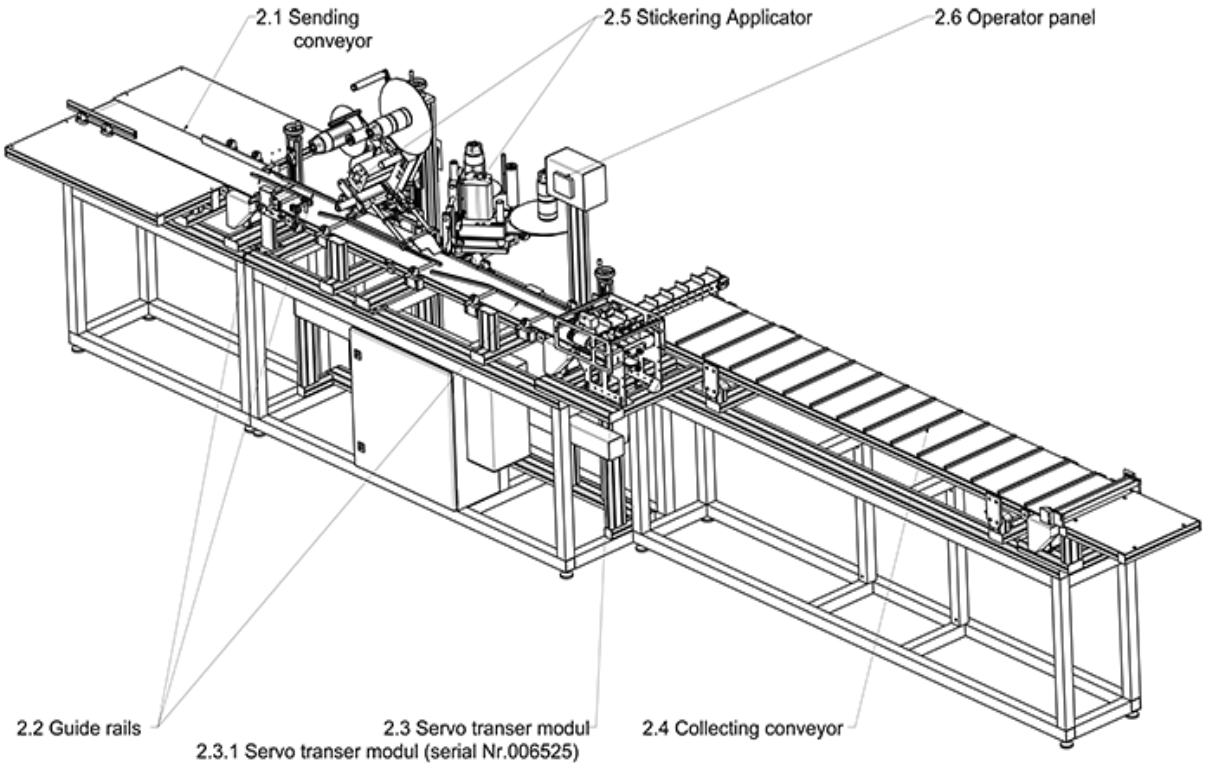
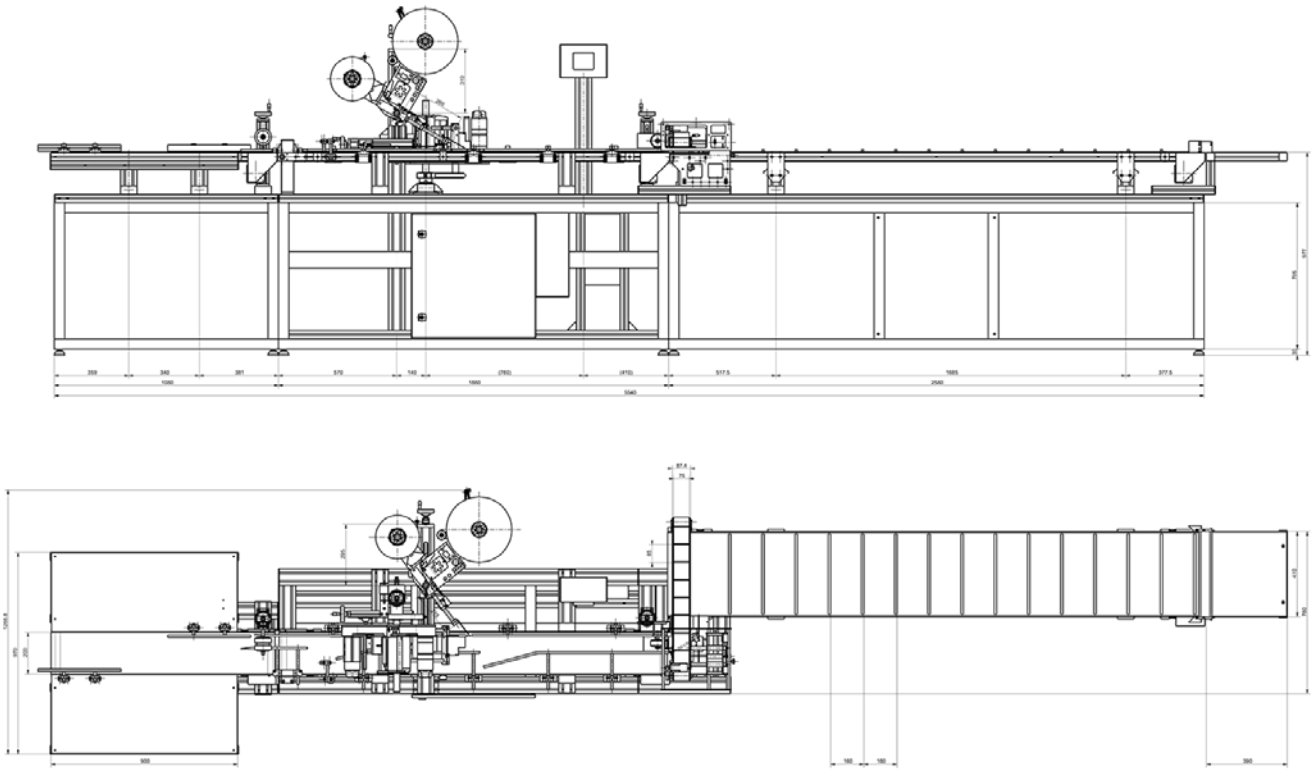
# ELA 4170 user manual




