

ENGLISH

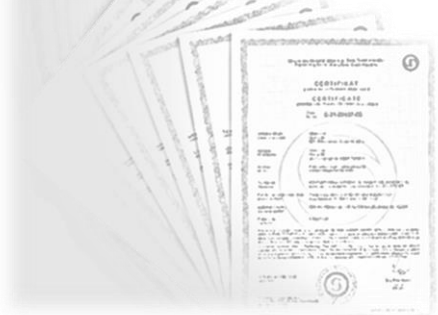
# LINDR FLOW-THROUGH WATER COOLING

Number 010-2020

Valid 2020-01-01



VCH 02237 AS-200-us Green Line



**This manual contains instructions for installation, use and operation of the appliance. This manual is an integral part of the device.**

**It must be stored in the vicinity of the device for the entirety of its service life and must be made available to the user any time the device is installed, moved, used or maintained.**

**Read this manual carefully before installing and using the device. It contains important information necessary to ensure that all operations are done properly and safely.**

**This manual is a translation of the original Czech manual.**

# Contents:

1.	Introduction	5
2.	Description of the cooler	5
3.	Machine plate	5
4.	General instructions, measures and safety instructions	6
5.	Installation and placement	7
6.	Electrical connection	9
7.	Testing	9
8.	Warranty	9
9.	Description of the cooler	10
10.	Beverage inlets and outlets	11
11.	Thermostat placement	12
12.	Temperature and adjustment	12
13.	Putting into operation	13
14.	Interconnecting beverage tubing	14
15.	Pouring water into the tank	15
16.	How to work with rapid couplings	17
17.	Environmental protection	18
18.	Maintenance	18
19.	Inspection before every use	18
20.	Periodic checks	19
21.	Cleaning the condenser	19
22.	Table of malfunctions	22
23.	Spare parts	23
24.	Technical data	24
25.	Wiring diagram	25
26.	Cooling diagram	26

## Symbols and Markings Used in the Manual:



### **WARNING:**

Not following instructions may cause injury or damage the device.



### **WARNING:**

Risk of injury by electrical current.



### **NOTE:**

This symbol indicates information and recommendations for the user.

---



***WARNING: The cooling system contains flammable coolant R290 (propane)!***



used meet the strictest hygienic standards and guarantee long service life of the cooler.

## 1. Introduction:

Thank you for purchasing this LINDR product.

## 2. Description of the cooler:

The beverage dispensing device is designed for professional cooling of beverage, especially for process cooling in beer or wine production. Cooling of lager tanks, fermentation vats and other technologies.

This dispensing system is the elite among professional undercounter coolers.

The Lindr modern compressor cooling unit uses input energy and transforms it directly into cooling, ensuring proper beer cooling at minimum energy drain.

Cooling transfer is done using water or glycol. If the thermostat is set to max., the device can accumulate a large amount of energy in the form of an ice bank. The time required to accumulate this energy is approx. 90-120 min., depending on the initial water temperature and the ambient temperature. Lindr cooling technology is 45 % more powerful than its electric input power.

The cooler is equipped with an aftercooling pump which also stirs the water bath to increase the effectiveness of the heat exchange. The cooler body is built from galvanised sheet metal with a plastic surface finish. The materials

## 3. Product label:




#### 4. General Instructions, Measures and Safety Instructions:


When using the device, follow basic safety instructions stated by the manufacturer. The cooling device is designed for flow cooling of beverages dispensed from kegs. Any other use is considered impermissible and therefore dangerous. The supplier is not liable for damage caused by incorrect use.

**DO NOT USE THE DEVICE FOR PURPOSES OTHER THAN THOSE STATED BY THE MANUFACTURER!**


**General safety principles. Observe the following safety instructions.**


The supplier is not liable for damage caused by activities carried out on this device without observing the following instructions!


 **WARNING:** Children aged 15 or more and persons with reduced physical, sensory or mental capabilities or insufficient experience and knowledge may only use the device when supervised or instructed in safe use of the appliance and familiarised with potential dangers.


 **WARNING:** Children must not be allowed to play with the appliance. Store all packaging material out of reach of children (comes with a plastic bag –


suffocation hazard).


 **WARNING:** Cleaning and maintenance of the appliance on the part of the user must not be done by unsupervised children.


 **WARNING:** Before connecting to main electrical supply, check that the voltage and frequency in the mains corresponds to the data stated on the device.


 **WARNING:** Always make sure that the socket you intend to plug the cooler into meets the specifications on the machine plate (voltage, frequency, input power).


 **WARNING:** Before any interference with the device, such as cleaning or maintenance, ALWAYS disconnect the device from power supply: set the thermostat to "O" position and unplug the appliance from the socket.


