

## MANUAL

### Queen Bee Incubator



# LYSON N

**Przedsiębiorstwo Pszczelarskie Łyson**

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**The following manual encompasses the devices bearing the following codes:**

W5014

**Manual**

1. The general safety principles for device operation
  - 1.1. Operational principles
  - 1.2. Electrical safety
  - 1.3. Operational safety
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## 1. GENERAL SAFETY PRINCIPLES FOR DEVICE OPERATION

Prior to device usage initiation, refer to the following manual and act according the guidelines contained therein. The manufacturer shall not be held accountable for any damages caused by improper usage of the device or its improper handling.

### 1.1. Operational principles

1. The incubator is intended for raising queen bees.
2. Prior to the first usage, the Incubator shall be washed and located in the place of operation.



### 1.2. Electrical safety

1. Power supply electric installation must be equipped with RCD with nominal tripping current In below 30 mA. Functioning of overcurrent circuit breaker must be checked periodically.
2. Check the nominal voltage of the device and the power source for compliance.
3. If the power supply cable gets damaged and it must be replaced, this will be performed by a guarantor or a specialist service centre or a qualified person in order to avoid any danger. Do not use the incubator when the power supply cable or a connecting cable are damaged!
4. Prior to connecting the device to the mains, make sure that the controller is off. The switch on the controlling panel (A – fig. 2) should be in “0” position.
5. While connecting to the mains, be careful. Hands must be dry! The floor on which the device is placed must be dry too!
6. Do not displace the incubator while in operation.
7. Protect the controller against humidity (also during the storage).
8. It is forbidden to pull the power supply cable. The power supply cable must be kept away from any heat sources, sharp edges and its proper state must be secured.



### 1.3. Operational safety

1. The following equipment is not intended to be used by persons with limited physical, sensory or mental capabilities (including children) or persons inexperienced or unfamiliar with that type of equipment unless the usage occurs undersupervision or in line with the equipment operating manual

provided by safety supervising persons. Make sure that children do not play with the incubator

2. In case of any damage t the incubator, in order to avoid any danger the repair must be performed by a qualified person or a specialist service centre only.
3. It is forbidden to perform any maintenance works or repairs while the device is connected to the mains!.
4. The device must not be stored nor switched on at the temperature below 0° C. The incubator must not be activated with the ambient temperature below 5°C
5. Prior to the incubator activation, in case when it has been transported from a room with a lower temperature to a room with a higher temperature, wait until the device has reached the ambient temperature.



It is forbidden to make repair when the device is in operation



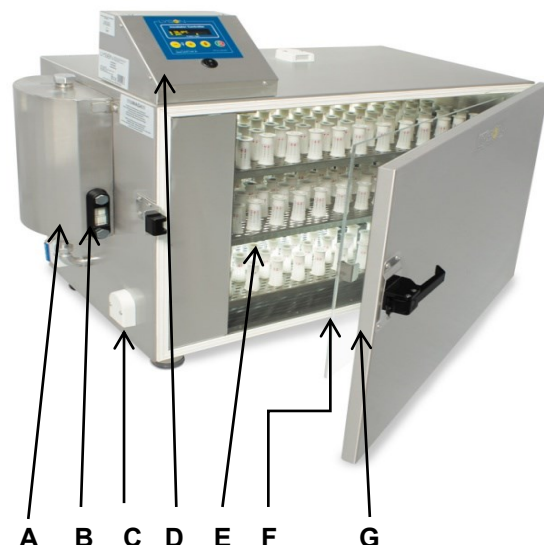
It is forbidden to remove the shields while the device is in operation.

## 2. Device characteristics

The Incubator has been equipped with an advanced IC-01 controller which supervises the internal temperature and humidity. It controls the air flow, filling an internal tank with water. It is made of stainless steel with insulated walls.