* the latest user manual can be found online on the [www.cimkezo.hu/en/ela-4170-manual](www.cimkezo.hu/en/ela-4170-manual)



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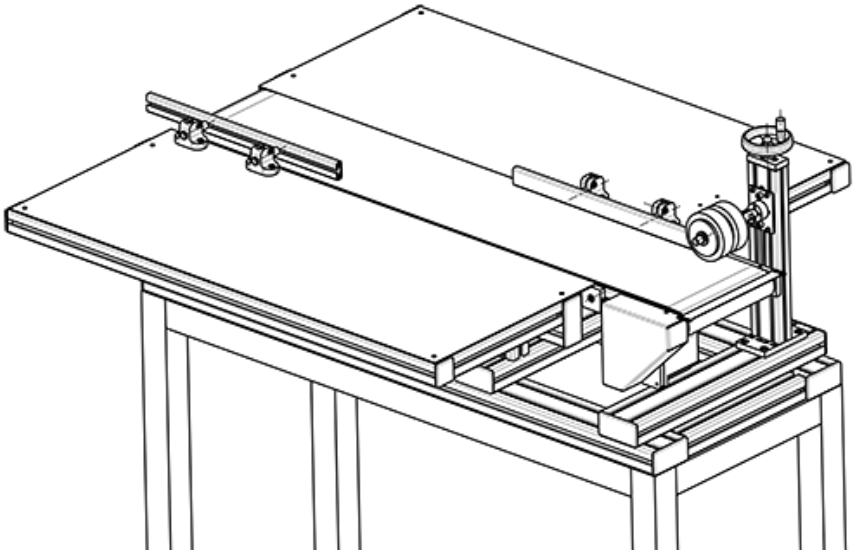
## *ELA 4170 2.1 Sending conveyor*



### 2.1.1 Use of the sending conveyor

This conveyor is for put the cigarettes int he system.

Two operators can work on this part at same time.

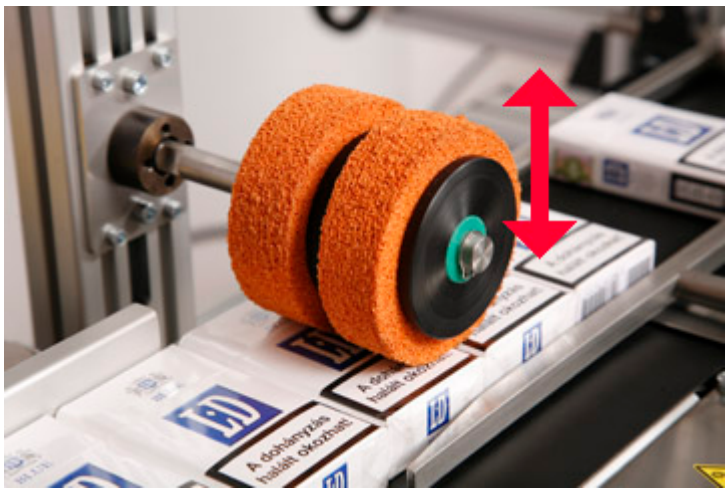
After opening the original pack the operaton put it ont he conveyor. Push the packs to the limiter guide.

### 2.1.2 Guide rails adjustment

The guides sould be adjusted to steer the packs.

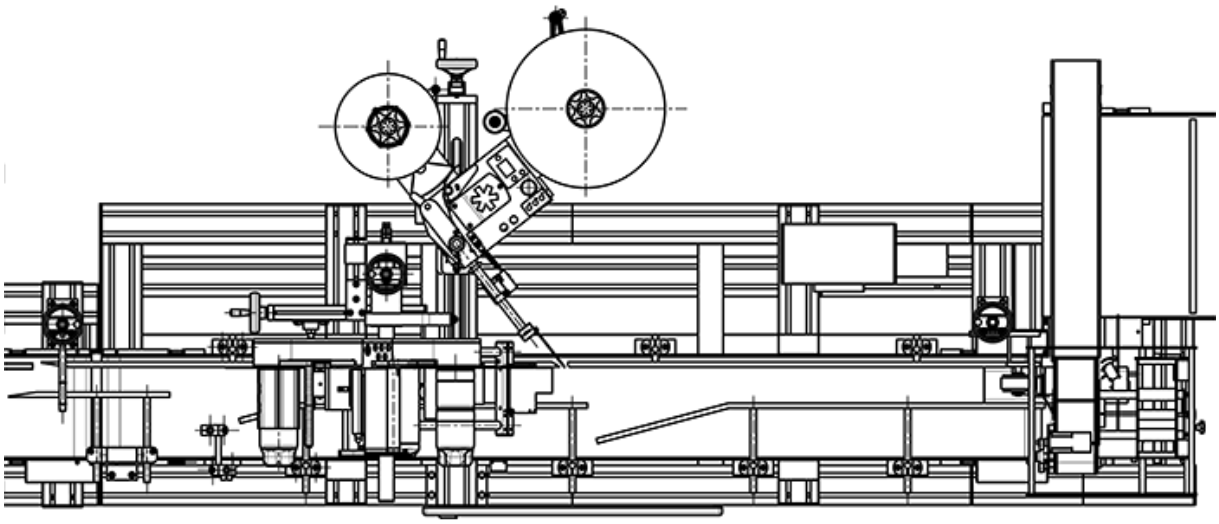
The limiter guides with no knobs is the fix level.
The other guide should be adjusted min 10mm wider than the cigarette pack legth.
Incorrect adjustment can cause jam!