 **WARNING:** Never place tools or other object into the fan.

 **WARNING:** Never touch electrical components with wet or damp hands.


 **WARNING:** To ensure the cooling unit works properly and at full capacity, make sure air supply to the unit is not obstructed.


 **WARNING:** Water temperature during sanitation must not be higher than 25 °C!


 **WARNING:** Always make sure the power socket you intend to plug the cooler into is accessible, so that the appliance can be immediately unplugged in case of emergency.

 **WARNING:** When unplugging the device from the socket, grab the plug and pull it out. Do not under any circumstances


pull at the cable; risk of damage.


 **WARNING:** To turn the device off completely, unplug the appliance from the power socket.


 **WARNING:** In the event the electrical wiring of the product becomes damaged, summon a trained service technician. Do not under any circumstances repair the device yourself.

 **WARNING: The cooling systém contains flammable coolant R290 (propane)!**




 **WARNING:** Emergency maintenance and repair of the cooling system must be done by trained, authorised technicians familiar with cooling and electrical systems. The technicians should have special training and qualification for handling flammable substances in order to perform service on coolers containing **R290** coolant. Follow basic regulations and safety measures regarding service and repair!

 **WARNING:** Do not use an open flame or potential sources of sparks in the vicinity of a cooler using R290 coolant!

 **WARNING:** After unpacking, place the cooler so that heat created by the cooling

unit can be vented sufficiently.

 **WARNING:** Do not place objects that could prevent air circulation on top of the cooler.

## 5. Instalation and Placement:

Place the cooler onto a stable, level surface (maximum permitted inclination: 2 degrees). The appliance requires unobstructed air circulation.

Ensure sufficient free space for air circulation and heat dissipation.

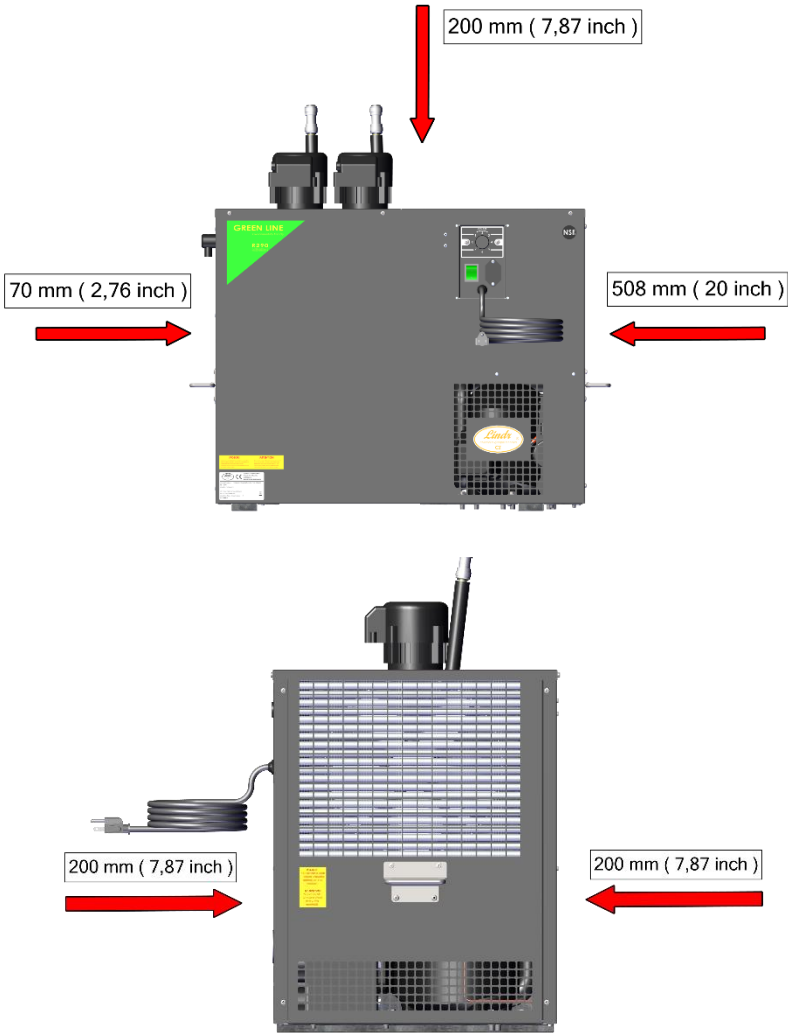
Ensure sufficient supply of fresh air.

The device must not be placed in an enclosed space.

The device must not be placed in the vicinity of heat sources or exposed to direct sunlight.

