

GB

INSTRUCTION MANUAL COMPACT COOLING UNIT

MINICHILLY SB COMPATIBLE 115V



Attention: Before switching on the unit, leave it standing on its feet for 24 hours to ensure that the oils that may have been circulating during transportation have settled. The unit is then ready for start-up.

WTG-Quantor GmbH
Europa-Allee 53
D-54343 Föhren
Phone: +49 (0)6502 999 95-0
Fax: +49 (0)6502 999 95-75
eMail: info@quantor.technology
Homepage: www.quantor.technology

QUANTOR

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The described cooling unit may only be put into operation, if the operator is sufficiently trained and the operating and maintenance personnel have studied this instruction manual in detail.

1. Safety instructions

1.1 Installation and commissioning

Place the unit on a plain, dry and clean place.

Before switching on the unit, leave it standing on its feet for 24 hours to ensure that the oils that may have been circulation during transport have settled.

Pay also attention that the connecting cable is untangled and free and that nothing is resting on it. For direct product cooling use the cooling coil offered by the manufacturer only (optional item). It is imperative to provide sufficient ventilation of the unit. The ventilation slots must remain free for sufficient evacuation of heat. No objects may be placed under the unit!

The following safety measures must be observed:

- Min. water temperature: -6 °C (with propylene glycol)
- Max. water temperature: +30 °C
- Max. ambient temperature: +32 °C
- **ATTENTION: For cold water temperatures below 0 °C it is mandatory, to add 30 % of propylene glycol to the cooling water !**
Note: There can be no ice bank building when using Glycol.
- Keep the unit clean from any dirt, fiber etc.
- Make sure to connect the unit to the required supply voltage
- Protect the unit from moisture, no fluids may enter the electric parts
- Observe the warning and safety information on the electrical components and in this instruction manual

1.2 Safety information

The unit should be connected and operated by trained personnel. Adjustments, maintenance and repairs should be performed by qualified personnel.

Correct function and reliability of operations of this unit can only be warranted, if during operation and service the general common safety precautions, as well as the specific safety instructions described in this manual will be carefully observed.

Handling and treatment of the unit not according to the safety instructions required for electrical appliances and the instruction in this document may result in severe bodily harm which is not under the responsibility of the manufacturer. Injury and property damage can occur through:

- inappropriate operation
- incorrect installation or operation
- improper removal of the necessary protective cover or housing, wetting the electrical parts
- Opening of the unit during operation, which is prohibited

1.2.1 Impairment of safety

If the unit is damaged, it must be unplugged, set aside, marked to warn others against using it, and a technician must be called before it is returned to operation. Using the unit if it is damaged is unsafe and therefore strictly prohibited.

1.2.2 Safety instructions

The unit may only be operated after an appropriate protection earth has been connected, and the directions of the country of destination, regional regulations as well as manufacturer's safety instructions have been observed.

1.3 Spare parts

If assemblies or parts are replaced, only use identical assemblies or parts from the manufacturer.

1.4 Transport/Storage

Check your unit for damaged on arrival, and note any damages found in the delivery note before signing for it, so you may claim the from the transport company. Postpone commissioning it until you have consulted with the manufacturer. The unit may only be stored in a dry, dust-free environment at temperature of 0°C to 40°C.

1.5 Electrical installation

All electrical installations are to be carried out by qualified personnel, under the conditions:

- The electrical unit has been unplugged from the electric socket and secured against unintentional resetting
- Disconnection from electric power has been verified.
- It is ensured for the operation of this control system that also the additional designated monitoring and safety fuse has been installed in a professional manner.

The installation is made with compliance to national and the manufacturer's safety standards.

1.6 Service

All information in this instruction manual regarding service work must be strictly observed.

2. Intended use

The cooling units MiniCHILLY are suitable for the cooling of process water for cooling other appliances such as tanks. The cooling units are only authorized for the above mentioned range of application. They are not suitable for cooling hot liquids, chemicals or the like.

3. Commissioning

- 1) Remove the lid and fill the water tank with water (see water level gauge outside).



Never operate the unit with a liquid level beneath the lowest water level mark “min”!

- 2) Connect the water pipes, check for possible leaks.
- 3) The unit is designed to operate with a tank temperature control kit which includes a submersible pump and plastic tubes to lead Glycol water through it. The fittings on the lid of the unit should be used to connect the plastic tubes. Such kits are not provided with the unit. If used, please connect them according to the instructions of the manufacturer.
- 4) Close the lid.