### 2.1.3 Pressing roll

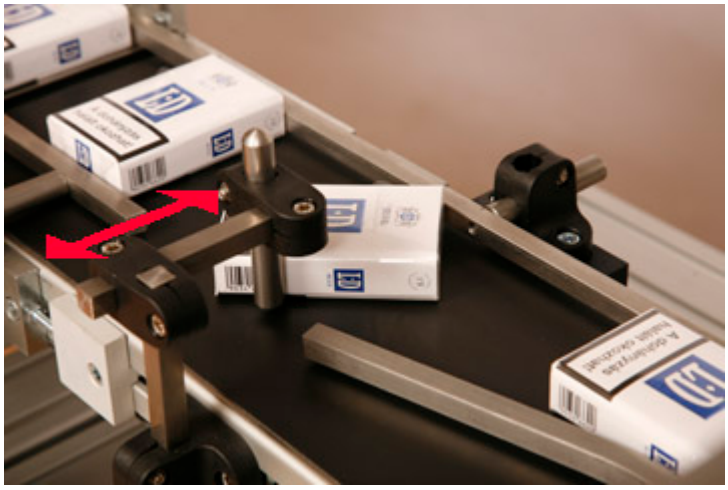


This sponge roll is for guarantee the equal distance between the packs.
( The distance is required for the sensing)
It prevents the manual pushing of pack.
The vertical position can be adjusted with the wheel.

## *ELA 4170 2.2 Guide rails*



### 2.2.1 Rotators



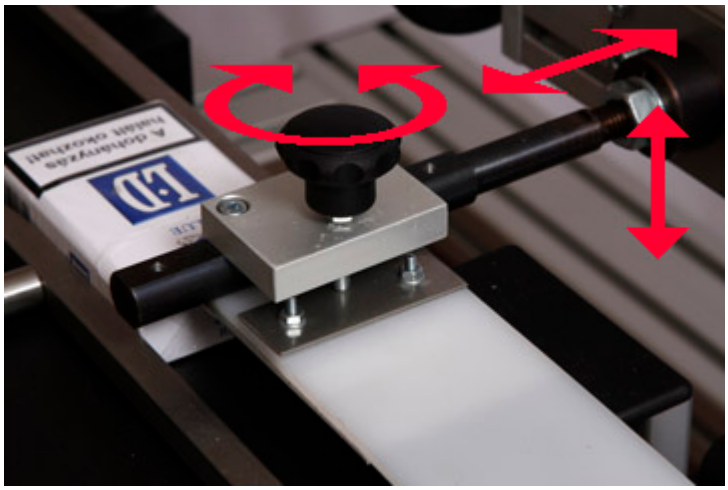
The rotators are used to rotate the packs to the right direction after the sending conveyor.
The first rotator are used by FRONT and the SIDE stickering.
By TOP stickering deactivate it. In this case activate the second rotator after stickering.
The second rotator should not adjust if the pack size doesn't changes.
Adjust it only the direction shows teh red arrow.

### 2.2.2 Guide rails adjusting

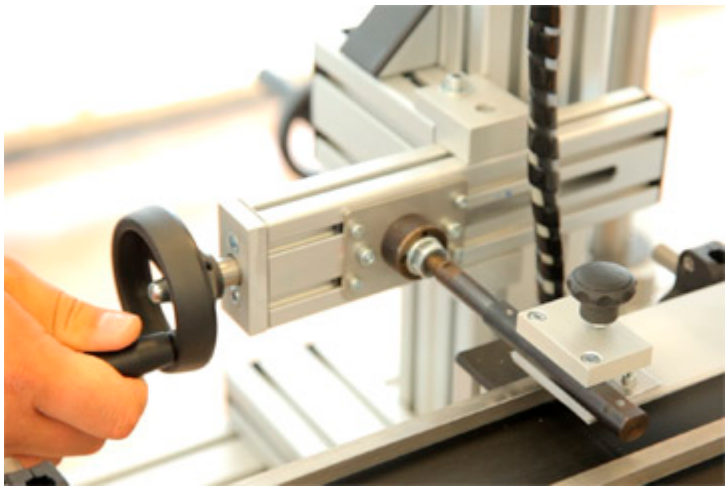
Adjusting of the guider is very important, becuse it controls the stickering precision. Set is as close together as possible. Ensure the free movement of the pack between the guides. !!!

1. Loose the knobs or the screws
2. Move the guides to the right position.

### 2.2.3 Pack clamping plate



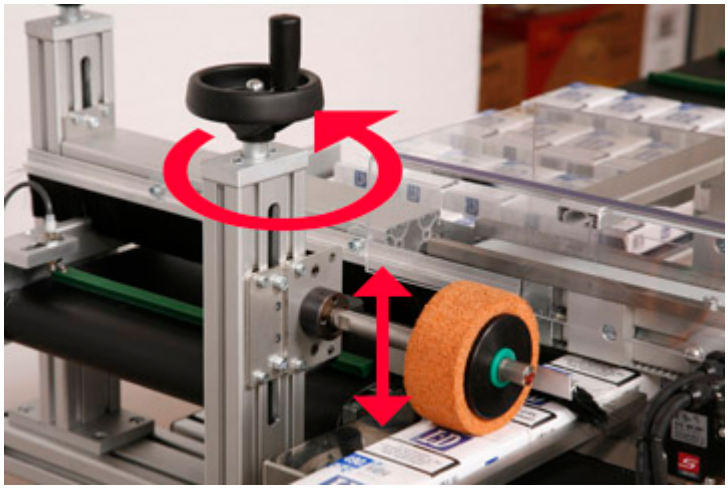
This plate is used for clamping the pack to the conveyor avoid the slip. It guarantees the stickering precision.
Adjusting option:
1. Pressing stength: Rotate the knob to adjust the pressing strength. Do not adjust it too strength, because it can stop the pack on the conveyor.



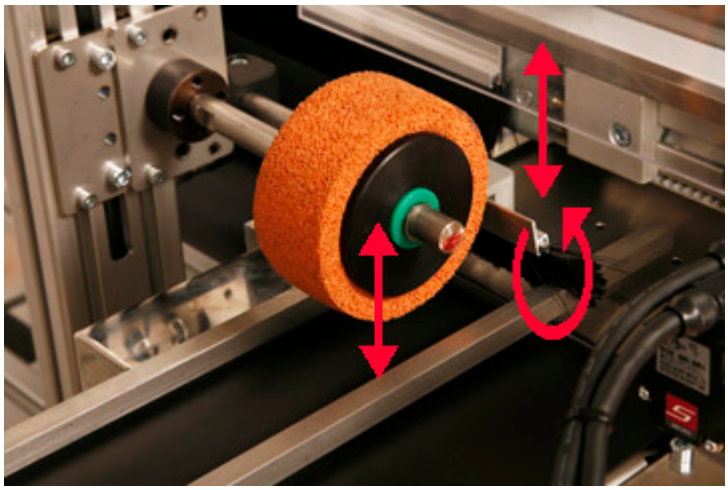
2. Lenght direction: Adjust the plate as close as possible to the dispensing beak.
3. Vertical direction: Set very low angle between the plate and the pack.
4. Cross direction: Set it the center of the cigarette.
5. Draft angle adjustment: Loose the srew nut and rotate the rod. After that fasten the srew nut.

