

**EN USER MANUAL**



***KING COOLING CABINETS***

Code 399005

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## Symbols Used in These Instructions for Use



This symbol indicates the existence of either imminent danger to life on or around the device, or the possibility of serious danger to the user or any other person nearby; extreme caution and careful further operation are required.



This symbol indicates the existence of potential risk of serious injury during the use of the device or around it to the operator or any person near the device; extreme caution and careful further operation are required.



This symbol indicates that the device is live. Prior to working with the device, switch off the electricity in order to prevent any damage or threat to health.



This symbol indicates that the device is filled with flammable refrigerant R290 of high level of ecological compatibility.



Contains information which helps ensure accurate operation of the device.

## Instructions for Use

These Instructions contain instructions for installation, use and device operation. These Instructions constitute an inseparable part of the device and should be kept alongside the device so that they may be used by technical staff during any removal or device installation. Prior to the installation and use of the device, please read the instructions carefully as they contain important information, so that each procedure can be performed correctly and safely.



These Instructions refer to standard device versions. Non-standard devices may contain minor differences which are not described in these Instructions. These Instructions can also be found on our web page ([www.bloom.eu](http://www.bloom.eu))



Notes

This device is intended for professional use only and is not meant for households.



Warning

This device can be used by children aged 8 years and up and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given supervision or instruction concerning the use of the device in a safe way and understand the hazards involved.



Warning

Children should be supervised to ensure that they do not play with the device.



Warning

Cleaning and user maintenance shall not be performed by children.



Warning

If the supply cord is damaged, it must be replaced with a special cord or assembly available from the manufacturer or their service agent.



Warning

Do not store explosive substances such as aerosol cans with a flammable propellant in this device.



Warning

**WARNING:** Do not obstruct any ventilation openings in the device enclosure or in the structure where the device will be installed.



Warning

**WARNING:** Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.



Warning

**WARNING:** Do not damage the refrigerating circuit.



Warning

WARNING: Do not use electrical appliances inside the food/ice storage compartments unless they are of the type recommended by the manufacturer.



Danger

During installation of the device the electricity needs to be switched off, until the end of installation and start of trial operation. Following installation, the device must remain switched off for two hours; do not switch on the device during this time.



Danger

Only trained staff can carry out servicing and maintenance jobs. All electrical and water installation parts have to correspond to national and local legal requirements (when replacing parts, please use original parts only). Never use a damaged device!



Danger

If the electrical cable is damaged, it needs to be replaced by the producer, their servicing electrician or another professional, in order to avoid danger.



Danger

Do not use open flames or other potential sources of sparks when the device using refrigerant R290 is in operation in the vicinity!



Danger

You must not damage the cooling circuit!



Danger

Do not place explosive aerosol containers (sprays, tubes) around the device.



Warning

The device is not to be switched off from electricity at the closure of the bar.



Warning


Do not use a water jet for washing the device.



Danger

Switch off the electricity at the time of cleaning the device.



Devices which contain the symbol  are filled with refrigerant R290 (propane). Since the device contains flammable refrigerant, please make sure that you dispose of the expired device according to legal requirements. Contact the dealer or your local responsible services when you intend to dispose of the old device.



Danger

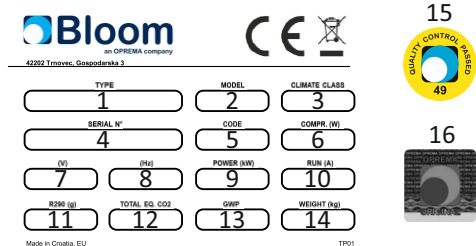


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## Cooling Unit Marks and Characteristics

Every cooling unit has its own identification number/code. This number is on the plate/label “Technical Data”. The plate/label with technical data is the only way to identify the cooling unit; it contains all necessary data about the unit which is relevant to the user/service personnel for quick and simple identification.



