning solution flows out (typically after 30 s + 1 s for each meter of coil). Turn on the tap for 15 s, pause for 5 s; repeat four times. Reopen the tap for 30 sec.
- Remove the coupling from the barrel containing the cleaning product and insert it into the special CELLI wall-mounted rinsing heads. You can also connect the coupling to the steel barrel, filled with clean drinking water. Pressurise the barrel at a pressure similar to that of the beverage.
- Operate the dispensing tap until water flows out only.
- Remove the coupling of the beverage line from the rinsing head and connect it to the barrel containing the previously prepared sanitising product. Pressurise the barrel at a pressure similar to that of the beverage.
- Dispense liquid from the tap corresponding to the line you wish to sanitize until the detergent solution comes out (typically after 30 seconds + 1 second per meter of python).
- After the sanitising product contact time indicated in the relating instructions has elapsed (15-20 minutes), remove the coupling from the barrel containing the sanitising product and insert it into the special CELLI wall-mounted rinsing heads. You can also connect the coupling to the steel barrel, filled with clean drinking water. Pressurise the barrel at a pressure similar to that of the beverage.
- Operate the dispensing tap to ensure proper rinsing of the line with

clean drinking water. Check that the pH of the output water is the same as the pH of the input water (check with litmus paper or pH meter).

- Remove the coupling of the beverage line from the rinsing head and connect it to the barrel containing the beverage.
- Dispense from the tap corresponding to the line being sanitised until the beverage flows out.
- Repeat the procedure described above for each beverage line.



CAUTION

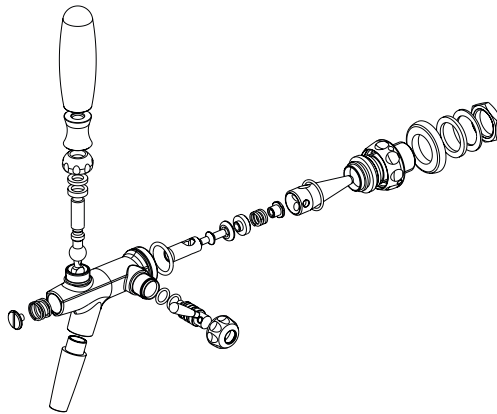


Avoid opening the pressurised barrel containing the sanitising liquid during the cleaning cycle. Close or remove the barrel CO₂ supply and release the pressure before opening for liquid replacement.
The Manufacturer denies all liability for damage to people or property arising from failure to comply with these provisions.



6.7 REGULAR CLEANING OF THE TAPS (PRE-MIX SYSTEMS)

The tap is one of the main system parts where bacteria may build up and jeopardise the taste, quality and lifespan of the product. It is therefore important to keep it in good working condition, cleaning and greasing it regularly to avoid any malfunctioning. Use food-grade grease supplied by the Manufacturer.

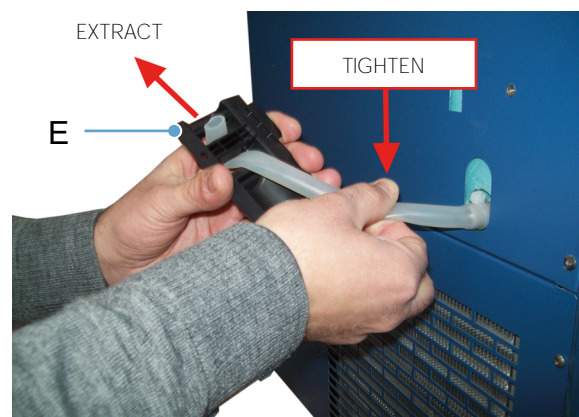


- Disconnect the dispensing head (or quick connections) from the keg. Discharge the residual pressure from the product lines.
- Use the appropriate ring nut spanner to separate the tap sleeve from the tap itself.
- Separate the knob from the tap, turn on the tap and put the main part and components in a container filled with clean water and disinfectant in the proportions indicated by the manufacturer. Use concentrations lower than those indicated for cleaning the lines (if the recommended concentration for the lines is 5%, then 2% will be enough for the taps). Wait about 30 minutes, then rinse all the parts with clean water and dry them with white absorbent paper before reassembling them, lubricating the gaskets and using a toothbrush to remove any residue from the inner parts.
- Reassemble the sleeve and ring nut on the main part of the tap. Tighten with the appropriate spanner. If the tap is with compensator during this operation, fully open it to avoid any mechanical interference and ensure the correct closure of the parts. Replace the O-ring if necessary.
- Connect the dispensing heads and dispense the product as usual, adjusting the tap compensator.