Minimum required distances of vents from an obstacle that prevents air circulation are listed on page 8. Ideally, use the device in a cool and well ventilated room. The device is designed for use at ambient temperature of at least 16 °C and at most 32°C.

V Clearances, mm (inch)					
Model	Top	Rear	Right Side	Left Side	Front
AS-110-us	200 (7.87)	200 (7.87)	508 (20)	70 (2.76)	200 (7.87)





**The device MUST NOT be used or stored at ambient temperature lower than 0 °C.**

The device is designed for use in a normal environment, always indoors, protected from rain or sunlight. Climate class N.



**WARNING:** Protect the cooler and electrical connection from rain and spraying water!



**WARNING:** Do not under any circumstances lay the cooler on its side, not even during transport.



**NOTE:** In order for the device to work correctly and at maximum output, it is important to not cover up any of the device's vents and ensure sufficient air circulation.

## 6. Electrical Connection:

Connect the device to a power socket in accordance with specifications on the product label of the device. Electrical wiring is subject to local regulations. If the power lead (cable) is damaged, it must be replaced by the manufacturer, the manufacturer's service technician or a similarly qualified person to prevent risk of hazardous situations.



**WARNING:** Do not use or turn on the device if the power lead (cable) is damaged!

## 7. Testing:

The product is delivered ready for immediate use.

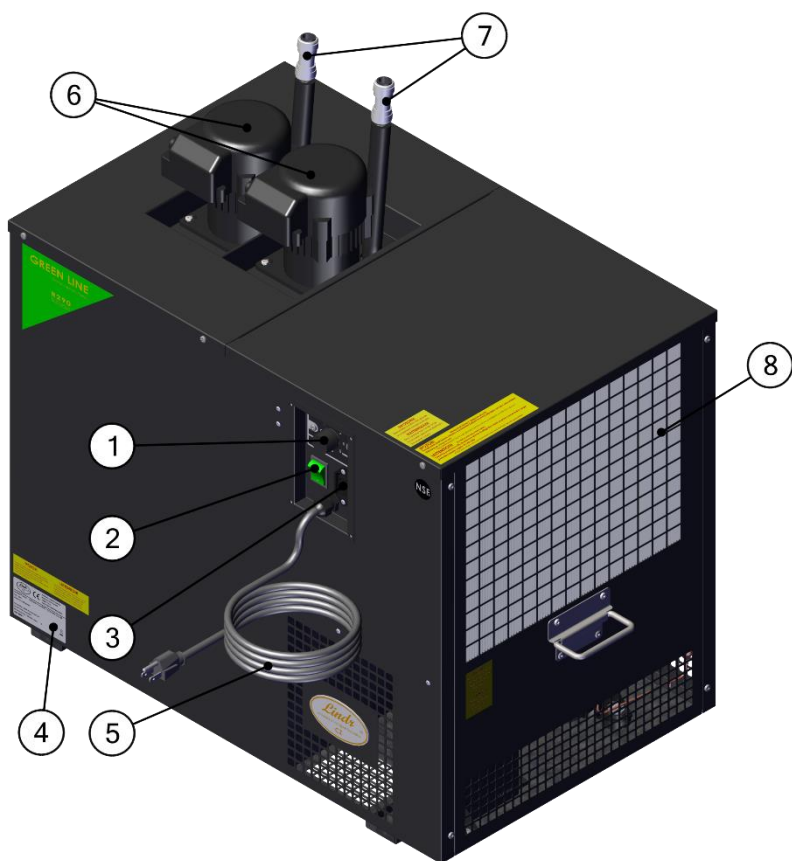
## 8. Warranty:

The device comes with a warranty in accordance with general legal regulations of the Czech Republic or in accordance with the trade agreement. During the validity period of the warranty, we will remove any defects on the product free of charge, provided these defects were not caused by excess wear, improper handling, incorrect storage or by using the product in a way that is counter to the instruction manual or the product's design as defined by the manufacturer. Materials replaced during the validity period of the warranty are our property. The legitimacy of the warranty claim is always decided by an authorised service centre. Warranty provided by a retailer outside of the territory of the Czech Republic is governed by the agreement between the retailer and the buyer in their mutual relationship; this agreement is not directly linked to the manufacturer. The agreement does not give the buyer the right to submit warranty claims to the manufacturer. Transport expenses or other costs are not covered by the warranty.

### **Attention:**

Electrical devices and appliances must be checked/inspected at a time stipulated by valid legislation of the country the device is operated in. Inspection of wiring may only be done by a person with valid authorisation for this activity. Service work, provision of spare parts and inspection is done by the manufacturer or an authorised service centre.

