

Instructions Manual

**Mini de-crystallising chamber 90 L,
De-crystallising chamber 490 L,
De-crystallising chamber for a 300 kg barrel,
De-crystallising chamber for a barrel on a pallet**



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This manual covers following devices (codes):

W20410, W204100, W204100A, W40780, W40781

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De-crystallising chamber

230V power supply

Before first use read the manual carefully and follow the instructions contained therein. The manufacturer is not liable for damage caused by equipment used inappropriately or by incorrect handling.

1. General safety instructions

Before first use read the manual carefully and follow the instructions contained therein. The manufacturer is not liable for damage caused by equipment used inappropriately or by incorrect handling.



1.1. Electrical safety

1. Make sure that the nominal voltage of the device and power source are compatible and the socket is grounded.
2. The electrical supply system must be fitted with a residual-current circuit breaker with rated tripping current not higher than 30mA. Performance of the circuit breaker should be checked periodically.
3. Periodically check the condition of the power cord.
Replace the power cord if damaged. Replacing the power cord can only be performed by the manufacturer or by qualified personnel.
Do not use the device if the cord is damaged.
4. In the event of damage to the device, to avoid any health and safety risks, repairs should be carried out only by qualified personnel.
5. Do not pull the power cord.
Keep the power cord away from heat sources and sharp edges to ensure its good condition.



1.2. Operation safety

1. The device is not intended for use by persons (including children) with limited physical, sensory or mental abilities, or by inexperienced users, unless under supervision or with instructions given by an accountable party.
This device is not a toy, and shouldn't be used as one. Children should not to play with it.
2. Protect the controller unit against humidity.
3. Never use this device near flammable materials.
4. Never carry out any maintenance or repairs during operation or if the device is plugged in!
5. For indoor use only. The device is not suitable for outdoor use.

2. Product description.

The adjustable fan (anemostat) is mounted from the top of the chamber. A thermal switch (by the temperature regulator) is mounted on the chamber. It switches on at the temperature of 80°C. The chambers are made of 4 cm thick polyurethane insulating plates, they are equipped with 4 caster wheels with brakes (chamber 490L) and 4 caster wheels without brakes (chamber for barrel / pallet). Shelves are made of stainless steel. The frame is made of black powder-coated sheet metal. er in a dry, cool place.

2.1. Technical specifications:

- **W204100**
- Capacity: 90 L (18 jars 900 ml)
- Total Power: 100 W
- Temperature range: 30 - 55°C
- Internal dimensions: 380x540x340mm (W X H X D)
- External dimensions: 550x810x440mm (W X H X D)
- Heating controller: HC 01
- No. of shelves: 2
- Fan: 230V / 14 Wat
- Heater: 80W
- **W204100A**
- Capacity: 490 L
- Total Power: 1 kW
- Temperature range: 30 - 55°C
- Internal dimensions: 690x1010x740mm (W X H X D)
- External dimensions: 875x1205x865mm (W X H X D)
- Heating controller: HC 01
- No. of shelves: 4
- Fan: 230V / 14 Wat
- Heater: 1 kW
- **W40780**
- Capacity: barrel 300 kg
- Total Power: 2 kW
- Temperature range: 30 - 55°C
- Internal dimensions: 910x1220x1290mm (W X H X D)
- External dimensions: 1135x1290x1535mm (W X H X D)
- Heating controller: HC 01
- No. of shelves: 0
- Fan: 230V / 14 Wat
- Heater: 2 kW
- **W40781**
- Capacity: pallet 120 x 120 cm
- Total Power: 2 kW
- Temperature range: 30 - 55°C
- Internal dimensions: 1310x1220x1290mm (W X H X D)
- External dimensions: 1520x1290x1535mm (W X H X D)
- Heating controller: HC 01
- No. of shelves: 0
- Fan: 230V / 14 Wat
- Heater: 2 kW

3. Temperature regulator

The device is equipped with MHC-01 controller.



3.1. Controller set up

1. Make sure that the controller is switched off before plugging the device in.
2. The main switch (0/1) on the control panel should be in position "0"
3. After plugging in, switch the main switch (0/1) on the control panel from position "0" to position "1"
4. Programmed the controller according to your needs.
5. Longer pressing and holding the button and then releasing it will start the mode of setting the work time indicated on the display with message (Pro.). In this mode, use the "+" and "-" buttons, to define the time after which the controller will automatically switch off. Exiting this mode and approval of the settings is performed by short pressing the "ON/OFF" button.