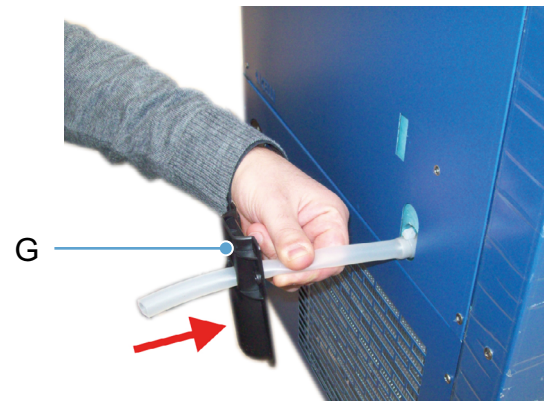


6.8 REPLACING THE WATER IN THE TANK

- 1) Disconnect the machine from the electricity supply.
- 2) Remove the upper cover.
- 3) Wait until the ice bank has fully melted.
- 4) Empty the tank via the drainage system (A).
- 5) Loosen the fixing screw (B).
- 6) Hold the upper end of the tube (C) firmly to avoid any liquid seeping out, then remove the plastic clip (D) from its seat, sliding it along the rubber tube.
- 7) Firmly hold the tube upstream from the clip to avoid any liquid seeping out, then remove the plastic clip from the tube (E).



- 8) Drain the liquid from the tank by releasing the tube (F).
- 9) Once the tank has been emptied, insert the tube in the lower slot of the plastic clip (G).
- 10) Turn the tube and insert it in the front of the upper slot (H). Slide the tube so you can insert the plastic clip in its seat.
- 11) Press the clip and insert the fixing screw (I). Tighten the screw, making sure the clip stays firmly in contact with the panel it is fixed to.



 **NOTE**

If the machine is to be left unused for a long time, always empty the tank.

CAUTION



Do not put your hands inside the tank if the machine is running.



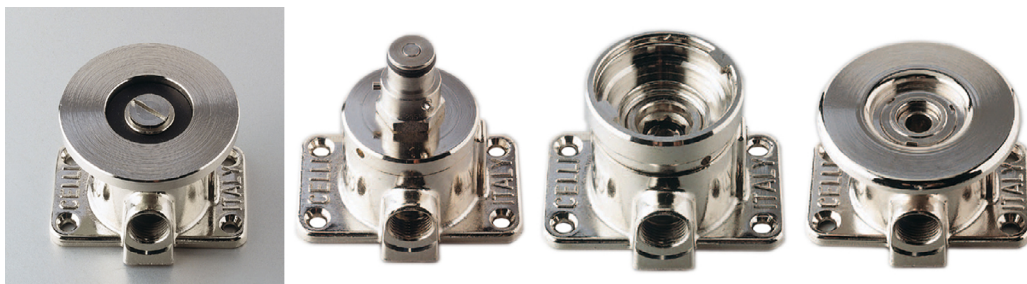
6.9 RINSING OUT THE BEER LINES

This operation should ideally be performed every time a keg is emptied, to prevent the formation of beer deposits that could lead to the growth of infections. If it becomes normal practice, it may also be a source of savings; when a new keg is connected to a depressurised line, there is a high quantity of head on the first glasses which cannot therefore be sold. By rinsing between one keg and the next, the line is kept pressurised and there are no head problems. It's important to remember that the rinsing operation helps to keep the lines clean, and means less frequent sterilisation interventions. It also prevents the new keg becoming polluted due to contact with polluted lines.

To rinse out the beer lines, proceed as follows:

- 1) Disconnect the dispensing head from the keg and connect it to a rinsing head linked to the mains water supply; alternatively, you can use a drum filled with clean drinking water.
- 2) Turn on the tap and let water flow out for about 30 seconds, then reconnect the dispensing head to a new keg.

