Instructions manual

PREMIUM Uncapping machine with

PC-03

CONTROLLER
230V or 400V

LYSON

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The manual covers following devices (codes):

W902Z_P; W903Z_P

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PREMIUM
UNCAPPING MACHINE
WITH PC-03
CONTROLLER

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

1.1. Electrical safety

1 Make sure that the nominal voltage of the device and power source are compatible.
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 power 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

a 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.
b The floor on which the unit stands must be dry!
c Before starting the unit the "Emergency stop" button must be released
d Pressing the Emergency Stop button stops the device immediately.
e Do not move the device duping operation
f Protect the electrical components against moisture
g Do not use the device near flammable materials.
h Never carry out any maintenance or repairs during operation
i All covers must be firmly attached to the device during operation
j In the event of damage to the device, to avoid any health and safety risks, repairs should be carried out only by qualified personnel.
k For indoor use only. The device is not suitable for outdoor use.

Never carry out any repairs during operation

Do not remove covers during operation

Warning! Hot elements!

NOTE!!!!
Check the water level before turning on the device

2. PC-03 controller

The PC-03 controller operates the uncapping machine and the extruder.
The control panel is divided into two parts; the left part controls the operation of the extruder, while the right part controls the operation of the uncapping machine Fig.2.
After placing the device in a desired place and blocking the wheels:
- plug in the device.
- check the level of water in the closed circuit tank
- check if the safety switch on the controller housing is not depressed (by gently turning it as arrows on the top of the switch) Fig3 no.4
- set the main switch to position "1" Fig 1

Power supply unit with the main switch.

230V socket Main switch

Fig.1

After the above steps, the driver panel will start.

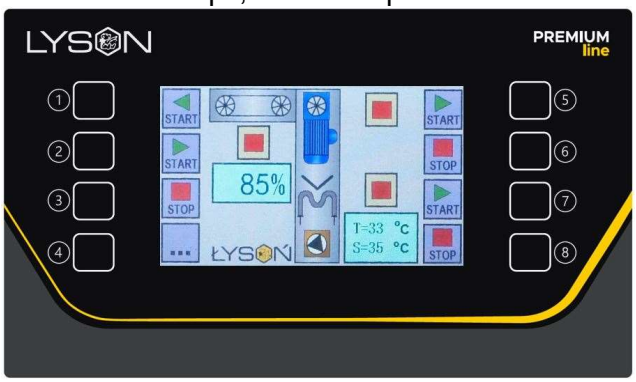


Fig.2
400V or 230V power supply.
Check the feeder chain work direction before starting

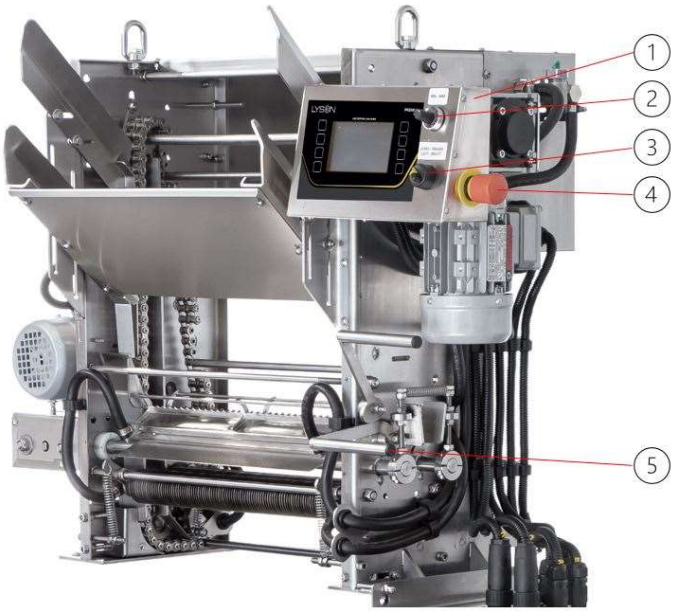


Fig.3

1) Controller unit
2) Chain speed adjustment
4) Safety switch
3) Changing the working direction of the feeder chain
5) Knife angle adjustment

The controller unit buttons (Fig. 2) are used to switch the machine on and off and to configure the parameters. The settings are stored in the controller memory.