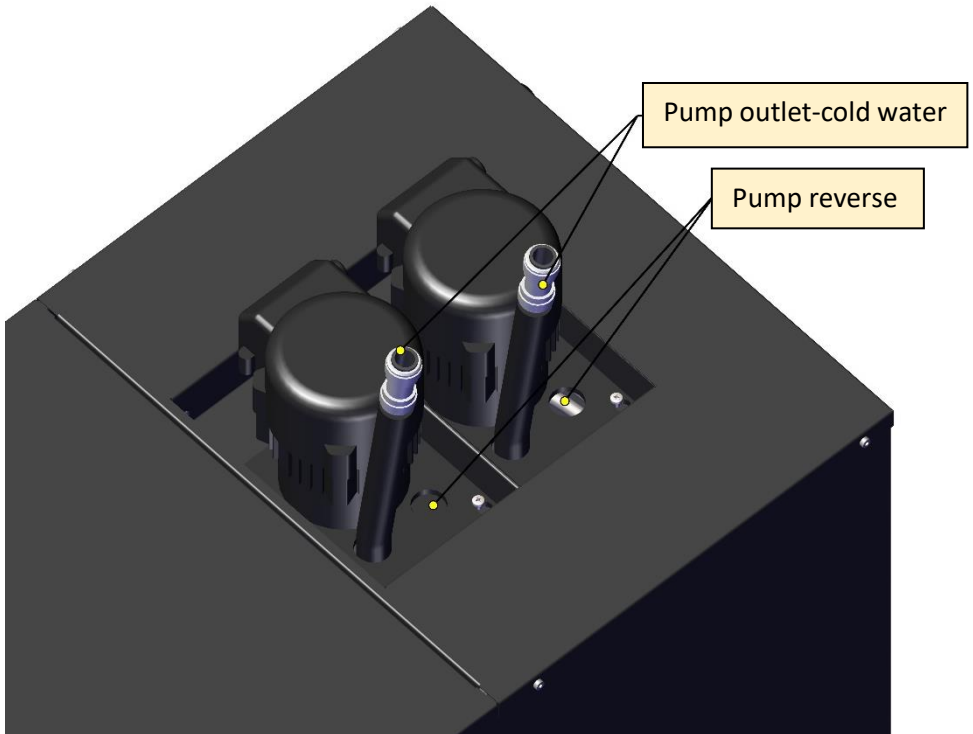
## 9. Description of the cooler:



1	Thermostat	6	Pumps
2	Main switch	7	1/2" (12.7 mm) cool water outlet Speed fitting
3	Pump socket	8	Condenser
4	Product label		
5	Power cable		

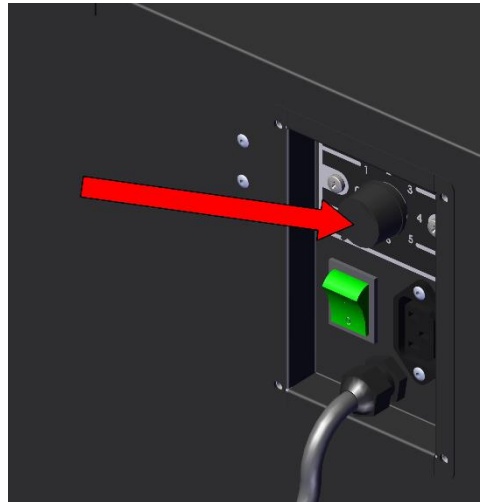
## 10. Beverage inlets and outlets:

The pump outlet is fitted with a 1/2" (12.7 mm) speed fitting.



## 11. Thermostat placement:

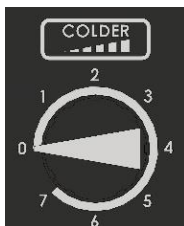
The mechanical thermostat with 1 -7 numerical scale located on the front of the cooler.



## 12. Temperature and adjustment:

The temperature of the cooled beverage is controlled by a mechanical thermostat. The thermostat has a numerical scale of 1-7. Setting the thermostat to 6-7 creates an ice bank (ice accumulation). Setting the thermostat to 1-5 regulates the temperature of cooled water in 1 °C – 12 °C