WALL-MOUNTED RINSING HEADS



SANITISATION DRUMS





6.10 EXTRAORDINARY MAINTENANCE

Non-routine maintenance interventions are those carried out following failure or malfunction. Such operations may consist in the replacement of some components by qualified and authorised technical staff.

If the power cable is damaged, replace it by contacting the Manufacturer's Technical Assistance Service or, in any case, by availing yourself of trained personnel with equivalent qualifications in order to avoid any risk.

 **NOTE**

All maintenance operations must be carried out by qualified personnel authorised by Manufacturer.



7. TROUBLESHOOTING

PROBLEM	PROBABLE CAUSE	SOLUTIONS
The dispenser does not start up	Power supply failure	Check that power is present If the power is OK, call an authorised technician
	Thermostat failure	Call an authorised technician
The cooling unit is working and the stirrer starter motor is idle	No power supplied to the stirrer starter motor	Check the electricity supply system
	Stirrer starter motor failure	Replace the stirrer starter motor
The cooling unit does not cool (the fan, compressor and stirrer starter motor are working)	Refrigerant gas leak	Call an authorised technician
The cooling unit does not cool (the fan is idle while the compressor and stirrer starter motor are working)	No power supplied to the fan unit	Check the electrical system
	Fan unit failure	Replace the fan unit
The cooling unit does not cool (the fan and compressor are idle, while the stirrer starter motor is working)	Thermostat failure	Replace the thermostat
	No water in the tank (for electronic thermostat only)	Top up the water level
The cooling unit never stops, and so freezes the drink	Thermostat failure	Replace the thermostat
The stirrer starter motor is noisy	Ball bearing failure	Replace the stirrer
	Worn brasses	Replace the stirrer
<p>N.B. IN THE CASES MENTIONED ABOVE, BEFORE ACCESSING THE ELECTRICAL PARTS IT IS NECESSARY TO CUT OFF THE POWER SUPPLY. ALWAYS REQUEST THE INTERVENTION OF SKILLED TECHNICIANS</p>		

PROBLEM	PROBABLE CAUSE	SOLUTIONS
The drink does not flow out of the tap	Product frozen in the coil	Use a thermometer to check the temperature of the water in the tank; if it is lower than 0°C, there may be some drink in it, so replace the water (checking for any leaks)
	Connection on keg not firmly in place	Make the connection
	Connection lever not hooked up	Hook up the lever
	Drink keg empty	Replace it with a full one
	CO ₂ / N ₂ cylinder empty	Replace it with a full one
	CO ₂ / N ₂ cylinder valve closed	Open the valve
	No pressure on the keg	Restore the operating pressure
	Drink tube bent	Check the path of the tube
	Drink tube obstructed	Wash out the drink lines and remove any obstructions
	Tap compensator blocked in the compensator-holder	Disconnect the connection on the keg, then disassemble the tap and remove the compensator. Wash everything, then reassemble (following the above steps in the reverse order)
The drink flows slowly from the tap	Adjustment screw (plastic tap) fully tightened	Loosen the adjustment screw by turning it anticlockwise
	Compensator adjustment bolt in "fully closed" position	Turn the tap bolt anticlockwise
	Ball stuck inside the keg connection (check valve)	Disconnect the connection on the keg, disassemble everything and wash with detergent. Reassemble (following the above steps in the reverse order).
	Drink tube bent	Check the path of the tube
	Tap compensator blocked in the compensator-holder	Disconnect the connection on the keg, then disassemble the tap and remove the compensator. Wash everything, then reassemble (following the above steps in the reverse order)
	Tap compensator adjusted in semi-closed position	Turn the tap bolt anticlockwise (open)
	Drink tube obstructed	Wash out the drink lines
The drink is too cold	Connection on keg not well inserted	Insert the connection firmly on the keg
	CO ₂ / N ₂ pressure too low	Restore the CO ₂ / N ₂ pressure (the cylinder may be empty)
	Temperature too low in keg storage place	Change the keg storage place, or raise the keg off the floor (onto a platform)