2.1. Buttons:

Button 1 – „START”	Switching on the extruder - counter clockwise After entering the menu (button no. 4) configure the extruder rotation (increase of rotation speed) Settings range from 10%-100%.
Button 2 – „START”	Switching on the extruder - clockwise After entering the menu (button no. 4) configure the extruder rotation (decrease of rotation speed) Settings range from 10%-100%.
Button 3 – „STOP”	Stopping the extruder
Button 4 – […] Menu	Menu entering/exiting button […] Fig 5. After entering the menu, we can start programming, i.e. change the speed and temperature.
Button 5 – „START”	Activation of the uncapping knives
Button 6 – „STOP”	Dectivation of the uncapping knives
Button 7 – „START” Button value change „PLUS”	Switching on the heating of knives. After entering the menu (button no.4) set the temperature of the knives **S**-increasing the temperature. Setting range from 30°C - 95°C **T** - current knife temperature
Button 8 – „STOP” Buttonvalue change „MINUS”	Switching on the heating of knives. After entering the menu (button no.4) set the temperature of the knives **S**-decreasing the temperature. Setting range from 30°C - 95°C **T** - current knife temperature

***Button* no 4** […] **Fig.5** entering i **Fot.6** exiting menu

2.2. Controller operation

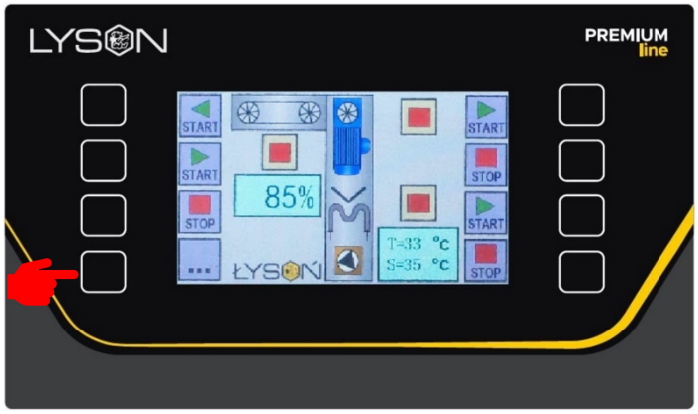


Fig.4.
View of the controller panel before entering the menu.

Below is a view of the controller panel after entering the menu.

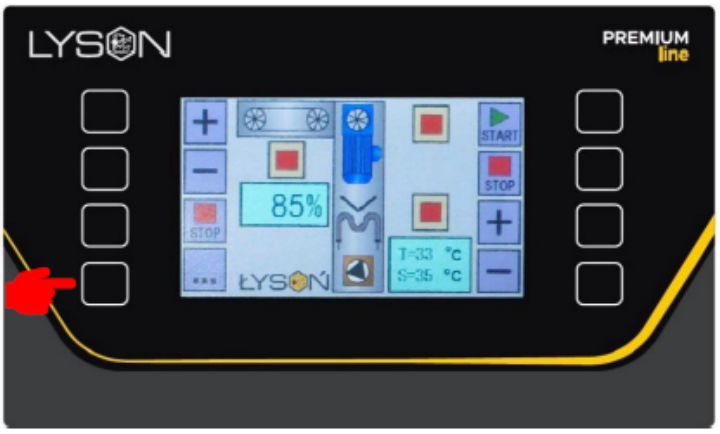


Fig.5.
After entering the controller menu (button no. 4) we can set parameters such as speed and temperature.
The menu button [...] is active in the STOP state as well as in the START state, which enables changing parameter values before and during the device operation.