0 = off



č.1 = max. beverage temperature of 12 °C






č.7 = ice bank



### 13. Putting into operation:

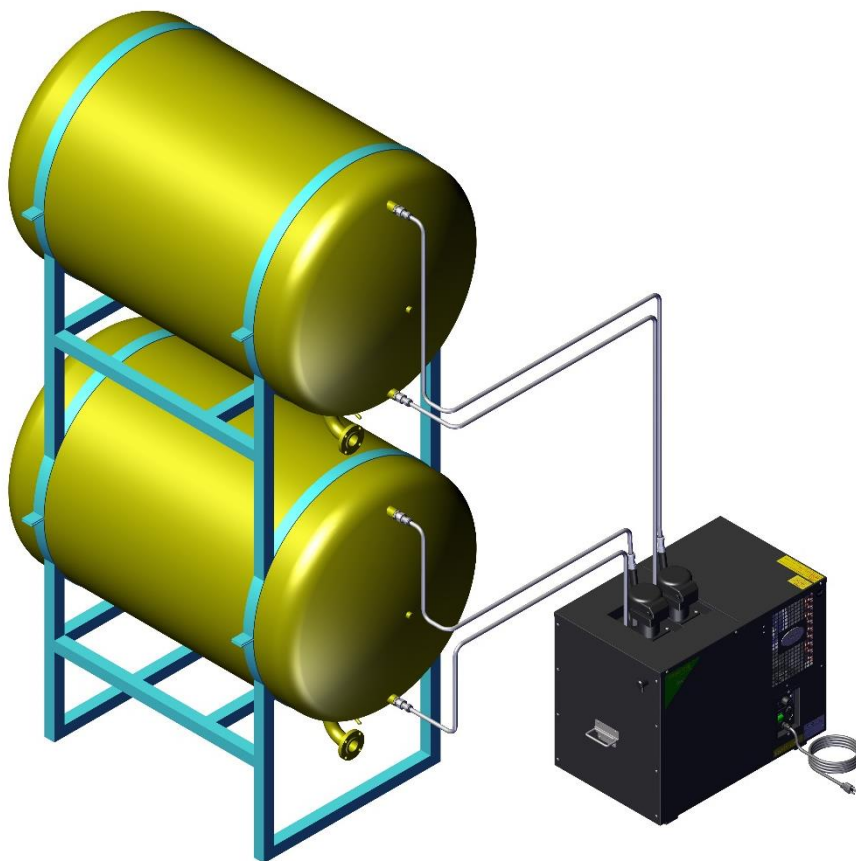
The device requires professional installation by a qualified firm including training of the operator (owner) and operating staff.

1. Interconnect the cooled water circuit. Insulate the tubing.  
 **WARNING: The reverse line (reverse) must be submerged under the water level in the tank.**
2. Fill the tank with clean water or glycol in accordance with point 15.
3. Connect the cooler to the power mains.
4. Plug the pump cable into the socket on the control panel.
5. Check that all the joints and connections are sufficiently tightened.  
 **WARNING: If you discover a leak, turn off the device. Fix any leaks found on the tubing. If a leak is found inside the device or you are unsure how to proceed, contact a service centre.**
6. Set the desired temperature on the thermostat – see point 12.
7. Turn on the device using the main switch.
8. The beverage is now cooling.
9. Check the water level in the tank and refill if needed.

 **WARNING: BEFORE STARTING THE DEVICE, FILL THE TANK WITH CLEAN WATER. DO NOT USE ANY CHEMICAL AGENTS. COULD CAUSE DAMAGE TO THE COOLING SYSTEM. FOR SPECIAL APPLICATIONS REQUIRING COOLING TO SUB-ZERO TEMPERATURES, IT IS POSSIBLE TO USE AN ECO-FRIENDLY ANTIFREEZE MIXTURE BASED ON PROPYLENE GLYCOL.**

## 14. Interconnecting beverage tubing:

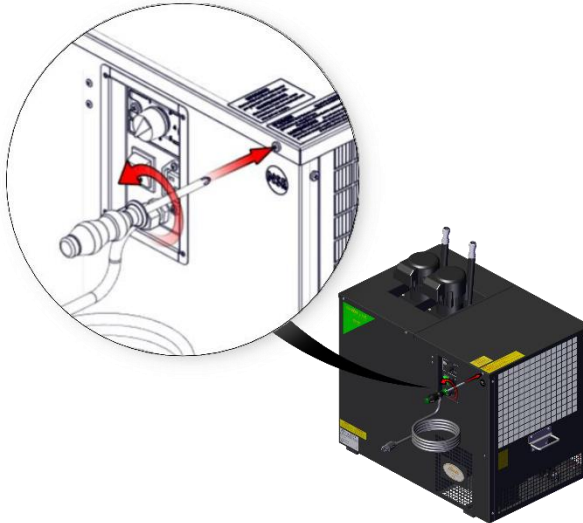
The figure shows a model example of connection.