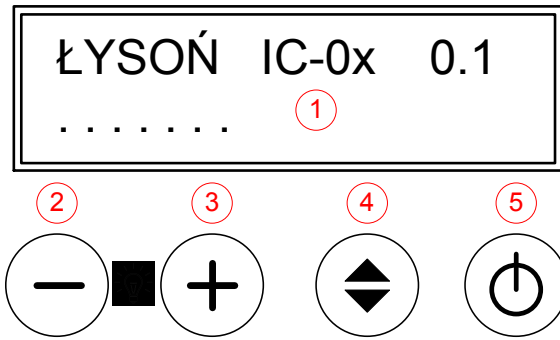
### 2.1 Device description

Figure 1

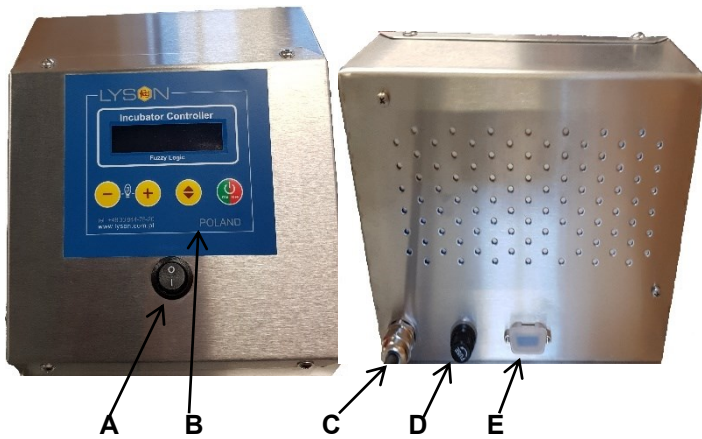


**Description of the incubator:**

- A- distilled water tank - 4L.
- B-water level indicator
- C-air holes
- D-controller
- E-incubator chamber
- F-transparent door to control the raising process
- G-incubator door



**Figure 2**



**Description of the controller:**

- A-main switch 0-1
- B-controlling panel
- C-power supply cable
- D-5A fuse holder
- E-Bluetooth communication outlet

**2.2 Handing the controller**



ELEMENT	DESCRIPTION
1 – display	<p><b>After activation</b> – displays sequentially: manufacturer’s name, device type and software version</p> <p><b>1. Main screen</b> – basic screen selected by default once the device has been activated. Screen description below.</p> <p><b>2. The screen to set the setpoint temperature</b> – the displays shows the temperature measured (upper line) and the setpoint temperature (lower line).</p> <p><b>3. The screen to set the setpoint humidity</b> – the display shows the humidity measured (upper line) and the setpoint humidity (lower line).</p> <p><b>4. The screen for operating statistics</b> – the displays shows the minimal and maximum values of temperature and humidity registered (since the control supply activation). Reset of the values registered shall occur after pressing the „plus” or „minus” buttons</p> <p><b>5. Service screen for TH sensor temperature readouts calibration</b> – the display shows the temperature measured including the calibration (upper line) and the calibration value (lower line)</p> <p><b>6. Service screen for humidity readouts calibration</b> – the display shows the humidity measured including the calibration (upper line) and the calibration value (lower line)</p> <p><b>7. Service screen for temperature regulator tuning</b> – the display shows the value of Kp parameter – tuning of the temperature regulator. In case when the setpoint temperature has not been achieved or when reaching the temperature lasts too long, the value of the parameter must be increased. Respectively, when there are</p>

	<p>noticeable temperature over-regulations, the parameter shall be lowered.</p> <p><b>8. Service screen for the calibration of T1 additional sensor temperature readouts.</b> The display shows the temperature measured including the calibration (upper line) and the calibration value (lower line)</p>		<p>regulating the power supply to the main heater.</p> <ul style="list-style-type: none"> <li>• based on the TH sensor readout, maintains the setpoint humidity</li> <li>• based on the T1 sensor readout, maintains the setpoint temperature by regulating the power supply to an additional heater</li> <li>• regulates the water level inside the humidifier system</li> <li>• detects and signals emergency and warning states</li> </ul>										
<p>2 – “-“ button for value lowering</p>	<p><b>Main screen (1)</b> – pressing the button will switch off the lighting of the incubator chamber.</p> <p><b>Statistics screen (4)</b> – pressing the button will reset the statistics for the measurements of the temperature and humidity.</p> <p><b>Other screens</b> – pressing the button will decrease the value of the modified parameter.</p>												
<p>3 – „+„ button for value increasing</p>	<p><b>Main screen (1)</b> – pressing the button will switch on the lighting of the incubator chamber.</p> <p><b>Statistics screen (4)</b> – pressing the button will reset the statistics for the measurements of the temperature and humidity.</p> <p><b>Other screens</b> – pressing the button will increase the value of the modified parameter.</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 50%;">ELEMENT</th> <th style="width: 50%;">DESCRIPTIONS</th> </tr> </thead> <tbody> <tr> <td>1 – temperature indication</td> <td>The field shows the value of the temperature measured.</td> </tr> <tr> <td>2 – signalling of T1 sensor damage</td> <td>Displayed sign together with a periodical sound signal indicate the damage to an additional sensor (T1). Switching off the controller resets the failure signalling.</td> </tr> <tr> <td>3 – signalling of open door</td> <td>Displayed sign together with a periodical sound signal indicate timeout of door opening. Closing the door resets the signal</td> </tr> <tr> <td>4 – signalling a failure in the water filling system of a humidifier</td> <td>Displayed sign together with a periodical sound signal indicate the timeout for water filling in a humidifier. The signal may be triggered by: <ul style="list-style-type: none"> <li>• water shortage</li> <li>• damage/suspension of a float switch</li> </ul> </td> </tr> </tbody> </table>		ELEMENT	DESCRIPTIONS	1 – temperature indication	The field shows the value of the temperature measured.	2 – signalling of T1 sensor damage	Displayed sign together with a periodical sound signal indicate the damage to an additional sensor (T1). Switching off the controller resets the failure signalling.	3 – signalling of open door	Displayed sign together with a periodical sound signal indicate timeout of door opening. Closing the door resets the signal	4 – signalling a failure in the water filling system of a humidifier	Displayed sign together with a periodical sound signal indicate the timeout for water filling in a humidifier. The signal may be triggered by: <ul style="list-style-type: none"> <li>• water shortage</li> <li>• damage/suspension of a float switch</li> </ul>
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<p>4 – button „&lt;&gt;” screen switching</p>	<p>Pressing the button shortly will switch between the controller screens.</p>												
<p>5 – button „ON/OFF”</p>	<p>Pressing the button alternately for a short time will activate (ON) and deactivate (OFF) the climate controlling inside the incubator.</p> <p>In the deactivated state (OFF), the regulator acts as a typical hytherograph completed by the registration system for min and max values. Additionally, in the deactivated state it is possible to switch on and off the cabin lighting, switch between the screens, reset the operating statistics and to modify the parameters displayed.</p> <p>In the activated state (ON), apart from all the operations typical for OFF state, the controller additionally :</p> <ul style="list-style-type: none"> <li>• based on the TH sensor readout, maintains the setpoint temperature by</li> </ul>												