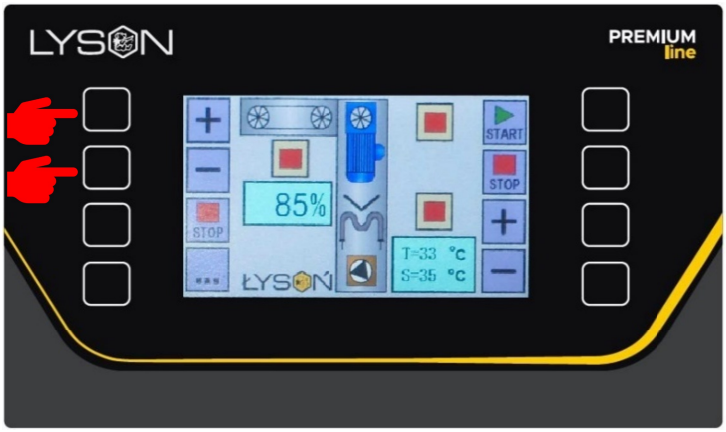


Fig.6.
The changing of the speed of the screw in the extruder is performed by means of buttons no.1 "PLUS" increasing the value of the parameter or no.2 "MINUS" decreasing the value of the parameter.

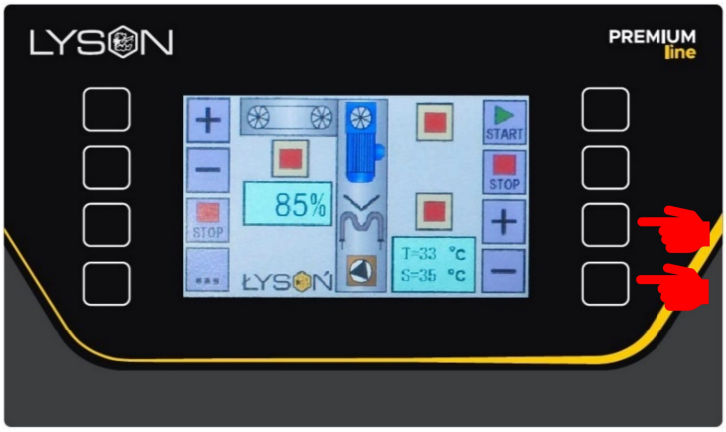


Fig.7.
*Setting the temperature of the knives parameter **S**.*
The temperature is set using buttons no. 7. "PLUS" to increase the value of the parameter and no.8. "MINUS" to decrease the value of the parameter.
Press again the button no. 4 [...] to exit the menu.

Activation of individual machine components is indicated by moving graphics on the display.

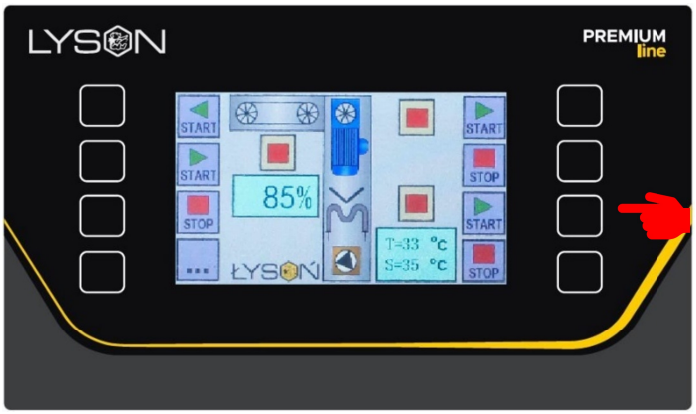


Fig.8.
Switching on the heating of knives - button no. 7
The set temperature is maintained by the controller.