## *ELA 4170 2.3 Servo transfer modul*

### 2.3.1 Sponge roll, brush setup



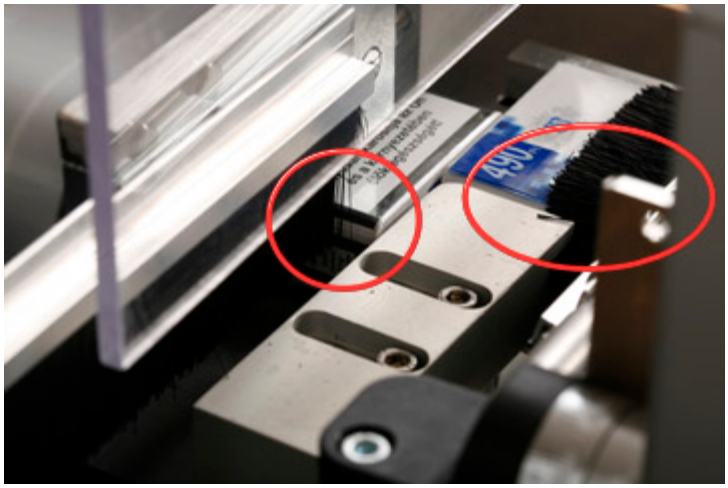
The sponge roll and the braking brush should be adjusted int he right position.
The roll press the pack and hold it in the right position. It prevents the continuing. The other pack will push it under the transfer unit.



The braking brush is for slow down the pack and stop itt he right position.

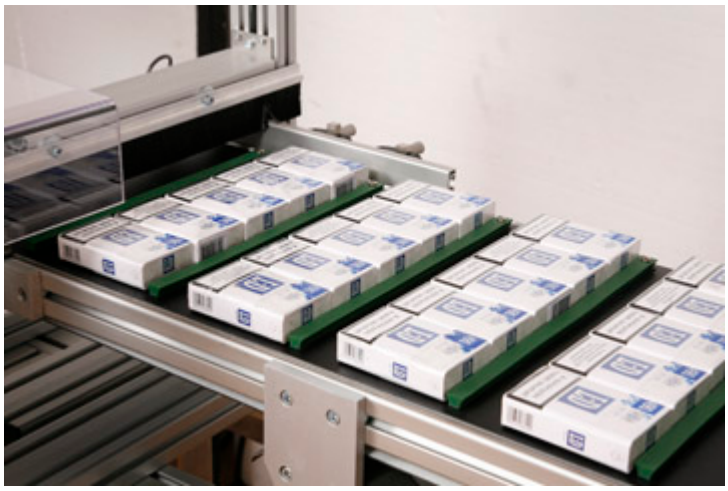
### 2.3.2 The positioning part should be adjsuted to the leth of the cigarette.

1. Loose the srews
2. Move int he right position and fasten the screws.
Do not adjust it too tight, because it can cause jam.
Caution! If big distance is adjusted the pack can rotate and it can also cause jam.



### 2.3.3 Cross brush adjusting

This part used for slow down the high speed packs, and prevent the rotation.
The precise adjusting is neccesary, because the packs can rotate and jammed packs can stop the whole system.

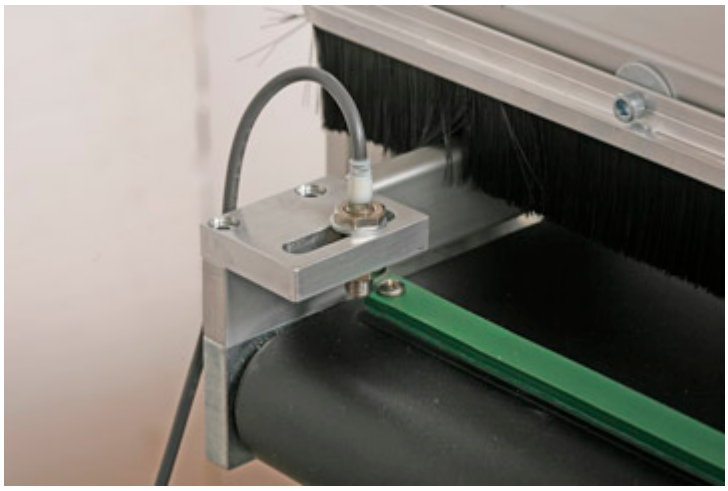


5 pack groups with right adjustment.

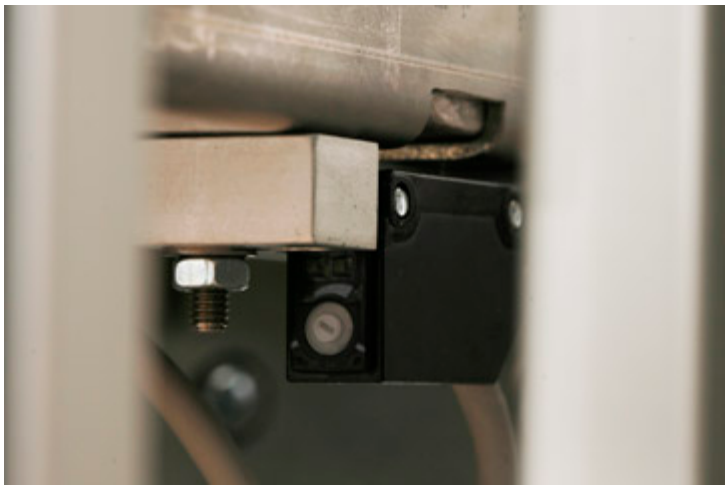
### 2.3.4 Servo home position

The servo transfer belt should be set to the home position.
Press the SERVO HOMING button int he parameters menu. The cleat will be move to the main position.