1. Type: Name of the cooling unit
2. Model: Model of device
3. Climate class: Climate class
4. Serial number: Serial number of the cooling unit
5. Code: Unit identification code
6. Compressor power (W): Power of compressor unit

7. (V): Voltage in volts

8. (Hz): Frequency in hertz

9. Power: Power in kW during normal operation

10. Run: Current in Amperes during normal operation

11. Type and quantity of refrigerant in the system in grams

12. Total EQ. CO2: Total carbon footprint

13. GWP: Global Warming Potential

14. Weight: Weight of unpacked unit in kg

15. Quality control: Unit has been tested for secure usage

16. Bloom Technologies logo: Manufactured by Bloom Technologies d.o.o.

This manual is valid for next cooling units:

**QUEEN 200, QUEEN 300, QUEEN 500**

**Dimensions (WxDxH (H incl. wheels))**

KING 100 - 600mm x 620mm x 790mm (830mm)

KING 225 - 650mm x 680mm x 996mm (1083mm)

**Serial Number Format:****YYWWDDNNNN**

YY-Year of production

WW-Week of production

DD-Day of production

NNNN-Number of device manufactured on specific date

**Warranty**

The warranty on the cooling unit is valid for 24 months from the date of production, unless otherwise agreed by contract. We recommend saving the original packing box and materials, as well as the invoice, for at least the duration of the warranty period.





## Compliance with Regulations

The company Bloom Technologies d.o.o. is a manufacturer of cooling cabinets, bars and parts for counters for professional use. The policies of quality management and environmental management are the foundation of Bloom Technologies d.o.o.'s business.



## Transport and Storage

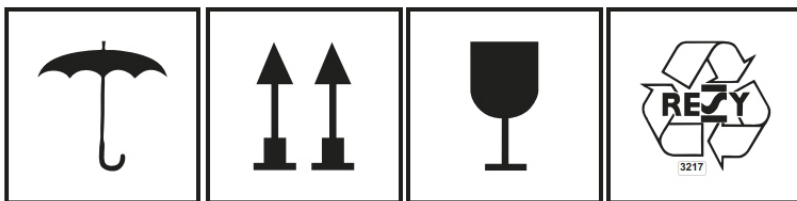
To avoid damage to the cooling unit, it is important to handle it with care during loading and unloading.

**A crane can be used for unit movement only if the unit is on a pallet.**

**- DO NOT turn around the unit**

**- DO NOT shake the unit or complete package**

The unit has to be stored in an adjusted and clean space, at a temperature between 0-40°C. Do not store coolers on top of one another, and take care to set them in a vertical position as indicated on the packaging.



## Packing Postponement

When the cooling unit is unpacked, it is necessary to check whether it is in proper condition (visually undamaged). In case of any doubt as to damage to the cooling unit within the packaging, do not install and use the unit. During packing postponement we ask you to respect local legislation regarding packing postponement. Do not incinerate package parts or throw them into the environment. The packaging of this cooling unit can be recycled in total. Keep packing material away from children.



### **Environmental Conditions for Installation**

The cooling unit has to be installed in a place where it is protected from rain and spraying water, with temperature correspondent to its climate class (marked on the Technical Data label); in case these terms are not met, the warranty is void and malfunctions in performance are possible.

The possible climate classes are:

- 0 - temperature of environment from 20°C
- 1 - temperature of environment from 16°C
- 2 - temperature of environment from 22°C
- 3 - temperature of environment from 25°C
- 4 - temperature of environment from 30°C
- 6 - temperature of environment from 27°C
- 8 - temperature of environment from 23.4°C

### **Procedures in Case of Malfunction**

Most technical issues can be easily solved using simple procedures. For this purpose we ask you to read the instructions carefully before informing service personnel or the manufacturer. In case you cannot solve the problem by using the instructions from this manual, please contact the seller from which the unit was bought. Keep units in good condition and do not allow any modifications, except if they are approved by the manufacturer.

### **Dispensing Procedure**

#### ***During dispensing use open containers only***

This type of cooling unit must be used for dispensing drinks only into open containers and for immediate usage (glasses, bottles). The dispensed product has to be used immediately: you cannot keep it or store it in bottles.

Any other use is considered not appropriate and therefore potentially dangerous for the health of consumers. The manufacturer of the cooling units disclaims any responsibility for damage occurred during inappropriate use of this dispensing unit.