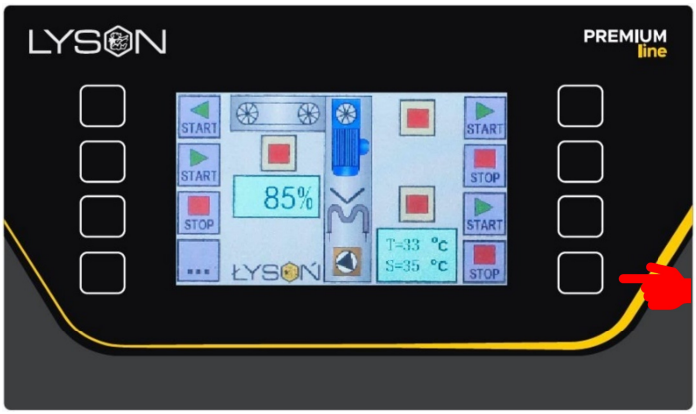


Fig.9.
Switching off heating of knives - button no. 8

When the knives have reached the pre-set temperature the machine is ready for uncapping process.
Then turn on the uncapping knives

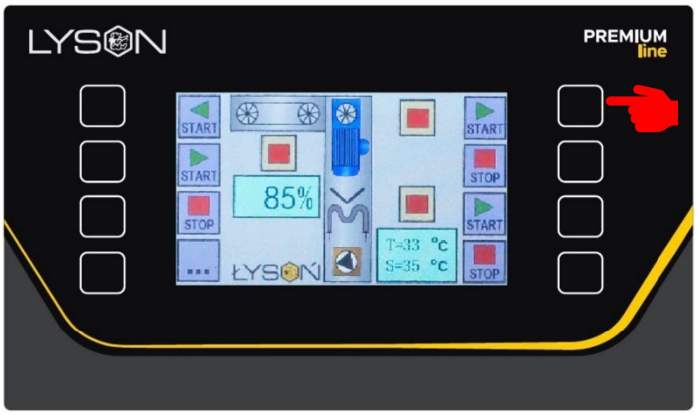


Fig.10.
Swiching on of the de-bonding knives - button no. 5

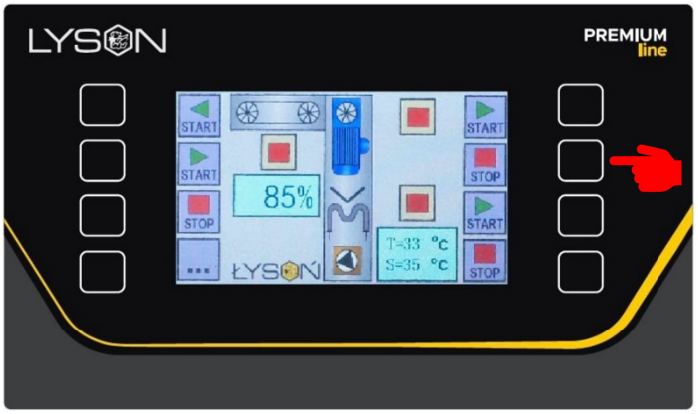


Fig.11.
Stopping the knives - button no. 6

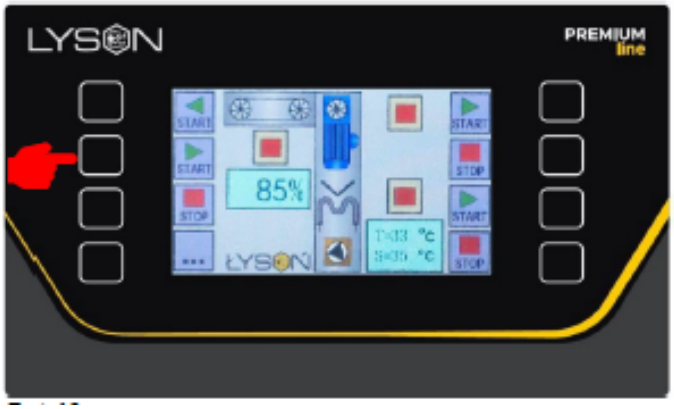


Fig.12. *Activation of extruder operation*

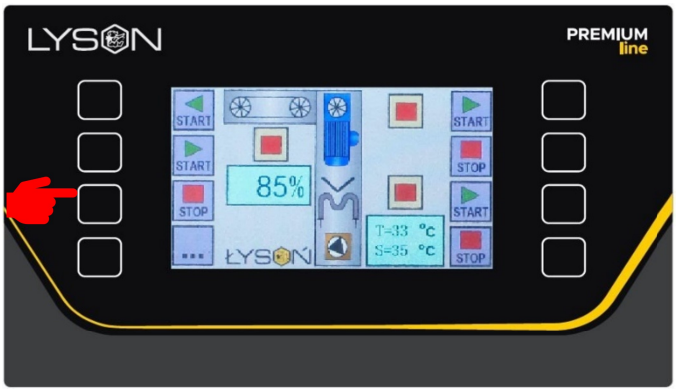


Fig.13.
Stopping the extruder

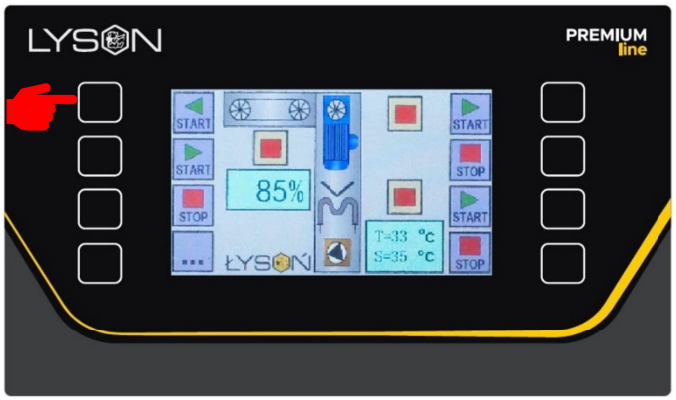


Fig.14.
Reversing the extruder

2.3. Error codes

The PC-03 controller is equipped with advanced error detection mechanisms. The detection of any error activates the emergency stop action and calls up the error report screen. The error report screen is displayed continuously. It is therefore necessary to switch off the power supply, remove the source of error and switch on the controller again.

ERROR	DESCRIPTION
(E.0) CPU STATUS	Internal controller fault
(E.1) PB1 STATUS	Fault / depressed button 1 (left side, top).