PROBLEM	PROBABLE CAUSE	SOLUTIONS
The drink has a poor-quality taste	Dirty tubes, keg connection and tap	Wash immediately with a suitable detergent, then rinse
	Drink keg too old	Replace the keg with a new one
	Drink keg faulty	Replace the keg with a new one
	CO ₂ / N ₂ not for alimentary use	Check the CO ₂ used is alimentary (i.e. CO ₂ S.S.A.). If it is not, replace the CO ₂ cylinder
The drink has too much head	Dirty tubes, keg connection and tap	Wash immediately with a suitable detergent, then rinse
	CO ₂ pressure too low	Calibrate to the correct equilibrium pressure
	Drink over-saturated with CO ₂ gas	a) Nothing can be done except replace the keg
		b) Excessively high pressure:
		- calibrate to the correct equilibrium pressure; - keep the temperature in the keg storage place as constant as possible throughout the day; - raise the kegs from the floor, sitting them on a platform.
	Storage room temperature too low or too high	Install air-conditioning, or change the storage place to a more suitable one
	Drink keg connected to the system for too long	Nothing can be done except use it up as quickly as possible and then replace the keg with a new one. Decide whether it's worth keeping a slow-selling drink available on draught
		Drink tube bent
Drink too hot	There may be various causes:	
	- faulty cooling unit; - faulty stirrer starter motor; - system not aligned with real consumption levels; - excessive distance between serving tap and cooler (in this case, it is necessary to install a python line with recirculation, so the cold water from the tank is in contact with the drinks line and keeps it cold; you are advised to cool the tap as well).	
Pressure reducer failure	Check the tool reads the correct counter-pressure; if it does not, replace it	

PROBLEM	PROBABLE CAUSE	SOLUTIONS
The drink flows out clear, but creates a large head in the glass	Glass too hot	Dip the glasses in cold water to lower their temperature (use the glass-fountain)
	Incorrect dispensing technique	Use the correct dispensing technique for the specific product
The drink has too little head	Drink temperature too low	Store the kegs in places with a suitable temperature
	Leak of CO ₂ gas from the keg, before dispensing	No solution - replace the keg
	Keg connection badly inserted	Insert the connection firmly on the keg
	Empty CO ₂ cylinder	Replace the cylinder
	CO ₂ cylinder valve closed	Open the valve
Quick loss of head	CO ₂ pressure reducer calibrated at an excessively low value	Restore the CO ₂ equilibrium pressure
	Traces of grease or detergent on the glasses	Wash the glasses well with a suitable detergent (in a glass-washer with brushes, if possible), then rinse thoroughly under running water. You are advised to use a glass-fountain.
The drink emerges with an uneven head	Old drink keg	Replace keg
	Keg connection badly inserted	Insert the connection firmly on the keg
	Drink line in contact with a heat source	Check the path of the product line, and change it if necessary (or insulate the tube in question)
	Keg connection gasket worn or faulty	Check and replace with a new one
CO ₂ / N ₂ Gas bottle runs out too quickly	Empty keg	Replace keg
	Leak on some point of the CO ₂ / N ₂ circuit	Use a brush and soapy water solution to wet the outer parts of the entire CO ₂ / N ₂ circuit (CO ₂ / N ₂ cylinder valve, pressure reducer, keg connections, various gaskets, etc.) in order to identify and eliminate the leak
The tap drips	Leak from the seal of the cylinder valve	Replace the empty cylinder with a full one. To avoid leaks from the cylinder seal, always open the valve fully.
	Semicircular sealing gasket worn or faulty	Replace with a new one
	Drainage holes (on tap head) blocked	Clean the drainage holes
FOR ANY OTHER PROBLEMS NOT COVERED HERE, CONTACT THE SERVICE CENTRE		

8. ADDITIONAL INSTRUCTIONS

8.1 WASTE DISPOSAL

Please note that residues from industrial processing are to be considered special waste that, in terms of quality or quantity, are not intended as municipal waste.

Deteriorated or obsolete machines are also special waste.

The user, in accordance with national legal regulations, will have to take special precautions regarding the disposal of materials, such as:

- Guards' material (PVC, acrylic)
- Plastic of pneumatic pipes
- Coated wires
- Rubber belts
- Used oil
- Refrigerant gas R134a (HFC)

8.2 DISMANTLING OF THE MACHINE

 **NOTE**

The operations of removal and demolition must be performed by qualified personnel.

The machine must be dismantled after disassembling of the various parts, and recovery of refrigerant, if the same is R134a.