Terms used hereinafter: “bottle with gas” (which has to be suitable for nutritional use: CO<sub>2</sub>, N<sub>2</sub>, Argon, a mix of CO<sub>2</sub> and N<sub>2</sub>, etc.), hereinafter referred to as “CO<sub>2</sub>”, which is used for the pressurising of premixed beverages (beer, juice, water, etc.), hereinafter referred to as “beer from a container” (container, barrel, bag in box, etc.), hereinafter referred to as the “barrel”.



**Warning** Always ensure the appropriate pressure regulator for the type of valve on the bottle.







## The Electronic Regulator Interface



Icon	Function	On	Off	Blink
	Compressor	On	Off	Request
	Defrost	On	Off	Request



Button	Function
	UP
	DOWN
	SET
	ESC

### Working Principle

Co<sub>2</sub> exits the bottle, gets through pressure regulator and CO<sub>2</sub> line, goes on keg head firmly adjusted to beer barrel. With pressure of CO<sub>2</sub> which is higher than pressure in the barrel, beer is pressed through the valve on keg head and with beer line it is brought to the cooling unit. Beer is cooled by passing through beer coils which are connected to taps (for undercounter unit they are mounted on tower) for beer dispensing in the glasses (mugs).



Danger

**To prevent risk of injuries and damages, bottle CO<sub>2</sub> always has to be positioned in vertical position, fixed on wall holder. If there is any doubt on gas release, especially in small spaces, it is necessary to ventilate potentially contaminated space.**



## Installation



Warning

**In accordance with current law regulations, installation and release of cooler in function, this needs to be done by specialized and trained technical staff.**

Each cooling unit consists of cold chamber and cooling device. Cooling unit can be installed in outdoor ambient under condition that it is protected from rainfall and direct sun rays. If it is installed in inner ambient, it needs to be in the space where room temperature does not over cross borders of climate class which can decrease cooling efficiency.

### **The cooling unit needs to be properly set on a surface:**

The max. incline allowed is 2 degrees. For installation of the cooler with air cooling it is necessary to ensure enough free space for the cooler (0.4m in front of the air entrance/exit). The cooler needs to be set on a straight surface with enough fresh air, away from heat sources. Free air circulation around the cooler needs to be ensured.



Warning

**The measured value of the sound level should be below 70dB!**



Warning

**Please ensure enough air circulation for the fan!**



Danger

**Each cooler produced with refrigerant R290 in the amount of 150g (please see Technical Data) needs to be installed in an environment with a minimum volume of 19m<sup>3</sup> (max allowed is 8g/m<sup>3</sup>). Coolers cannot be installed in environments used as halls or emergency exits. Coolers from Group 3 (the cooling system contains less than 150g) can be installed anywhere without extra precautions.**



## Handling the Cooler

1. Open the main valve of the CO2 bottle.
2. While working keep track of the pressure on the CO2 bottle, when the manometer needle goes into the red area, replace the bottle.
3. When the barrel is empty, replace the barrel and wash the connection to the barrel and keg head.
4. Close the valve on the CO2 bottle when cooler is not in use any more.



**The cooler should not be unplugged from the power supply after bar closing time.**



**Service and maintenance of cooler can be carried out only by qualified staff. All parts of the electrical and water installations need to be in accordance with national and local legislation. Always use only original parts for spare parts. Do not use a defective cooler.**



For all coolers, it is necessary to ensure that they are not in direct proximity to heat sources. The ambient temperature at which the cooler is installed is very important for its cooling capacity. The general rule is that with an increase in the ambient temperature, the cooling capacity is lower and consumption of electricity is increased. The coolers are produced with a single phase cable, so a grounded 220-240V and 50Hz jack must be nearby. Voltage deviations should not be more than 10% of its nominal value because this can cause damage to the electrical components. You can keep the CO2 bottle under a counter, in a room nearby or in a basement.



**During installation, the cooler needs to be unplugged from the electricity until installation and a probation test is carried out. The cooler should not be turned on until 2 hours after installation.**

Install pressure reducer for CO2 on bottle (bottle needs to be closed).

Connect CO2 entrance to keg head.

Connect cooler with the tower for dispensing.