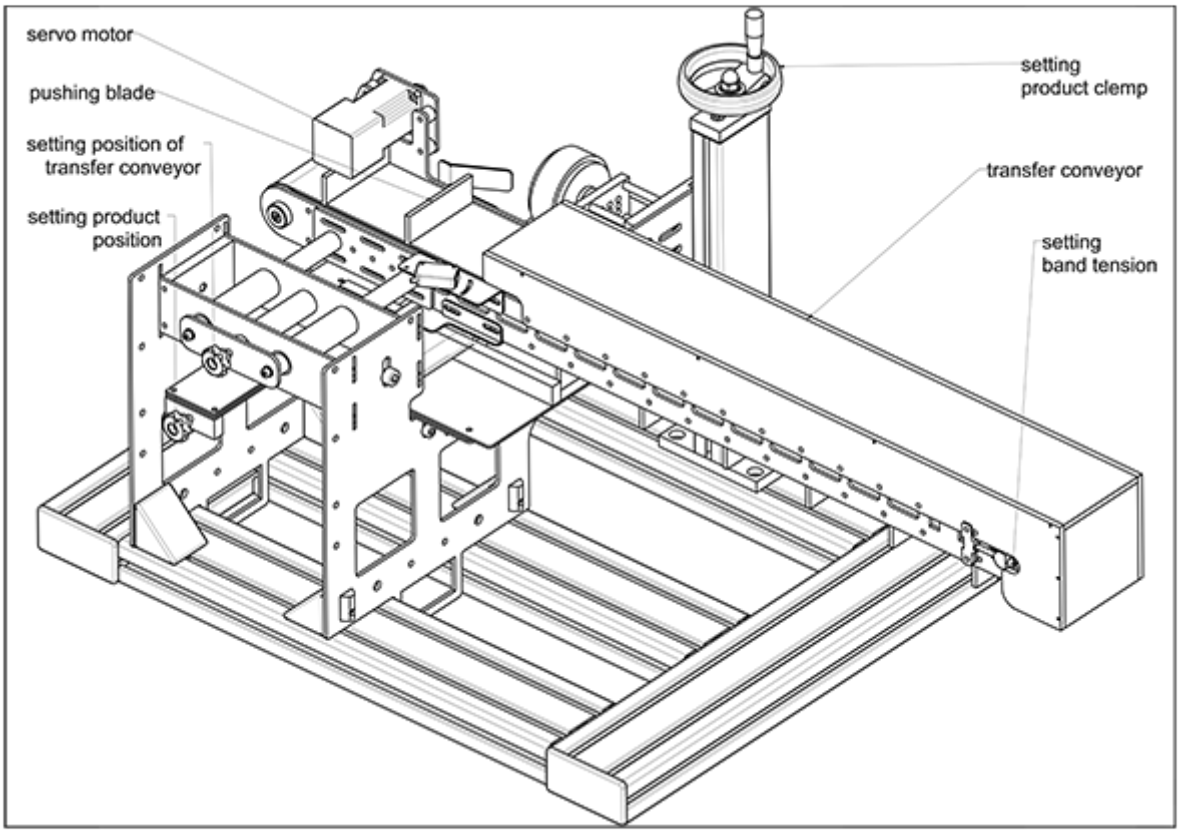
### 2.3.5 Setting position sensor for step-conveyor