Do not operate the unit when it is open with the lid removed!

- 5) Establish the electric network connection (see 1.5 Electrical installation)
- 6) Adjust the required temperature on the thermostat (see 5. temperature setting). After reaching the adjusted set-point temperature the unit is ready for operation (see also 1.1 safety measures).

3.1 Connection

Verify that all connections are sealed. No dirt particles may gain access into the pipes and the cooling water in the unit.

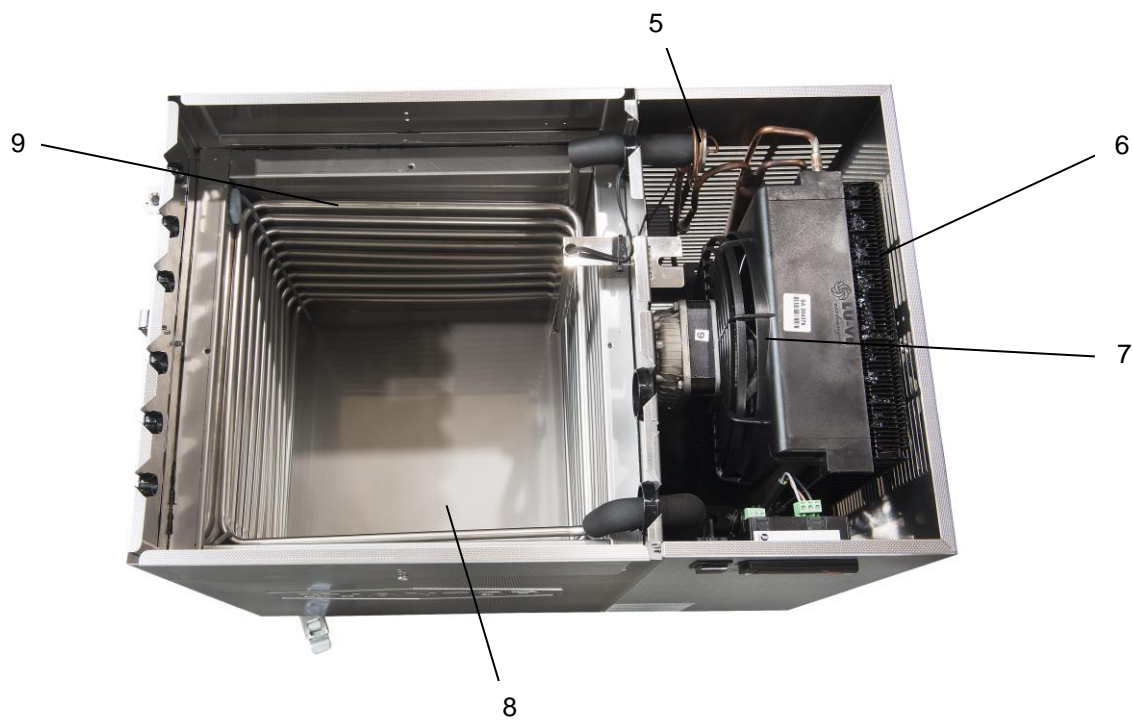
3.2 Chart

Example: MiniChilly 05 SB Comp



- 1 Water level gauge and tank emptying
- 2 Cover fastener
- 3 Connections 3/8"

- 4 Thermostatic controller
- 5 Small pipes for water return flow



- 5 Expansion valve
- 6 Condenser
- 7 Fan

- 8 Water tank
- 9 Evaporator (cooling circuit)

4. Decommissioning

- Switch off the unit and disconnect the power plug.
- Remove the pipes/hoses from the unit.
- Draining and cleaning of the unit by qualified personnel.

5. Temperature setting

Thermostatic operation: adjust the desired set-point temperature at the controller (5).



**Do not operate the unit when it is open with the lid removed!
Make sure that the lid is fastened before switching the unit on!**

For ice bank building

- Ice bank will be build approx. 2 hours after starting the unit
- Building an ice bank requires filling the unit with clear water only, without Glycol or remnants of Glycol in the water system
- Recommended set-point temperature for using an ice bank: -1,0 °C (30,2 °F)
- **ATTENTION: to avoid damage on the unit (freezing of items such as pumps) make sure that during the ice bank building all items are removed from the water tank**
=> Never let the working machine unattended over a longer time

For required cold water temperatures down to -6 °C (21,2 °F)

- Using the MiniChilly to produce cold water below the freezing point down to -6 °C (21,2 °F) necessitates the use of a glycol-water mixture (min. 30 % propylene glycol, max. 35 % propylene glycol in the water system)
- No ice bank building is then possible due to the anti-frost qualities of the glycol



The value you see on the display after starting the unit is the current water temperature

1. Press the button SET for 1 second
(The set value will start flashing after a few moments)

2. Increase or decrease the value using the arrow button UP or DOWN

3. Press SET again to confirm the new value

Now you will see the current water temperature again.