For disassembly, wear the personal protective equipment mentioned in the user's manual, and also refer to the instructions and diagrams in this manual, or request specific information to the Manufacturer.

CFC, HCFC and HFC refrigerant gases cannot be discharged into the atmosphere, but must be collected and recovered for disposal or recovery as special hazardous waste (under the CER code 140601*).

The above gases must be sent to companies authorised to dispose of such products.

Once you have disassembled the various parts, sort the different components, separating metal from plastic, copper etc., depending on the type of differentiated disposal regulations in force in the country where the machine is dismantled.

The waste resulted from the demolition of the machine can be classified as special waste.

If the various components should be stored awaiting admission into landfills for recovery, pay attention to keep them in a safe place and protected from the weather, to prevent soil and groundwater contamination.

Dispose of the waste following the local regulations in force on waste disposal.

8.3 DISPOSAL OF ELECTRONIC EQUIPMENT (WEEE DIRECTIVE)



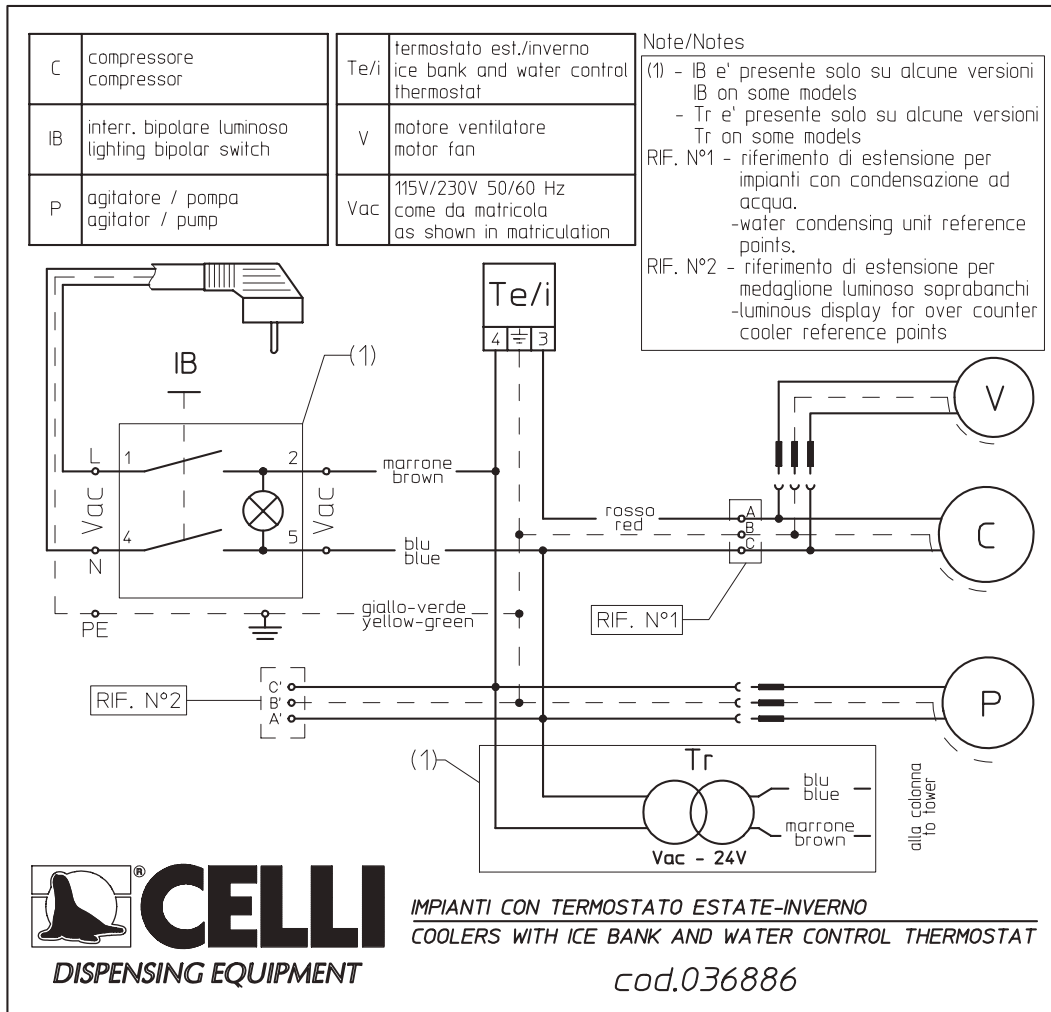
The EU Directive 2012/19/UE (WEEE), requires manufacturers and users of electrical and electronic equipment a number of obligations relating to the collection, treatment, recovery and disposal of such waste.