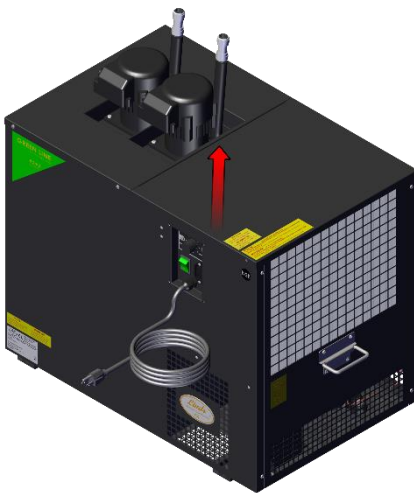
## 15. Pouring water into the tank:

 **WARNING: Always disconnect the device from power before pouring in water!**

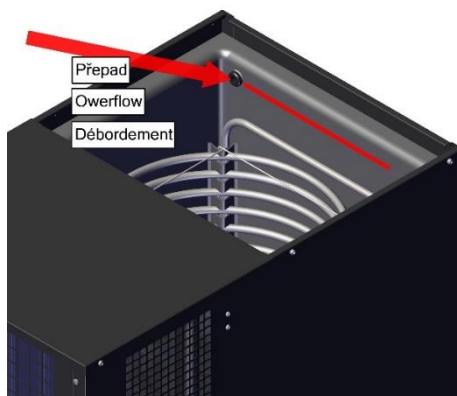
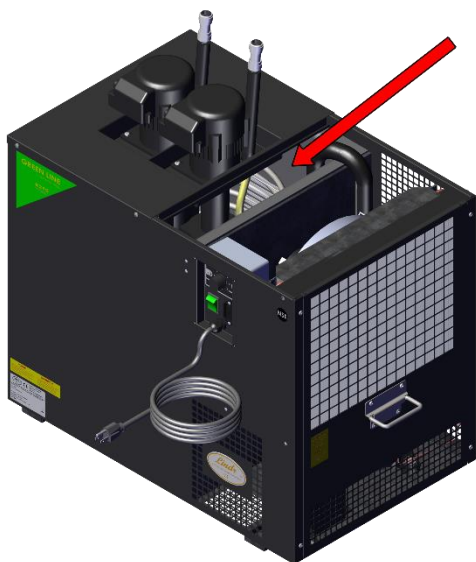
1. Remove the two screws holding the lid.



2. Remove the lid.



3. Pour water all the way up to the overflow.



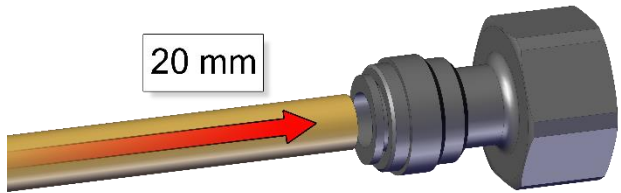
4. Replace the lid and secure it with screws.



## 16. How to Work with speed fittings:

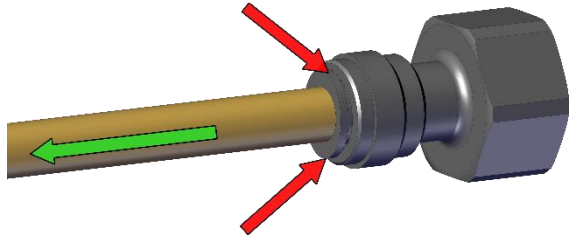
### Speed fittings Installation

Grasp the speed fitting and insert the hose all the way inside the speed fitting body (ca. 20 mm). The end of the hose must be straight, so that it plugs fully into the coupling. If the hose will not go in, moisten the end of the hose.



### Speed fitting Removal

Hold the grey ring tight against the body of the speed fitting and pull out the hose.



**WARNING:** Hoses must not be pressurised during removal.



**WARNING:** If you do not hold the grey ring but pull at the hose, the rapid coupling will cut even deeper into the hose.

## 17. Environmental protection:



This product must not be disposed of in communal waste.  
Electrical waste in the Czech Republic is disposed of within the Rema System.

### **In countries other than the Czech Republic, waste sorting is subject to local regulations.**

Sorted waste enables recycling and reusing used products and packaging materials. Reuse of recycled material helps protect the environment from pollution and reduces resource consumption. Local regulations may regulate the method of disposing household appliances at local collection points or at the point of sale.

## 18. Maintenance:

Flush the beverage tubing of the cooler after each use with pressurised water (see Sanitation by Water). To make flushing easier, use a sanitation adapter according to your type of keg coupler (not included in standard accessories). The cooler must be sanitised once every 14 days by a person with chemical engineering qualifications. The condenser must be checked for cleanliness every month. Any dirt found must be cleaned with compressed air or wiped off. Otherwise, there is a risk of reduced cooling output or damaging of the cooler.

## 19. Inspection before every use:

1. Visual check.
2. Water level check.
3. Lead-in cable check.
4. Condenser cleanliness check (in case of excess pollution of the condenser, clean more frequently than once a month).