(E.2) PB2 STATUS	Fault / depressed button 2 (left side).
(E.3) PB3 STATUS	Fault / push button 3 (left side).
(E.4) PB4 STATUS	Fault / depressed button no. 4 (left side, bottom).
(E.5) PB5 STATUS	Fault / depressed button no. 5 (right side, top).
(E.6) PB6 STATUS	Fault / depressed button no. 6 (right side).
(E.7) PB7 STATUS	Fault / depressed button no. 7 (right side).
(E.8) PB8 STATUS	Fault / depressed button 8 (right side, bottom).
(E.9) T1 SENSOR	Fault or malfunction of temperature sensor T1.
(E.10) T > Tmax	Temperature measured by sensor T1 too high.
(E.11) T < Tmin	Temperature measured by sensor T1 too low.
(E.12) ALARM ST1	Alarm notification from input D4.
(E.13) ALARM ST2	Alarm notification from entrance D5.

3 Instructions for use

Elements

Fig.15.

Elements:

3.1 Controller
3.2 Frame
3.3 PSU box
3.4 Power cord 400V lub 230V
3.5 Leveling feet
3.6 Frame slides
3.7 Uncapping knives
3.8 Discs piercing uncapped cells in the frame (in Fig. 17 close-up view)

3.1. General rules – preparation for use

Before starting uncapping, adjust the sliders "6" Fig.15. with the screws shown in Fig.16.

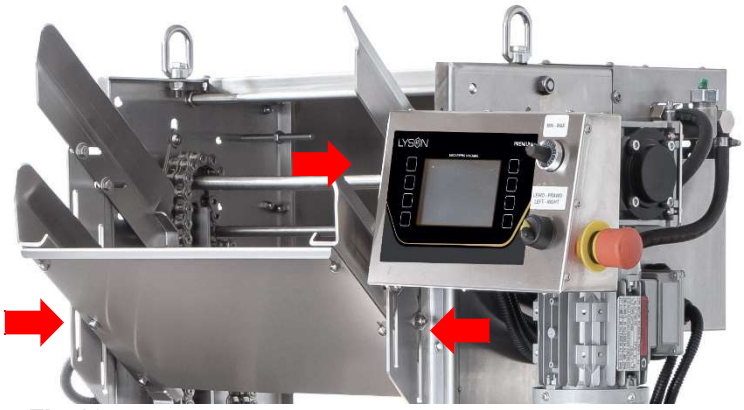


Fig.16.

The adjustment of the frame sliders is carried out according to the height of the uncapped frames and the width of the top bars.
To do this, place a few suitable frames on the feeder and adjust the top and bottom sliders accordingly.

The next step is to adjust the knife spacing according to the comb thickness.
This will ensure optimum uncapping conditions.

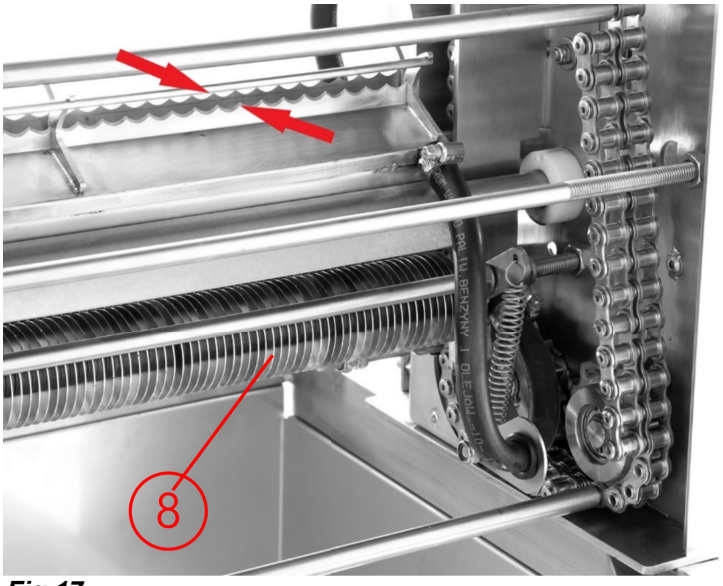


Fig.17.

Knife spacing is adjusted by two levers, adjustment lever A and locking lever B **Fig.18.**

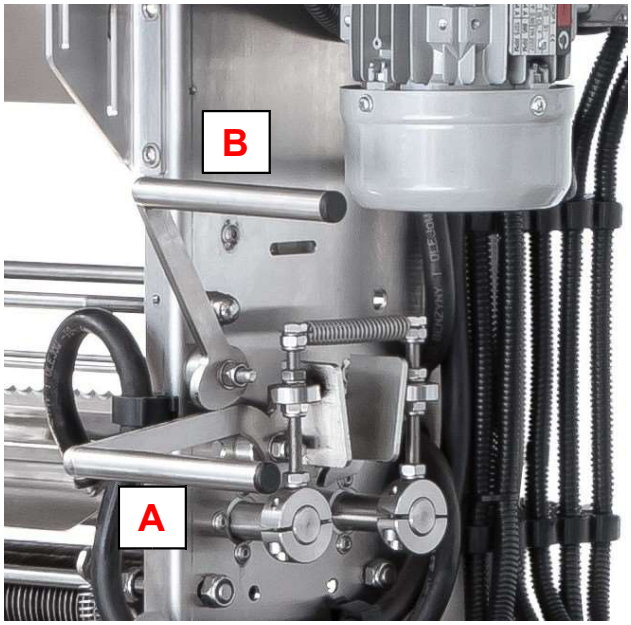


Fig.18.