Connect the cooler to the electricity. With this cooling system, the motor agitator and fan are turned on.

Open the valve on the CO2 bottle, if pressure is in the red area, the bottle should be replaced.

Set pressure CO2 on barrel to the pressure suggested by the beer producer – this is generally 0.8 bar.

On the dispensing tap, pour a few glasses and, with a regulation screw, adjust the desired flow. During this test the beer will still be warm. The cooling unit needs 24 hours to drop the temperature of the barrel to the pouring temperature (depending on the temperature and volume of the barrel which is placed in the cold chamber).



## Cleaning and Maintenance of the System



**During cleaning, disconnect the cooler from the power supply.**

**Cleaning and maintenance of the system is divided into:**

1. Daily assignment
2. Monthly assignments
3. System sanitation



**If cooler is defective due to a mistake in maintenance or some other reason, we suggest placing a notification on the cooler.**

### **Daily Assignment:**

It is necessary to keep the cooler clean, as well as the space around the cooler and the dispensing tower, including the tap and drip tray.

### **Monthly Assignments:**

Clean any dirt and dust from the device. Pay particular attention to the condenser in units with air cooling, because if too much dust builds up, this directly decreases the refrigeration capacity of the device. Do not use high pressure because it can damage the condenser. Use a vacuum cleaner or brush to clean the blades.

### **Service and Repairs**

In order to ensure your safety and abide by current legislation, all repairs must be carried out by authorized personnel.

For service and repair on coolers with R290, service staff should be specially trained and qualified for handling flammable substances. This includes knowledge about tools, work with the compressor and cooling unit, basic legislations and precautions regarding service and repair.



**Do not use open flames or potential sources of sparks in the proximity of a cooler with R290 in use.**





## Instructions for Device Disassembly



Warning


**The cooler disposal procedure must be carried out in compliance with legislation.**

Steel, plastic and other materials must be disposed of by an authorized person.

Isolation material must be disposed of by an authorized company and person. Each refrigerant (check the label) must be removed with special equipment by an authorized person and company.

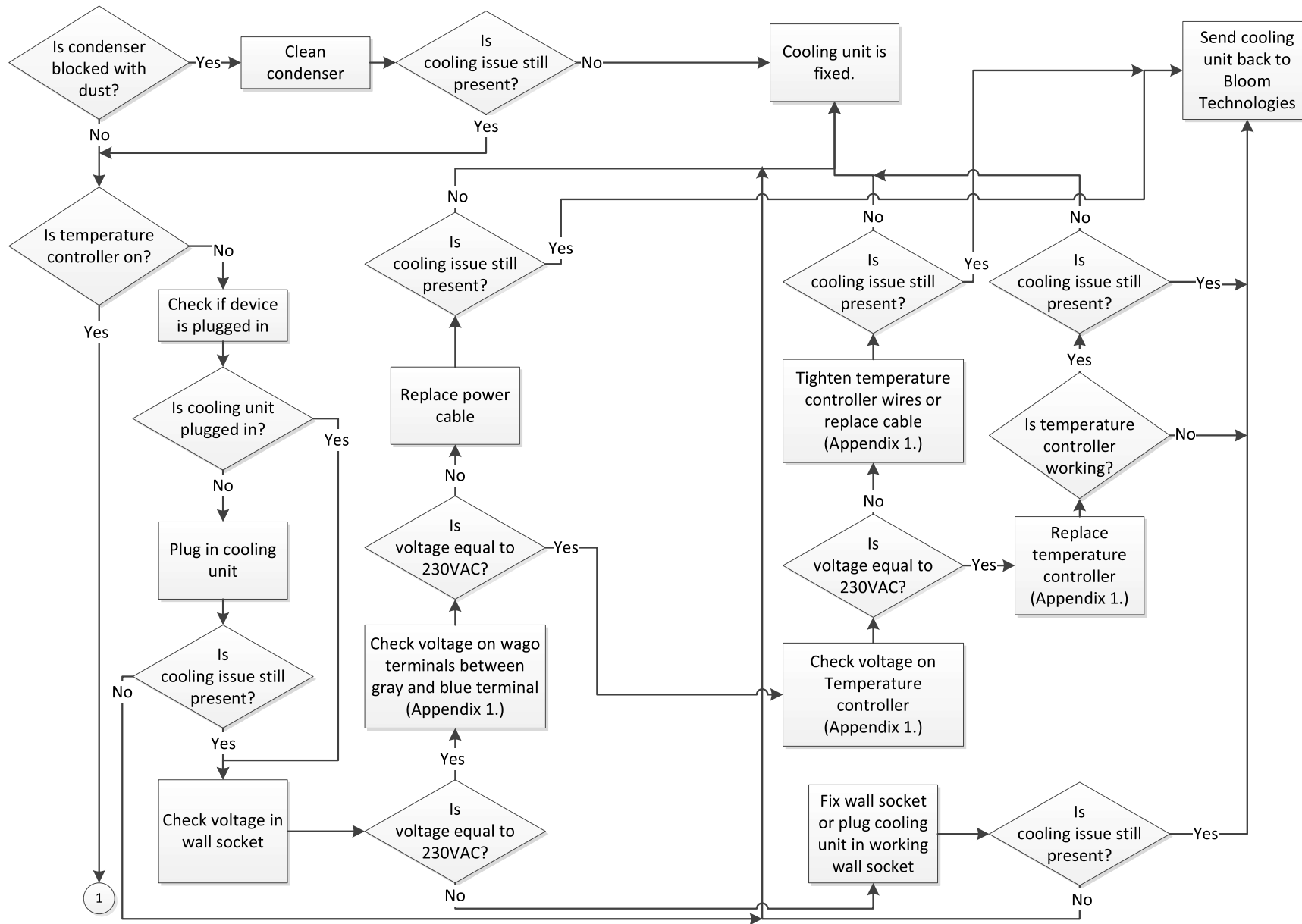
**Refrigerants should not be spread in working area.**