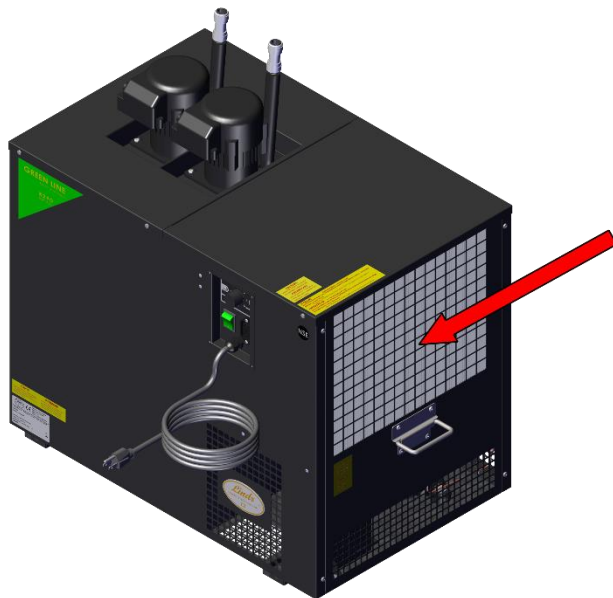
**Warning: Do not use the device if defects or malfunctions are found.**

## 20. Periodic check:

- 1x a day: check water level in the tank.
- 1x a week: check that the lead-in cable is undamaged and that the plug is firmly in the socket.
- 1x a week: check that the device is not exposed to radiant heat.
- 1x a week: check that air circulation is not obstructed.
- 1x a month: check the cooling unit's condenser and clean it regularly.
- 1x a year: have an engineering inspector check the electrical safety of the device.

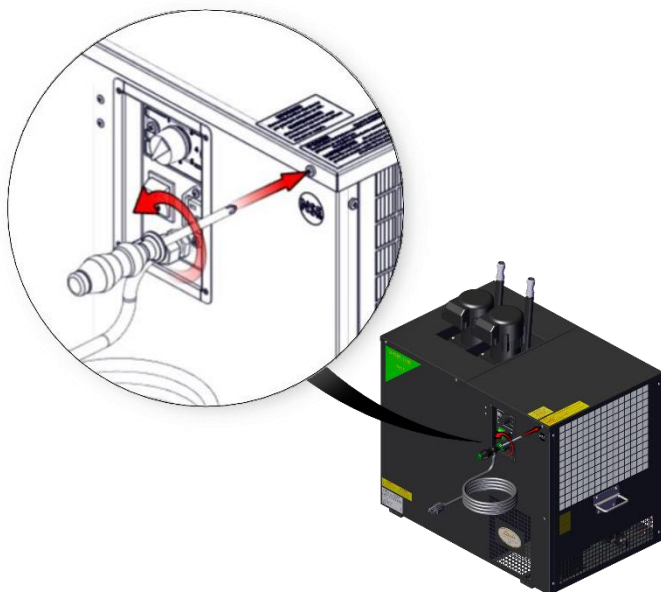
## 21. Condenser cleaning:

The condenser must be cleaned with compressed air and brush 1x a month.



 **Warning:** Disconnect the device from power before cleaning the condenser!

1.



2.



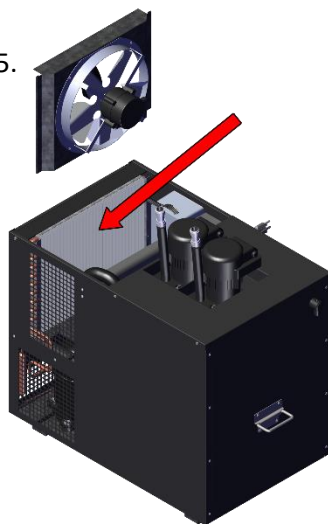
3.



4.



5.



## 22. Table of defects:

MALFUNCTION	CAUSE	REMOVAL
The device does not work.	Power cable is not plugged in.	Plug in the cable.
	Main switch is off.	Turn on the main switch.
	The thermostat is set to "0".	Set the thermostat to the desired value.
	No water in the tank.	Pour water into the tank.
The device does not cool to the set temperature.	incorrect thermostat setting.	Turn the thermostat knob to the right towards number 7.
	Poor air circulation.	Check the cleanliness of condenser plates.
	The air vents are obstructed.	Free up the air vents.
	The device overheats.	Place the device in a colder environment.
Rapid couplings are leaking.	Hose poorly inserted.	Pull out the hose, check that the end of the hose is flat (not at an angle), level off with a knife if needed.
	Scratches on the hose.	Pull out the hose and shorten it by ca. 2 cm.