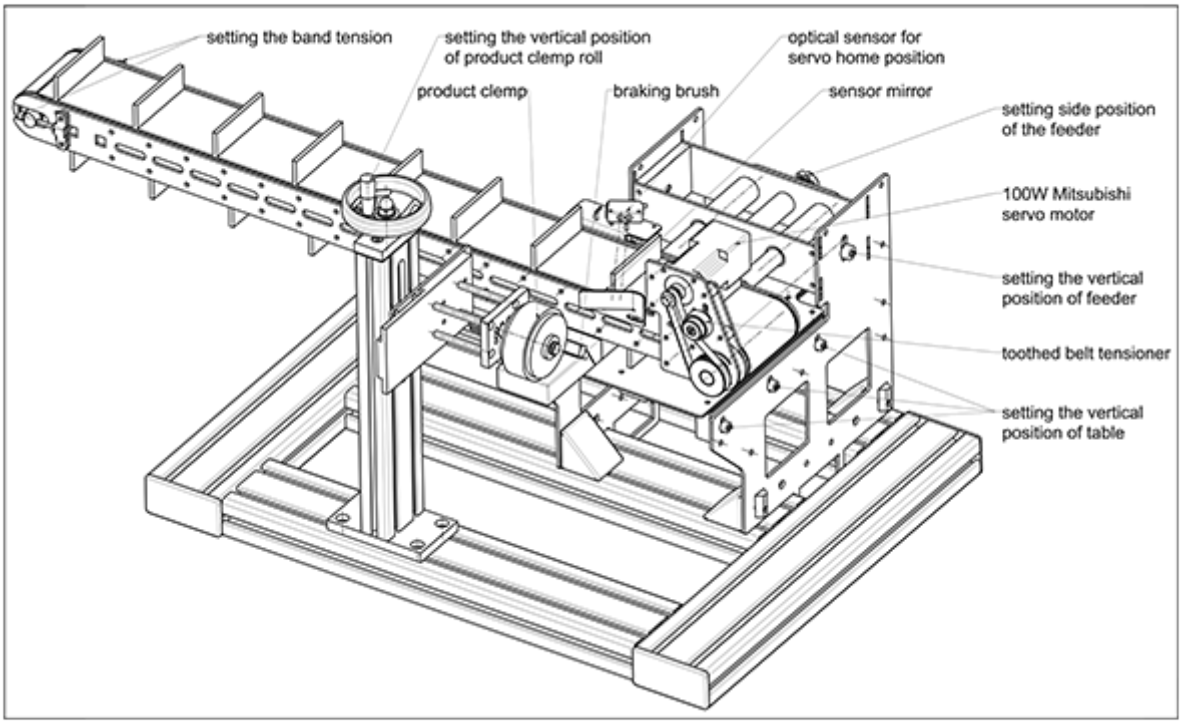


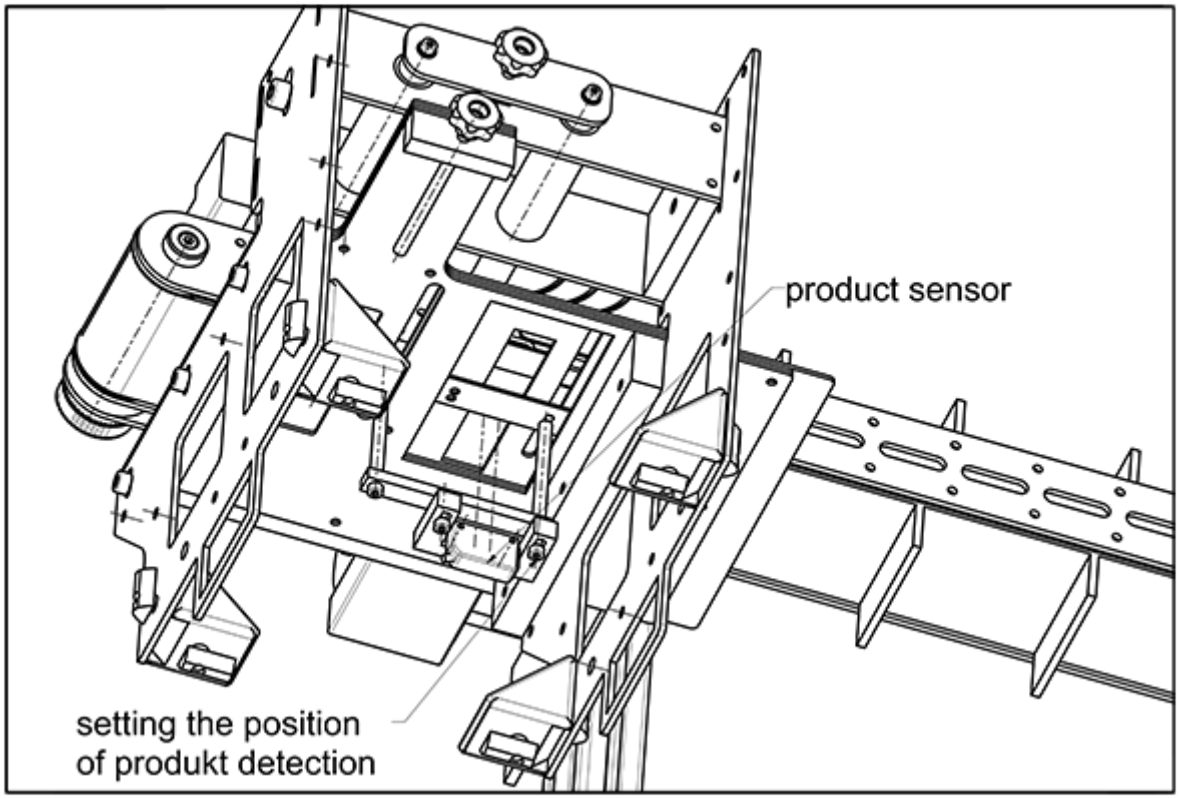
### 2.3.6 Produkt position sensor



## *ELA 4170 2.3.1 Servo transfer modul (serial Nr.006525)*



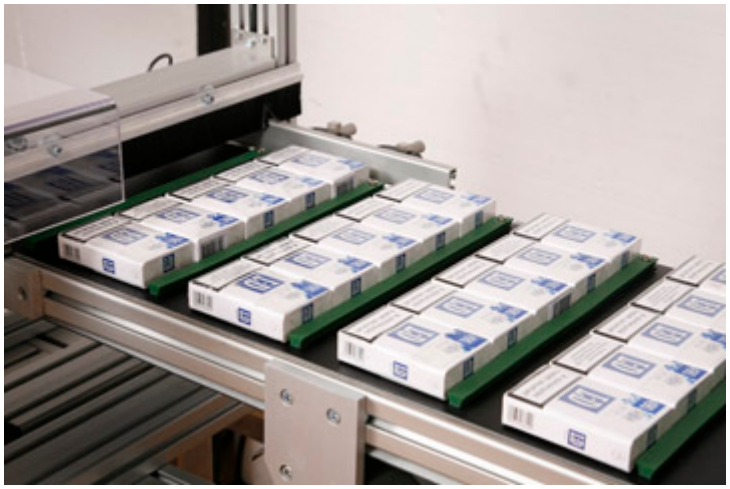

setting the band tension
setting the vertical position of product clemp roll
optical sensor for servo home position
product clemp
braking brush
sensor mirror
setting side position of the feeder
100W Mitsubishi servo motor
setting the vertical position of feeder
toothed belt tensioner
setting the vertical position of table


product sensor
setting the position of produkt detection

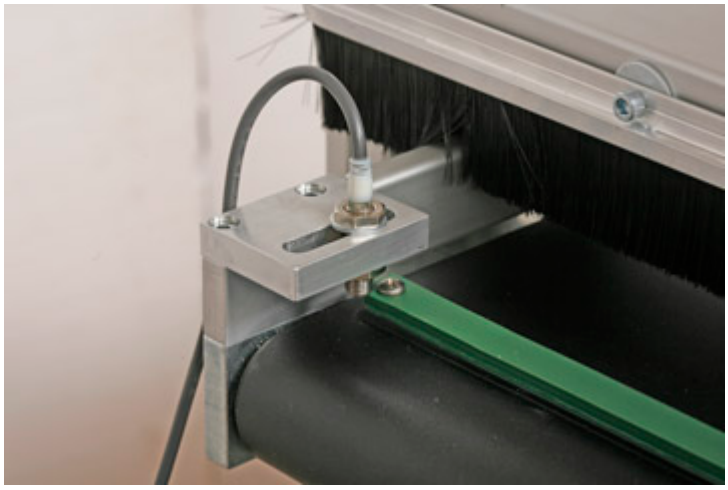
## *ELA 4170 2.4 Collecting conveyor*

### 2.4.1 Collecting conveyor

This conveyor prepare 5 packs groups for max 4 re-bounding operators.
After received the fifth pack the conveyor makes one step.
The operators can easily pull side the groups and pust into the re-bounding machine.