It is recommended to strictly follow the said rules for disposal of such waste. Illegal dumping of the product by the user entails the administrative sanctions stated by current legislation.



9. ANNEXES

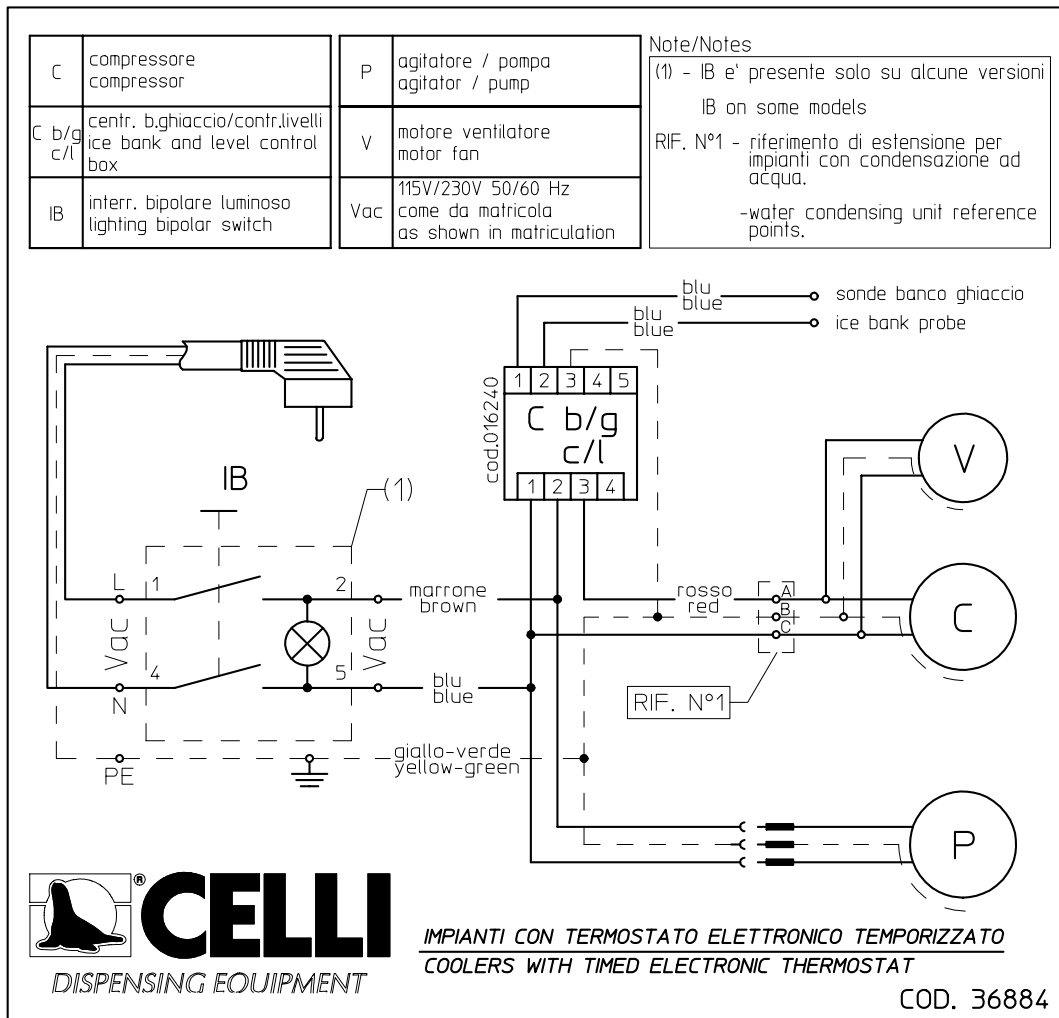
9.1 GEORANGE-ELECTRICAL DIAGRAM VERSION WITH MECHANICAL THERMOSTAT



NOTE

The electrical diagram can also be found on the inner part of the insulating tank cover. Refer to that diagram if there are any differences compared with the one above.