**NOTE:** If the defect persists even after the above steps are taken, contact a service centre.

**Do not forget to specify the following:**

- type of defect
- product type
- production year
- product's serial number (found on the label)

Ordering Components.

ALWAYS USE ORIGINAL COMPONENTS. The manufacturer or supplier bear no responsibility for non-original components or components not recommended by the manufacturer.

## 23. Spare parts:

When ordering spare parts, always provide the following:

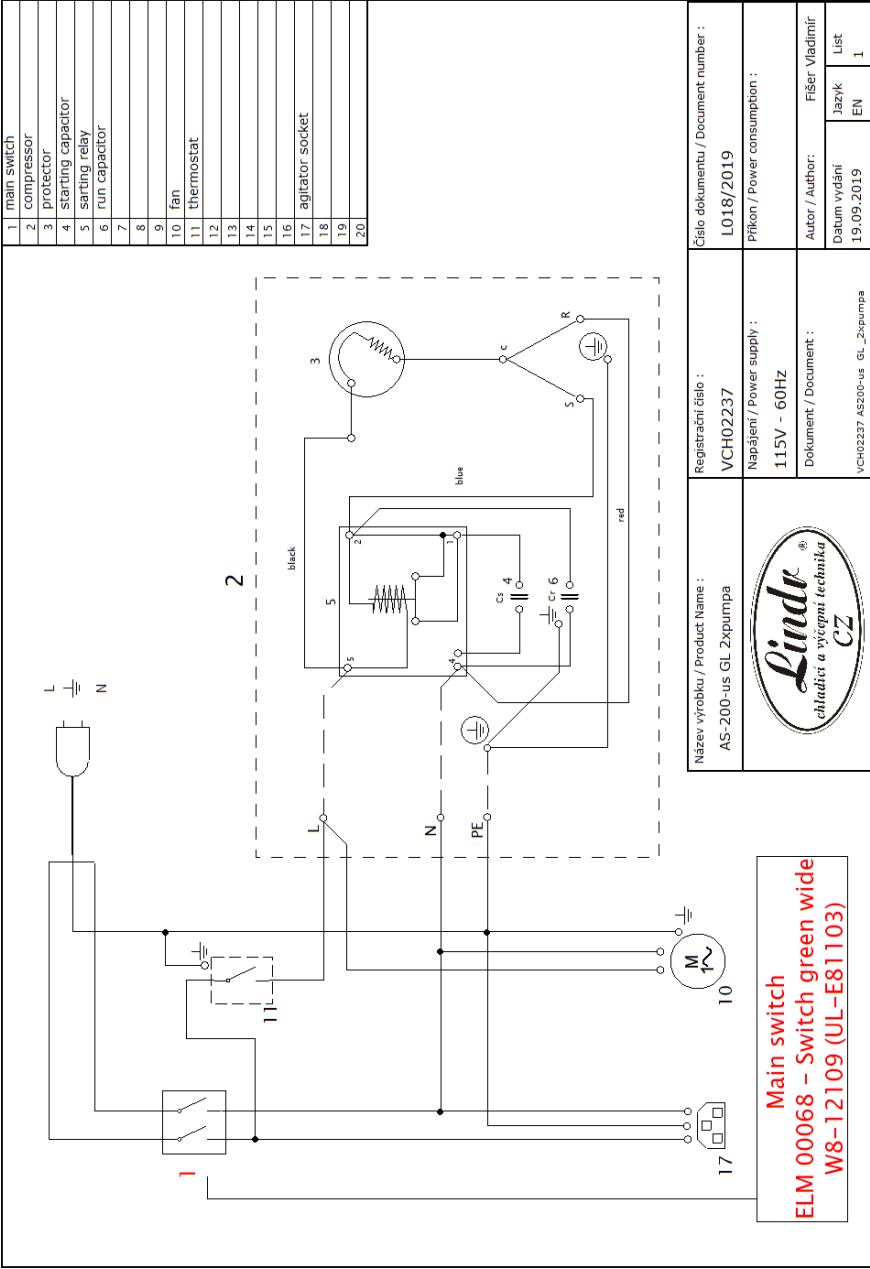
- product type
- production year
- product's serial number
- full name of the spare part and its number.

## 24. Technical data:

Card number	VCH 02237
Name	AS-200-us
Power (Hp)	3/4
Power (W)	2050
Max. output (l/hour)	200
Sustained output (l/hour)	150
Temperature difference $\Delta t$ (°C)	10
Coolant type	R290
Voltage	115 V/60 Hz
Input power (W)	886
Current (A)	7,70
Pump displacement	2x 12m
Frame dimensions (WxDxH mm)	660x420x540
Net weight (kg)	42,5



25. Wiring diagram:



## 26.Cooling diagram:

