Instructions Manual

Portable transport incubator for queen cells

LYSON

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This manual covers following devices (codes):

W5016

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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. Intended use

1. The transport incubator is designed for transporting queens, cages or cells from the apiary to a stationary laboratory or between apiaries.

1.2. Electrical safety

1. Connect the device to a socket with voltage specified on the rating plate of the product.
2. 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 power cord is damaged!
3. Protect the motor and the control unit against moisture (also during storage).
4. Do not pull the power cord.
Keep the power cord away from heat sources and sharp edges to ensure its good condition.

1.3. 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. In the event of damage to the device, to avoid any health and safety risks, repairs should be carried out only by qualified personnel.
3. Never carry out any maintenance or repairs during operation or if the device is plugged in!
4. Do not use or store the device at the ambient temperature below 5ºC.
5. If the device has been moved from a cold room to a room with a higher temperature, before switching on wait until it reaches room temperature.

2. Product description

The portable incubator is equipped with the IC-03 controller, which automatically manages the temperature inside the device. The range of controlled temperature is from 33 to 35 ºC +/-0,5ºC. (**recommended temperature is 34,5 - 35ºC**). The casing is made of durable synthetic materials, insulated and airtight. The built-in 30W heater keeps the temperature in the device stable.

2.1 Design

The transport incubator is designed for transporting queens, cages or cells from the apiary to a stationary laboratory or between apiaries. It is equipped with a 12V plug that fits into a car socket.

Preperations for use:

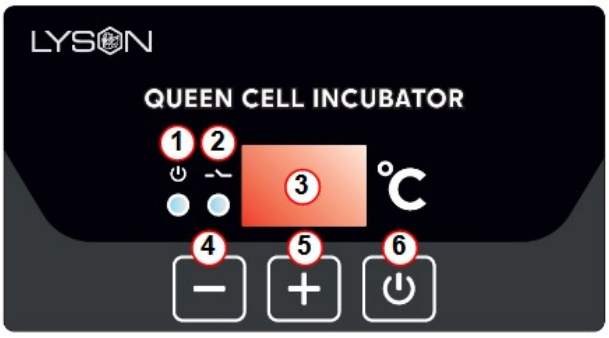
Before placing the cells or cages in the unit, turn it on about 15 minutes earlier so that the temperature inside stabilizes.
The controller (3) has been programmed by default to a set temperature of 34.5°C.
At the front of the incubator case, under the handle, there is a ventilation hole (4).
During transport, place a damp cloth or paper towel on the foam with the cages to maintain optimal humidity inside the incubator

Do not expose the incubator to sunlight, avoid shocks and, during transport, protect the incubator against shifting (tipping over).
When transporting, the incubator must always be placed in a horizontal position (temperature regulator upwards). When carrying, hold by the handles on the lid of the unit, not by the handle on the side.

Elements:

1-Incubator case
2-power supply cable 12V
3-IC-03 controller
4-ventilation hole
5-temperature sensor
6. Heater power supply cable
7-foam for 45 cells

2.2 Controller



ELEMENT	DESCRIPTION
1 – status indicator	The indicator is on - the temperature regulator is on, the indicator is off - the temperature regulator is off (the controller works as a regular thermometer).
2 – heater status	The indicator is on - the preheating system is powered (preheating is in progress), the indicator is off - the preheating system is not powered.
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. **Preset temperature setting mode -** selected by pressing the +(4) or -(5) button. The display shows the desired temperature. The indication is given in °C. The display flashes and then returns to the measured temperature display. **The default setting is 34.5 °C.** **Standby power setting mode (PSt)** - activated by pressing the "ON/OFF" button (6). The display indicates the heating power maintained when the set temperature has been reached. The value is scaled in %. **Default setting 3%**. If the system, after reaching the desired temperature, cannot maintain it (the temperature drops very quickly), the value of Pst should be increased. If, after stabilising the preset temperature, its value continues to increase, the value of Pst should be decreased. **Maximum power setting mode (PMA) -** activated when the "ON/OFF" button pressed and held down a few seconds. The display indicates the maximum power that the controller will deliver to the chamber heating system. The value is scaled in %. **Default setting is 75%.** The PMA value should be increased when the system, is not able to reach the preset temperature. The PMA value should be decreased when during the device heating up the temperature exceeds the maximum value. **Temperature regulator gain setting mode (CPG)** - activated when the "ON/OFF" button pressed and held down a few seconds. The display indicates the temperature regulator gain setting. **Default setting 20.**

	The CPG value should be increased if the system has problems with reaching the setpoint temperature and the temperature values achieved are minimally too low. Decrease the CPG value when the temperature stabilisation overshoot is too high. **Temperature regulator integration time setting (CtI) -** activated when the "ON/OFF" button pressed and held down a few seconds. The display indicates the set integration time of the temperature regulator. **Default setting is 5.** The value of CtI should be decreased when the system has problems with adjusting (reaching) the setpoint temperature and the obtained temperature values are minimally too low. The value of CtI should be increased when the over-regulation of temperature stabilisation is too high. ***The following mode is available by entering the appropriate code.*** **Calibration mode (CAL.)** code L-1 - activated when the "ON/OFF" button pressed and held down a few seconds. The display shows the measured temperature taking calibration into account. The indication is given in °C. The device is factory calibrated in such a way that the temperature value of 34.5°C is indicated with the accuracy of no less than 0.1°C.
4 – the "-" button - reducing values	**Reducing parameter values**
5 – „+" button increasing values	**Increasing parameter values**
6 – „ON/OFF" button	Brief pressing of the button alternately turns the controller ON and OFF. In the OFF state, the regulator behaves like a thermometer. In the ON state, the controller will turn the heater control on and off to maintain the temperature set by the user.
	Longer pressing and holding the button and then releasing the button will activate one of the selected setting or calibration modes of the device one after another.

2.3 Error Codes

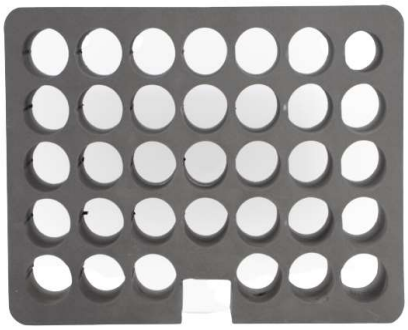
CODE	DESCRIPTION
(E-0) CPU STATUS	Internal controller fault
(E-3) T < Tmin	T1 measured temperature too low
(E-4) T > Tmax	T1 measured temperature too high.
(E-5) button -	pressed/faulty „-„ button
(E-6) button +	pressed/faulty „+„ button
(E-7) button ON/OFF	pressed/faulty „ON/OFF" button

2.4 Technical specifications

-power supply 12VDC/15A
-capacity: 45 cages
-outer dimensions: WxDxH.-
270x240x165mm.
-power consumption: 30W
-Net weight; 1,9 kg.
-controller IC-03
-temperature range 33-35ºC accuracy +/-0,5°C
-airtight, thermally insulated case

Optional accessories:

1) 33 cage foam



2) 230VAC/12VDC power supply unit

3. Storage

Do not store the device at the ambient temperature below freezing. Do not use the device if the temperature is below 5°C.
If the device has been moved from a cold room to a room with a higher temperature, before switching on wait until it reaches room temperature.

4. Cleaning and maintenance

Unplug the device before commencing any maintenance or cleaning procedures!

While cleaning, take special care not to let the controls of the portable incubator get damp
Dry the unit thoroughly after cleaning. Before each season, an additional technical inspection should be carried out and if any defects are found, please contact the manufacturer.

5. 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.

6. 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