3.2. Starting work

1 - operation status

indicator lights on - temperature regulator is on,
indicator does not light - temperature regulator is off (the controller works as a normal thermometer), indicator blinks - temperature regulator is on and preheating process is in progress

2 - heating relay state indicator

The indicator lights up - contacts of the relay are closed (heating on), the indicator does not light up - contacts are opened (heating off)

3 – display

Operation mode – default mode, automatically selected when the controller is powered on. The display indicates the measured temperature. The indications are given in °C.

Settings mode – selected by pressing the + or – button. The display indicates the set temperature. The value is displayed in °C. The value displayed flashes and after a while returns to the measured temperature display mode.

Run time setting mode (Pro.) - activated by pressing the "ON/OFF" button. The display indicates the operating time, counting from the moment of switching on, after which the thermostat will automatically switch off. The indication is given in hours.

Display brightness setting mode (d.br.) - activated by holding down the "ON/OFF" button. The display, with all segments lit, shows the currently set brightness. Reaching the setting limit is signalled by flashing.

The following modes are available after entering the appropriate code.

Calibration mode (CAL.) code L-1 – activated by holding down the "ON/OFF" button. The display shows the calibrated temperature (temperature measured taking calibration into account). The indication is given in °C.

Pre-heating time setting mode (P.tl.) code L-2 – activated by holding down the "ON/OFF" button. The display indicates the operating time, counting from the moment of switching on, for which the controller performs the preheating, maintaining the preheating temperature programmed by the manufacturer. The message "OFF" indicates that the preheating function is deactivated. The indication is given in minutes. If preheating is activated, the controller will display "HC2" at start-up.

Preheat temperature setting mode (P.tE.) code L-3 – activated by holding down the "ON/OFF". The display shows the preheating set temperature value. P... indicated in oC.

Preset temperature limit setting mode (L.t.h.) code L-4 – activated by holding down the "ON/OFF" button. The display shows the maximum value of the preset temperature that can be set. The L... indication is given in oC.

4 – button "-" decrease value

Operating mode – Pressing the button will decrease the set temperature value. During pre-heating the possibility of changing the set temperature is blocked.

Run time setting mode – pressing the button will decrease the time after which the thermostat automatically switches off.

Display brightness setting mode – pressing the button will decrease the brightness of the display. Calibration mode – pressing the button will decrease the value of the indicated temperature, and thus calibrating the measurement.

Pre-heating time setting mode – pressing the button will decrease the time after which the thermostat automatically switches from the preheating phase to the heating phase.

Preheat temperature setting mode – pressing the button will decrease the value of the desired temperature to be maintained during preheating. **Preset temperature limit setting mode** – pressing the button will decrease the value of the maximum preset temperature value that can be set.

5 - button "+" increase value

Operating mode – Pressing the button will increase the set temperature value. During pre-heating the possibility of changing the set temperature is blocked.

Run time setting mode – pressing the button will increase the time after which the thermostat will automatically switch off.

Display brightness setting mode – pressing the button will increase the brightness of the display.

Calibration mode – pressing the button will increase the value of the indicated temperature and thus calibrating the measurement.

Pre-heating time setting mode – pressing the button will increase the time after which the thermostat automatically switches from the preheating phase to the heating phase.

Preheat temperature setting mode – pressing the button will increase the preset temperature to be maintained during preheating.

Preset temperature limit setting mode – pressing the button will increase the value of the maximum preset temperature value that can be set

6 - "ON/OFF" button

Briefly pressing the button alternately turns the regulator on (ON) and off (OFF). In the OFF state, the regulator acts as a thermometer. In the ON state, the controller will turn the heater control output on and off to maintain the temperature set by the user.

Longer pressing and holding the button will activate the run time setting mode, indicated by the displayed message (Pro.). In this mode, using the "+" and "-" buttons, the user can define the time after which the controller will automatically switch off, i.e. go into the OFF state. Exiting this mode and confirming the settings is done by short pressing the "ON/OFF" button.

Longer pressing and holding the button starts the display brightness setting mode – indicated by the message (d.br.). In this mode, using the "+" and "-" buttons, the user can set the brightness of the display segments. Exiting this mode and confirming the settings is done by short pressing the "ON/OFF" button.

Longer pressing and holding the button activates the calibration mode which is indicated by a displayed message (CAL.). In this mode, using the "+" and "-" buttons, the user can adjust the temperature readings to the actual temperature value. Exiting this mode and confirming the calibration settings is done by short pressing the "ON/OFF" button.

Note – the controllers supplied are already calibrated.

Longer pressing and holding the button will activate the mode of preheating time setting indicated by the displayed message (P.tl.). In this mode, using the "+" and "-" buttons, the user can define the time after which the controller will automatically switch from the preheating phase to the actual heating phase. Switching off the preheating is indicated with "OFF" message. To leave this mode and confirm the settings press the "ON/OFF" button.

Longer pressing and holding the button will start the mode of setting the preheating temperature indicated by the displayed message (P.tE.). In this mode, using the "+" and "-" buttons, the user can define the desired temperature to be maintained during pre-heating. To exit this mode and confirm the settings press the "ON/OFF" button.

Longer pressing and holding the button will activate the mode of setting the preset temperature limit, signalled by the displayed message (L.t.h.). In this mode, using the "+" and "-" buttons, the user can set the upper limit of the desired temperature setting. To exit this mode and confirm the settings press the "ON/OFF" button.

Note – all settings and operating status (on or off) of the controller are stored in the controller's memory.

Access codes

During start-up of the controller (displayed controller's name, software version, settings values) press and hold the "-" and "+" buttons. After displaying "-" - "-" buttons may be released and the appropriate code may be entered. The code is confirmed with the "ON/OFF" button.

CODE	ACCESS LEVEL
Random	L-0
157	L-1
314	L-2
628	L-3
942	L-4

Run time setting mode (code L-0)

Display brightness setting mode (code L-0)

Calibration mode (code L-1)

Pre-heating time setting mode (code L-2)

Preheat temperature setting mode (code L-3)

Preset temperature limit setting mode (code L-4)

3.3. Error codes

The MHC-01 controller features advanced error detection algorithms. The detection of any error triggers an emergency stop action and brings up the error report screen. The error report screen is displayed continuously. It is therefore necessary to turn off the power, remove the source of the error and turn the controller back on.

ERROR CODE	DESCRIPTION
(E-0) CPU STATUS	Internal controller fault
(E-3) T < Tmin	T1 measured temperature too low
(E-4) T > Tmax	T1 measured temperature too high.
(E-5) button -	pressed/faulty „-“ button
(E-6) button +	pressed/faulty „+“ button
(E-7) button ON/OFF	pressed/faulty „ON/OFF“ button

3.4. Controller's specifications

Specifications (FOR FW: 0.1 version)	
Measuring range*:	-50°C ... +250°C
Read-out resolution:	0,1°C
Measurement accuracy	± 1,5 °C
Minimum set temperature value:	30°C
Run time setting range:	1 ... 96 godzin
Preheating temperature range:	30°C ... 40°C
Preheating time range:	0 ... 60 minut
Adjustment mode	two way
Electrical parameters	
Main circuit power supply: PCU voltage:	12VDC ±10%, Min. 200mA 100...240 VAC 50/60Hz
Thermometer connection:	PT1000
Connection type:	Relay, NO connector
Max connection load:	AC1 - 9A230V
Max heater power:	2000W 230VAC
Max connection cycles AC1	600 cycles/h
Work conditions requirements	

Controller's work temperatures:	0°C...55°C
Storage temperature:	0°C...60°C
Humidity:	Max 65% at 25 °C



IMPORTANT!

Unplug the device before commencing any maintenance or cleaning procedures!

4. Ventilation

When the appliance is in operation, ensure adequate ventilation.



5. Storage

Clean and dry the unit thoroughly after use.

If the device has been moved from a cold room to a room with a higher temperature, before switching on wait until it reaches the ambient temperature and all condensation water evaporates.

Store the device in a dry and frost-free room.

Do not use the device when the ambient temperature is below 5°C.

An additional technical check should be carried out periodically, and if any defects are found, please contact the manufacturer.

6. Cleaning and maintenance

Before first use and after finishing work the equipment

must be thoroughly cleaned and dried.

While cleaning ensure the safety of all electrical components like controller panels (for the time of washing cover them with waterproof fabric or plastic film).

No parts of the device require chemical conservation.

An additional technical check should be carried out before the start of the season, and if any defects are found, please contact the manufacturer.

7. Waste disposal and environmental protection

The used product must be disposed in accordance with the local regulations. Return the device to a collection point from where it can be submitted for environmentally compatible recycling. The consumer has the right to return used equipment directly to the manufacturer's distribution network, free of charge, while replacing it with a new unit as long as the used device is of the same kind and same application as the newly purchased device.

8. Warranty

The product purchased from the Lyson Company is covered by a manufacturer's warranty. The warranty period is 24 months from the date of purchase.

All purchased products come with receipts or VAT invoices.

Warranty details at: www.lyson.com.pl

I declare that I have read the following user manual, the entire text is for me understandable, I have no doubts as to the safe operation of this type of device. I declare that I was trained in how to operate the machine and work safely. I commit to follow the instructions and use all safeguards that are provided for this machinery. If any part of these instructions is not clear to me, I will not operate the machine and I will contact my supervisor to clarify my doubts.

[illegible]