3.2. Heating system

WARNING!!!!

The tank should be filled up with liquid after the unit has been disconnected from the mains via the filler Fig. B! The closed circuit is topped up before start-up with a quantity of (6 LITRES) in proportion:

5 L. WATER + 1 L. propylene glycol (organic compound)

NUMER CAS: 57-55-6 ; NUMER WE: 200-338-0

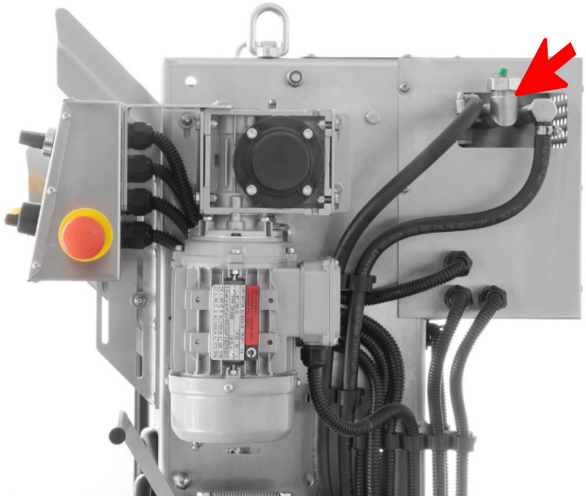
IMPORTANT!!!

During operation the level of liquid in the closed circuit must be checked regularly. If the liquid level falls to the minimum (see level indicator Fig. A), stop the unit, disconnect it from the power supply and refill the tank.

After topping up the liquid, switch on the heating of the knives again. Wait for the reheating of the uncapping knives. Start the uncapping machine and return to the uncapping process.

A Liquid level indicator in closed circuit

B Filler port through which we refill the liquid tank.



3.3. Uncapping

Start heating the knives with the "**START**" button **Fig. 8**. When the knives have heated up, place the frames in the previously adjusted sliders **"6" Fig. 15**, start the uncapping machine with the "**START**" button **Fig. 10** and start the uncapping process. If the uncapping machine is also equipped with an extruder, start it with the "**START**" button **Fig. 12.**

Check the quality of the uncapped frames and make adjustments if necessary.

Before adjusting, stop the operation of the uncapping machine and the heating of the knives ("STOP" button Fig. 11 and Fig. 9)! Then switch off the power at the control box **"3" Fig.15**.

Do not make any adjustments while the uncapping machine is switched on. Be careful with hot uncapping knives.

The correct switch position during adjustment is "0"!!!

Fig.19. *Switch on the control box "0" position*

Only in this switch position can the necessary adjustments to the machine set-up be made.

WARNING!
In case of necessity of immediate stopping of the device press the emergency "STOP" button "4" Fig. 3 on the controller box "1" Fig 3.
Pressing the emergency button switches off the heating system, circulation pump, uncapping knives and power supply of the circulation tank heater.

4 Technical specifications

-construction, stainless steel
-uncapping capacity 5-8 frames/min. depending on type of frames
-knife drive,0.18kW
-frame feeder 0.12kW
-knives heated by liquid in closed circuit 2 kW
-maximum temperature of knives 95°C
-Power supply 230V or 400V

5 Cleaning and maintenance

IMPORTANT!

Unplug the device from the power supply outlet and wait until all elements of the device have cooled down before performing any maintenance or cleaning!

Clean the uncapping table and uncapping knives thoroughly before first use.
Wash the machine with hot water and a small amount of detergent approved for washing equipment intended for food contact, using a soft flannel cloth, making sure to protect the electrical components.
After washing, rinse thoroughly with clean water.
The chain carrying the frames should be dried after washing and do not use any preservatives!
The uncapping machine is ready for use.
After the uncapping process is complete, wash, dry the machine and and store in a dry room.

6 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.

7 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