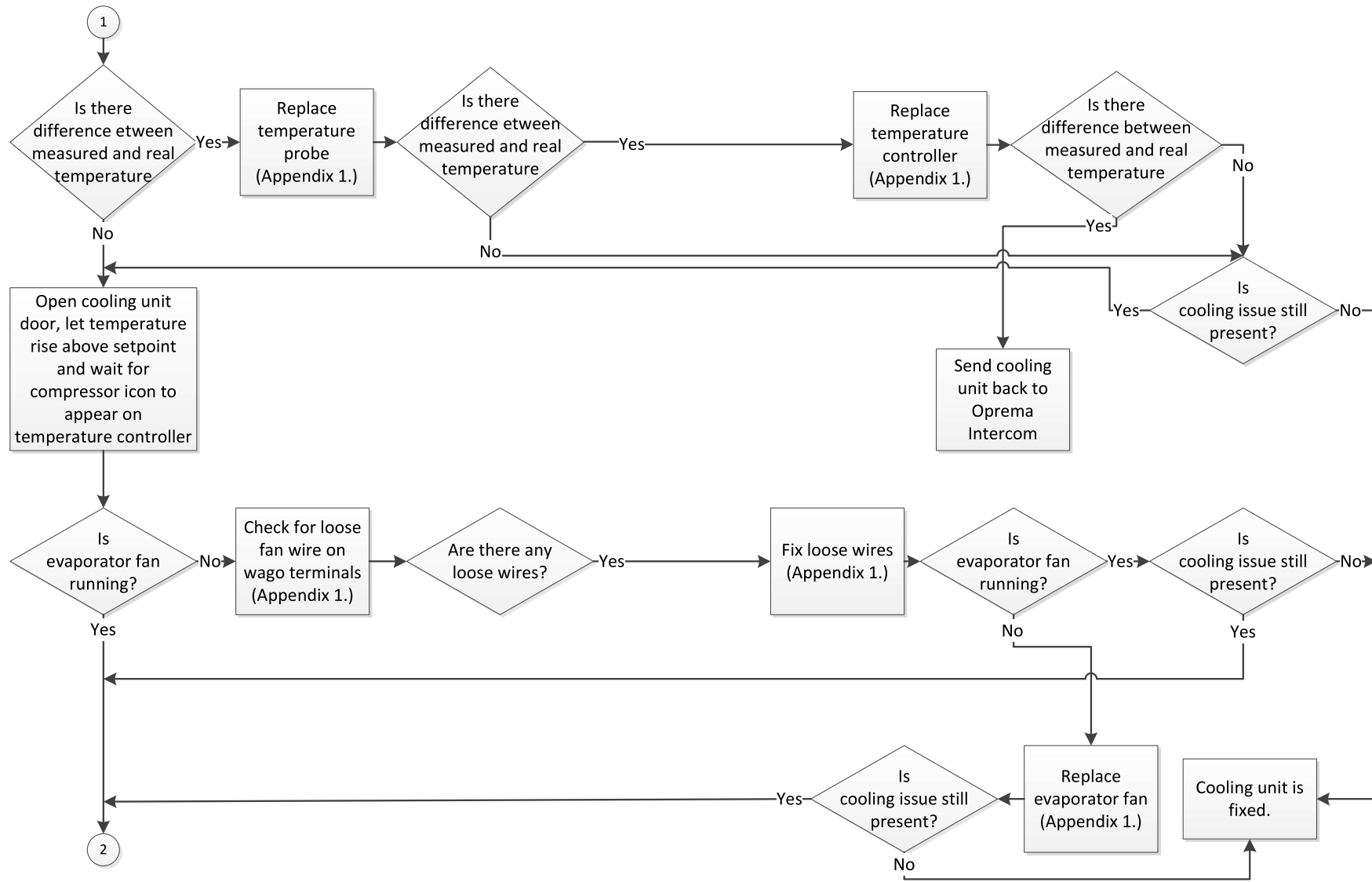


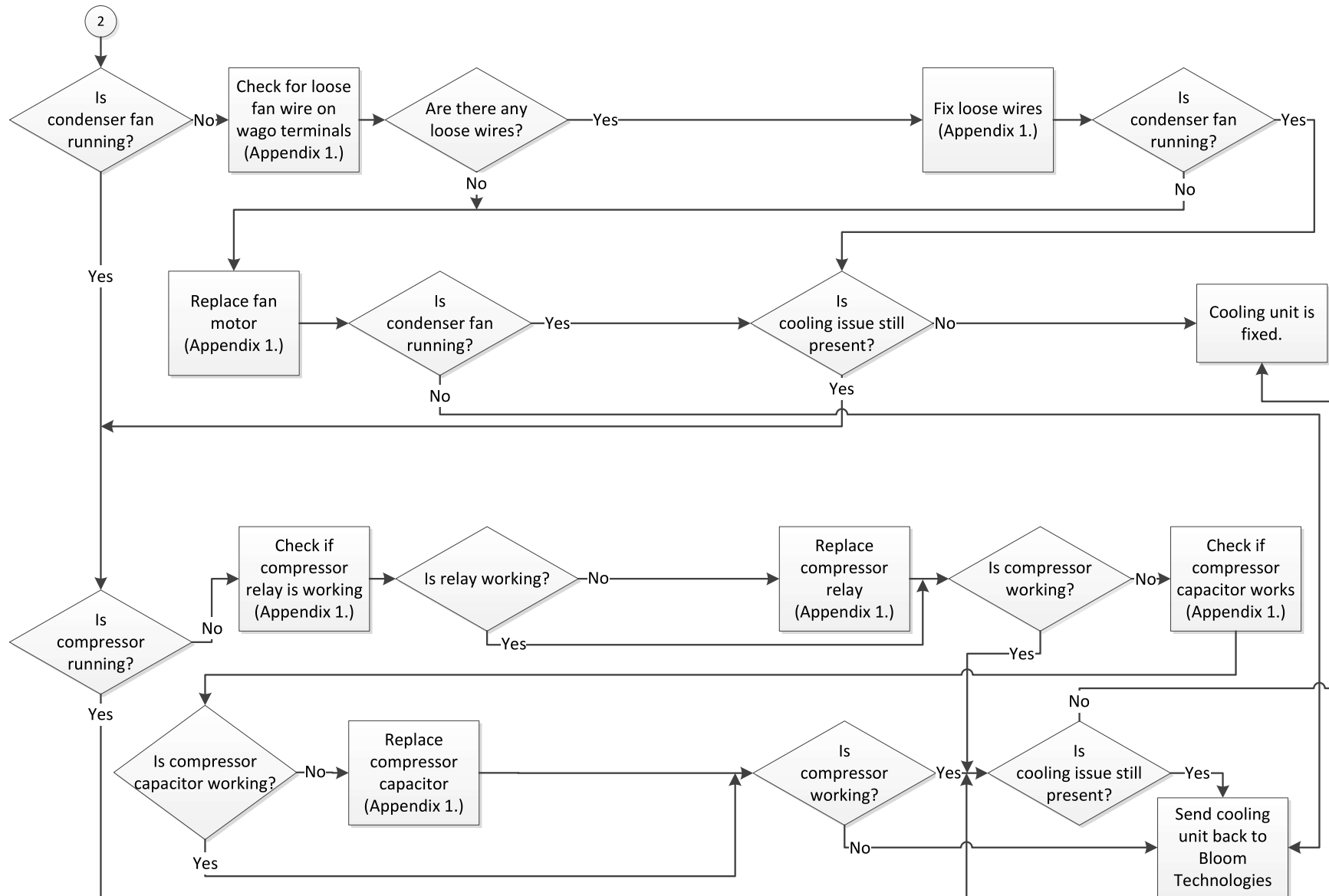
**Coolers with the mark  contain the refrigerant R290 (propane). Given that the refrigerant contained in these coolers is flammable, please dispose of any coolers that are out of operation according to legislation. Contact your seller or local authorized company for disposal of the cooler.**