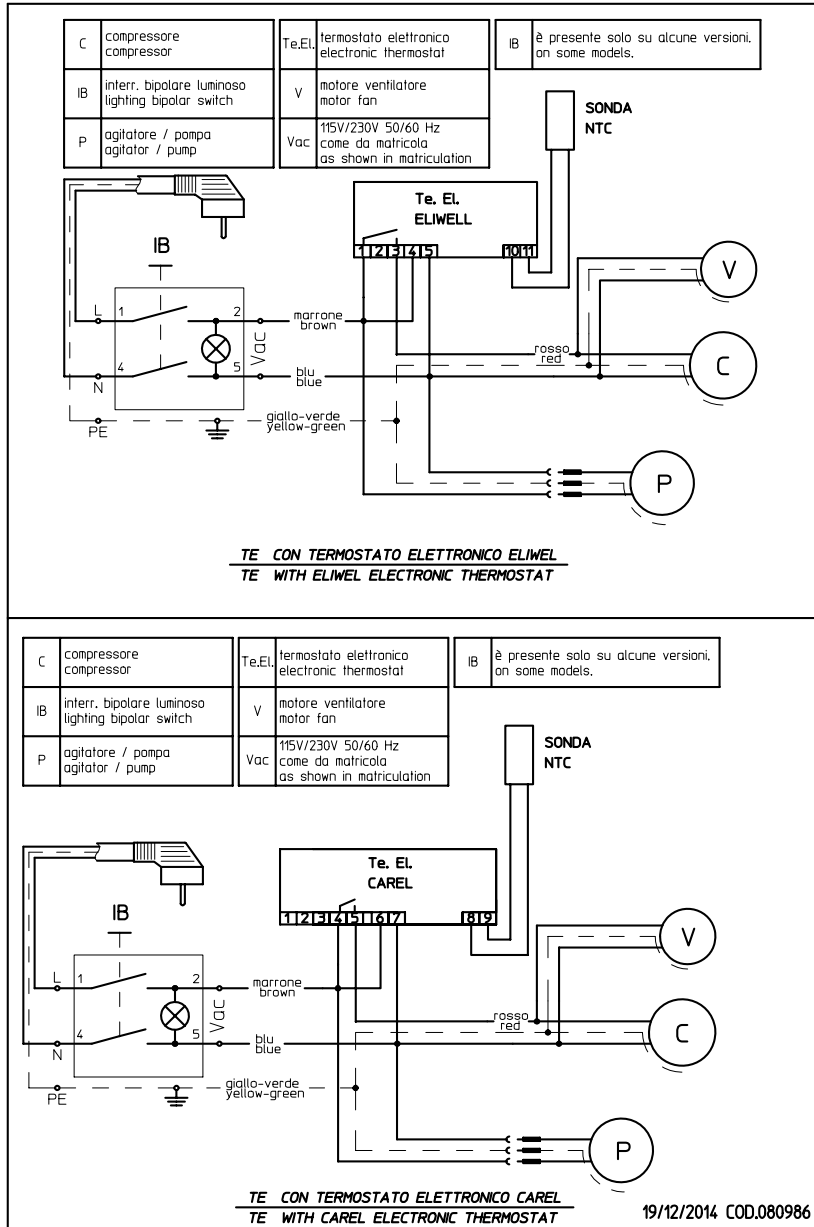
9.2 GEORANGE - ELECTRICAL DIAGRAM VERSION WITH ELECTRONIC THERMOSTAT



NOTE

The electrical diagram can also be found on the inner part of the insulating tank cover. Refer to that diagram if there are any differences compared with the one above.

9.3 GEORANGE - ELECTRICAL DIAGRAM VERSION WITH DIGITAL THERMOSTAT



NOTE

The electrical diagram can also be found on the inner part of the insulating tank cover. Refer to that diagram if there are any differences compared with the one above.



WE RESERVE THE RIGHT TO MODIFY OUR PRODUCTS IN ANY WAY WE CONSIDER USEFUL, WITHOUT PREWARNING



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