	<ul style="list-style-type: none"> <li>• damage to a solenoid valve that controls the filling</li> <li>• stopping the liquid flow from a tank to a humidifier</li> </ul> <p>Defect signalling is accompanied by cutting off the power supply to the humidifier heater. Switching off the controller resets the failure signalling.</p>
5 – signalling the activation of climate controlling inside the incubator	Displayed sign signals deactivation of temperature and humidity controlling inside the incubator (incubator operation deactivating)
6 – humidity indication	The field indicates the value of the humidity measured. In case of humidity sensor failure, the sign „-“ is displayed as the value readout. Failure signal is accompanied by a periodical sound signal.
7 – signalling of activating for a solenoid valve of humidifier water filling	The displayed sign indicates the activating of a solenoid valve that fills in the water tank of air humidifier.
8 – signalling the activation of the incubator chamber lighting	The displayed sign signals switching on the incubator chamber lighting.
9 – signalling the activation of the air humidifier system.	The displayed sign signals the activation of air humidifier inside the incubator chamber.
10 – signalling the activation of the air humidifier activation.	The displayed sign signals energy supply to the temperature main heater inside the incubator chamber.

### 2.3 Error codes

ERROR	ERROR DESCRIPTION
100	Internal failure of the controlling computer.
200	Damaged or blocked “-“ button .
201	Damaged or blocked “+” button.
202	Damaged or blocked „<“ button - 4.
203	Damaged or blocked „ON/OFF“ button.
300	Damaged sensor of temperature measurement for TH composite sensor.
301	Temperature indication of TH composite sensor outsider the permissible range.
302	Temperature regulation error – damaged heaters power supply path.

### 2.4 Device technical parameters

- power supply 230V/5A
- capacity 300 queen bee’s cells
- external dimension: width. x depth. x height.- 900x500x750mm.
- shelf dimension: width. x depth. x height. – 560x370x130mm.
- power consumption 480W
- advanced IC-01 controller
- LED lighting for the incubator chamber
- 4 l tank for distilled water

**The recommended air temperature in the room where the incubator works should be 20-30°C.**

### 3. Device storage

After termination of operation, the device must be washed and dried thoroughly  
Prior to the incubator’s start-up. in case when it has been transferred from a room with a lower ambient temperature to a room with a higher one . one must wait until the device has reached the ambient temperature.  
The device is to be stored in dry rooms with the temperature above 0° C.  
The incubator must not be switched on with the ambient temperature below 5 degrees C.  
Before every season. an additional technical inspection must be performed and in case when any defects have been detected, a service centre must be contacted

### 4. Maintenance and cleaning



**Prior to the maintenance, unplug from the mains!**

While washing, be careful not to damp the controller (it can be covered with a water-resistant material).  
While washing take precautions not to damp the internal heating elements. Dry the incubator carefully after washing.  
Before every season. an additional technical inspection must be performed and in case when any defects have been detected, a service centre must be contacted

## **5. Recycling**

Worn-out product must be removed as waste only within selective waste collection organised by the Network of Communal Electric and Electronic Waste Collecting Points. A customer is entitled to return the used equipment to the electrical equipment distributor network, at least free of charge and directly, if the device to be returned is of proper type and serves the same purpose as the newly purchased device

## **6. Guarantee**

Product purchased from "Lyson" company are encompassed by the manufacturer's guarantee.

The guarantee duration equals 2 years .

A receipt or a VAT invoice is issued for each product purchased.

**Details on the guarantee terms available  
on [www.lyson.com.pl](http://www.lyson.com.pl)**