The controller is enabled for a temperature range from -1°C to $+20^{\circ}\text{C}$ to protect the machine.



For cooling temperatures down to -6°C use a glycol-water mixture (approx. 30 % propylene glycol)!

Please pay attention that the water bath temperature must not fall below -6°C and must not exceed $+30^{\circ}\text{C}$!

Controller activation for a minimum set-point down to -6°C

- Press the „Set“-Button for 3 seconds
- „PS“ is displayed => confirm by pressing „Set“ again for a short time
- With the arrow buttons input password „22“ and confirm with „Set“
- Select parameter name „r1“ (minimum set-point) by confirming with „Set“
- With the arrow buttons set the parameter (min. set-point) down to -6°C
=> confirm again with „Set“
- After modification press „Set“ for 3 seconds to save the settings

After this setting the set-point can be adjusted as usual (see pictures above) – now possible down to -6°C .

6. Cleaning of the cooling unit

Casing: Before cleaning the units disconnect the mains plug! Please do not use water directly on the unit, clean only with a wet cloth and a little dish liquid. The cleaning of the units and the beverage coils (optional for this unit, if used) have to take place according to the instructions of the industrial safety regulations.

Prevent any moisture from getting into the electric part of the unit!

The condenser fins should be cleaned at regular intervals (min. every six months and more frequently if required) by qualified personnel to remove the accumulated air dust.

7. Troubleshooting

Error	Possible cause	Error correction
<ul style="list-style-type: none">• The unit does not start	<ul style="list-style-type: none">• No main connection• No water in the tank• Thermostat is disconnected• Thermostat does not close circuit• Starting device at the compressor is defect• Interference of the compressor (interwinding fault)	<ul style="list-style-type: none">• Establish main connection (plug the unit)• Fill in water• Switch on the Thermostat• Change the Thermostat• Exchange the starting device (relay and condenser)• Change the compressor
<ul style="list-style-type: none">• Unit is running, but does not cool	<ul style="list-style-type: none">• The condenser is blocked with dirt• Failure of the condenser fan• Leakage in the refrigeration system• Compressor interference	<ul style="list-style-type: none">• Clean the condenser• Exchange the fan• Repair the leakage, evacuate gas, and fill with the refrigerant gas (R134a)• Exchange the compressor
<ul style="list-style-type: none">• Unit does not switch off	<ul style="list-style-type: none">• Thermostat defect• Leakage in the refrigeration system• Cooling demand is to large	<ul style="list-style-type: none">• Exchange Thermostat• Repair the leakage, and fill with the refrigerent (R134a)• Control the cooling demand and if necessary reduce the cooling load

All these works have to be carried out by skilled and qualified personnel!

Should it not be possible to take care of the failure, please contact the responsible service.

8. Noise emission

70 dB (A) data according to EN 292 part 2 A1

At level, which are lower as or equal 70 dB (A), the inscription "70 dB (A)" is adequate.

9. Technical Data

- Refrigerant: R134a
- Voltage: 115 V / 1 Ph / 60 Hz
- Water tank volume: 27 l (MiniCHILLY 05 SB Comp und 09 SB Comp)
48 l (MiniCHILLY 17 SB Comp)
- Water connections: 3/8"
- Casing: Stainless steel
- Mobile on wheels

10. Declaration of conformity


We, WTG-Quantor GmbH, D-54343 Föhren, declare in sole responsibility that the cooling units MiniCHILLY 05, MiniCHILLY 09 and MiniCHILLY 17 which this declaration refers to, comply with the following standards and normative documents.

- EN 60204-1 (VDE 0113)
- DIN 6650

In accordance with the low-voltage directive 2014/35/EU, EG 1935/2004.

This declaration becomes void for any modification of the units not agreed with us.

Föhren, 19.07.2016



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Markus Milz
Managing director WTG-Quantor GmbH

► www.quantor.technology