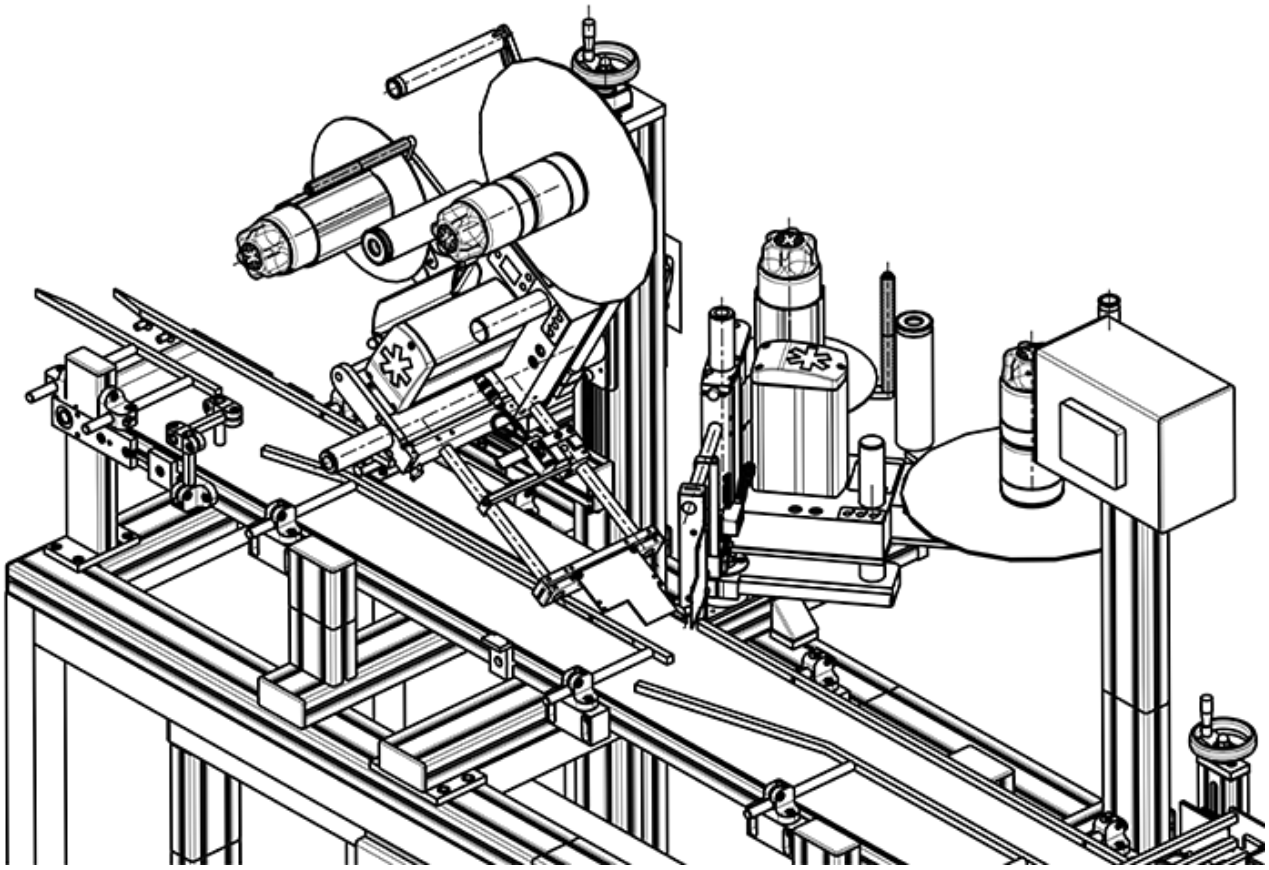
### 2.4.2 Sensor adjusting.



This sensor sense the position of the ribs.
The sensing distance is max 2mm, so the correct adjustment is very important.
Caution! The collision can crash the sensor.
The position of the ribs can be adjusted to move the sensor int he slot.

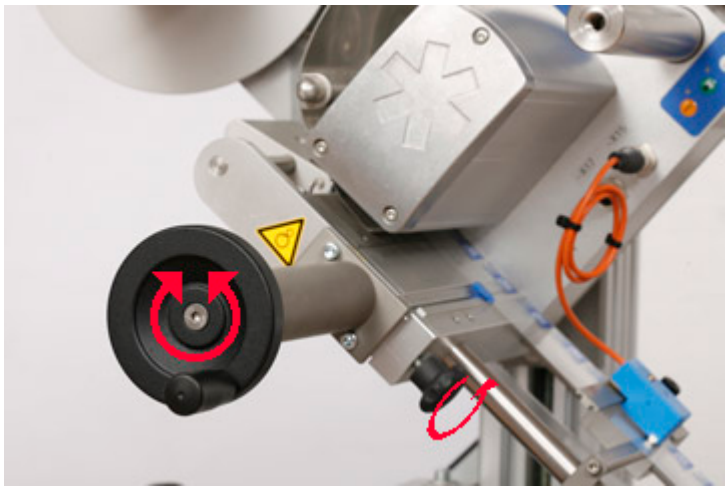
## *ELA 4170 2.5 Stickering applicator*

HERMA H400



### 2.5.1 Adjusting position of labeling applicator

Verical adjusment



Side position adjustment

Pivoting

### 2.5.2 Product sensor adjustment

For moving the sticker position use the sensor adjustment instead of adjusting the stickering head. In the stickering head should be adjusted the smallest strat delay as possible. The sensor should be opposite to the reflector. Caution! The IR beam must go through the hole on the guides.

For adjusting loose the srew and move the sensor to the right position.

## *ELA 4170 2.6 Operator panel*

### 2.6.1 Touch creen operator panel handling

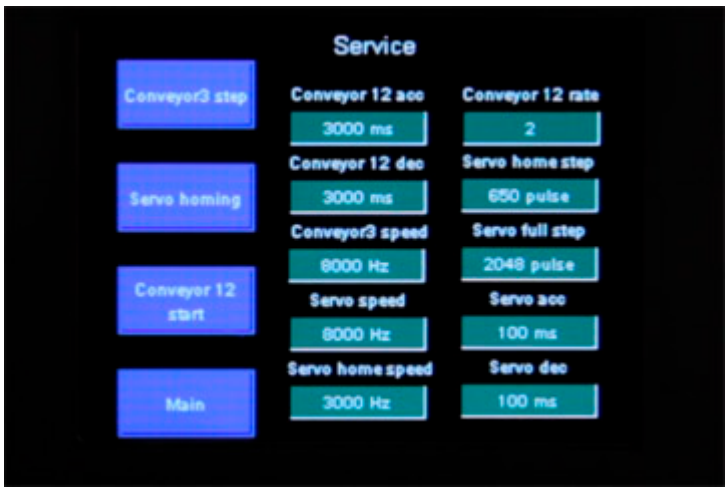
1. Shows the main functions
2. Start and stop the machine
3. Adjusting the parameters
4. Error/Alarm logging