According to legislation regarding the management of waste electrical and electronic devices, and according to EU Directive 2002/96/EC, the symbol with a crossed out trash can on equipment or packaging means that a product should be disposed of separately from other waste after use, connected to decreased use of dangerous substances in electronic and electrical equipment and adequate waste disposal. Separate collection and recycling of this equipment decreases possible negative effects on the environment and health, and ensures that some of the materials are being reused. Unauthorized disposal of this product by the user could lead to legal sanctions in accordance with current legislation.









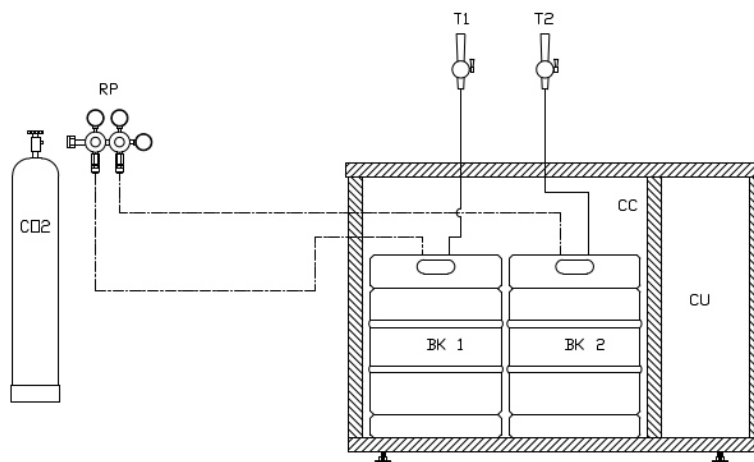


## Beverage Dispensing Faults

Description of fault	Possible cause	Description of repair
<b>Beverage does not flow from the tap</b>	<ol style="list-style-type: none"> <li>1. Barrel is empty.</li> <li>2. CO2 bottle is empty.</li> <li>3. Valve on CO2 bottle is off.</li> <li>4. Insufficient pressure in the barrel.</li> <li>5. Head inadequately fastened to barrel.</li> </ol>	<ol style="list-style-type: none"> <li>1. Replace barrel.</li> <li>2. Replace bottle.</li> <li>3. Open valve.</li> <li>4. Set pressure again.</li> <li>5. Correctly set the head on the barrel.</li> </ol>
<b>Beverage flows too slowly from the tap</b>	<ol style="list-style-type: none"> <li>1. Tap compensator is partly open.</li> <li>2. Head is not correctly fastened to barrel.</li> <li>3. CO2 pressure too low.</li> </ol>	<ol style="list-style-type: none"> <li>1. Turn tap regulator anti-clockwise.</li> <li>2. Adjust the head.</li> <li>3. Adjust pressure again, or if bottle is empty, replace it</li> </ol>
<b>Dispensed beverage is warm or has bad taste</b>	<ol style="list-style-type: none"> <li>1. Cooling is inadequately adjusted</li> <li>2. Beverage in the barrel is too old.</li> <li>3. Sanitation of lines and accessories not properly done.</li> </ol>	<ol style="list-style-type: none"> <li>1. Call service .</li> <li>2. Replace the barrel.</li> <li>3. Repeat sanitation or call service/repairs.</li> </ol>
<b>Clear beverage comes out but with too much foam</b>	<ol style="list-style-type: none"> <li>1. Glass too warm.</li> <li>2. Inadequate dispensing technique</li> <li>3. Pressure too low or too high</li> <li>4. Aluminium block is warmer than beer keg</li> </ol>	<ol style="list-style-type: none"> <li>1. Cool the glass.</li> <li>2. Apply adequate technique.</li> <li>3. Regulate pressure.</li> <li>4. Set parameter temperature must be lower than Fot temperature</li> </ol>



Description of fault	Possible cause	Description of repair
<b>Foam comes out in hits</b>	1. Head is not adjusted properly 2.No beverage in barrel.	1. Adjust the head. 2. Replace the barrel.
<b>Crown of foam does not stay</b>	1. Residual grease or glass washing liquid. 2. Beverage in barrel is too old.	1. Wash glass with adequate washing agent and rinse in clean water. 2. Replace the barrel.
<b>Beverage drips from tap CO<sub>2</sub> bottle empties too fast</b>	1.	1. Call service/repairs.



- RP - Pressure Reducer  
BK1, BK2 - Beer Keg  
CC - Cold Chamber  
CU - Cooling unit  
CO2 - CO2 bottle  
T1, T2 - Tap
- - CO2 line  
— - Product line
-



Before any tests, remove cooling unit from cooler and work with cooling unit unplugged unless otherwise stated.

Check voltage between gray and blue Wago terminals (plug in cooling unit)

Using a multimeter, check voltage on Wago terminals between gray and blue terminals. Voltage should be 230V AC.

Check voltage on temperature controller (plug in cooling unit)

Using multimeter, check voltage between temperature controller terminals 6 and 7. Voltage should be 230V AC.

Tighten temperature controller wires or replace cable

Check all temperature controller terminal wires and if there are any loose wires, tighten them.

Replace temperature controller

Remove all terminals from temperature controller.

Remove temperature controller by pressing clips on controller.

Install new temperature controller and plug in terminals.

Replace temperature probe

Unscrew temperature probe from terminals.

Remove temperature probe and replace it with a new one.

Tighten temperature probe wires and plug in terminal.

Check for loose wires on Wago terminals

Check if there are any loose wires on Wago terminals and if there loose wires, replug them into Wago terminals.

Secure wires with zip ties.





### Replace evaporator fan

Remove evaporator cover.

Unplug evaporator fan wires from Wago terminals.

Replace evaporator fan.

Plug new evaporator fan wires into Wago terminals.

Install evaporator cover.

### Replace condenser fan motor

Remove condenser fan motor wires from Wago terminals.

Remove condenser fan assembly from condenser.

Remove condenser fan blade and motor from motor holder.

Mount new motor on motor holder and mount fan blade on motor.

Remount condenser fan assembly on condenser.

Replug wires into Wago terminals.

### Check and replace compressor relay

Unplug cooling unit from wall and plug it back in.

Wait for 2 minutes. After 2 minutes you should hear a click from the compressor relay.

If you can't hear a click, replace compressor relay by removing all wires from relay and pulling relay away from compressor housing.

Mount new relay on compressor and replug all wires in the same manner as before.

### Check and replace compressor capacitor

Unplug capacitor from compressor.

Using multimeter check capacity of capacitor.

If capacity isn't the same as declared on capacitor, replace capacitor.