### 2.6.2 Main screen

1. START – Start the system. (The stickering head should be separate switch on/off)
2. STOP – Stop the whole system
3. Conveyor1 – Sending Conveyor speed
4. Conveyor2 – Stickering conveyor speed

5. ALARM – Error log
6. SERVICE – Service menu – Parameter setting

### 2.6.3 Service menu




**2.6.3.1 Buttons**:
1. Conveyor3 step – Step one ont he collecting conveyor
2. Servo homing – Move the servo home position
3. Conveyor 12 start – Manual start of the conveyor 1 and 2.
4. Main – Back to the Main menu

#### 2.6.3.2 Parameters

1. Conveyor 12 acc – Start acceleration of the 1,2 conveyor in (ms).
2. Conveyor 12 dec- Stop deceleration of the 1,2 conveyor in (ms).
3. Conveyor 3 speed – Stepping speed of the 3(collecting) conveyor (Hz)
4. Servo speed – Servo collctor speed [Hz]
5. Servo home speed – Servo speed on manual homing function [Hz]
6. Conveyor 12 rata – Inactive!
7. Servo home step – Servo modul position [pulse]
8. Servo full step – Servo mooving distance [pulse]
9. Servo acc – Servo acceleration [ms]
10. Servo dec – servo deceleration [ms]

### 2.6.4 Parameters

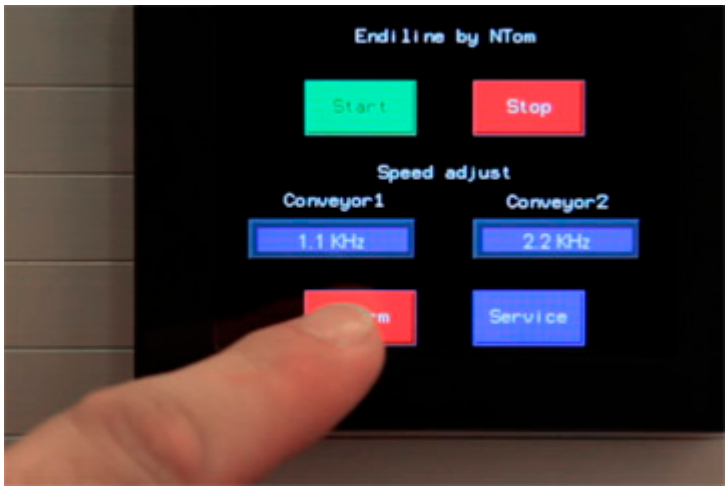
After pressing the parameter value field, a numeric keyboard appears to input the value.

### 2.6.5 Emergency button

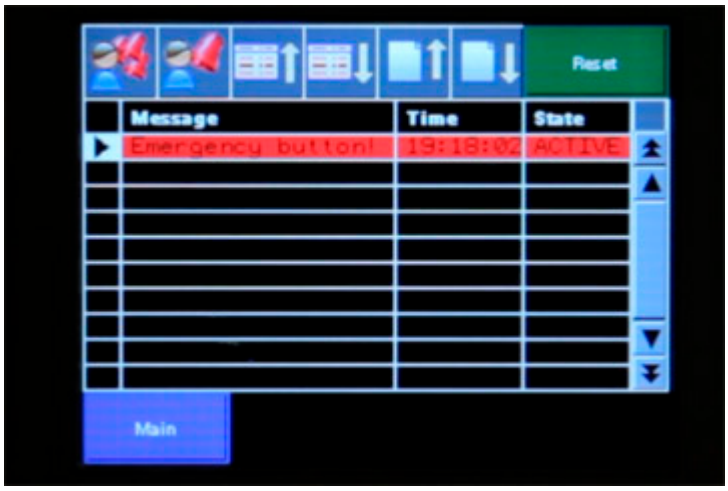
After activatin one of Emergency button, the system stopn and a popup window will apper on the screen.

The reset function work only after deactivating the Emergency button.
After deactivating the Emergency Button the system do not start automatically. Required to press the start button.

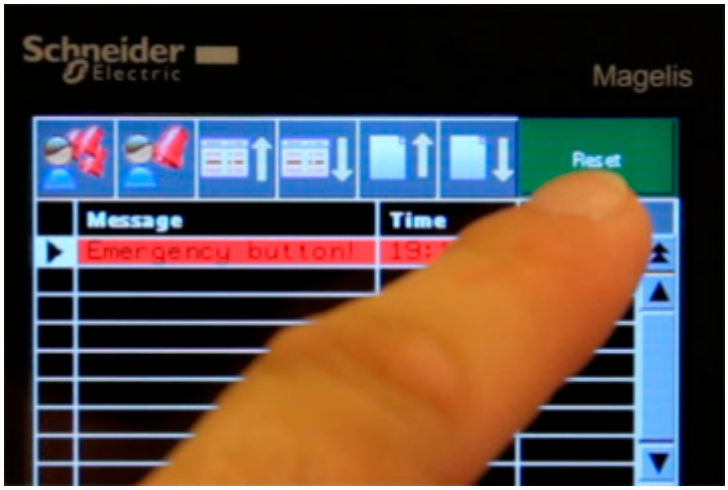
### 2.6.6 Alarm log




If the alarm log is empty the Alarm button is blue. In case of alarm the button will be red.
Press the button to open the log window.

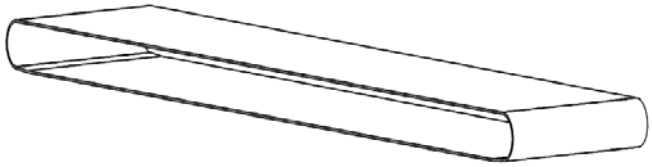
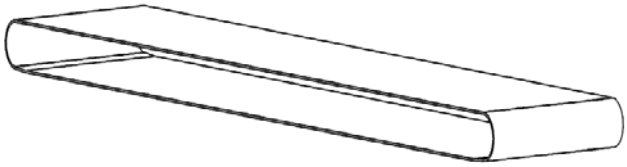
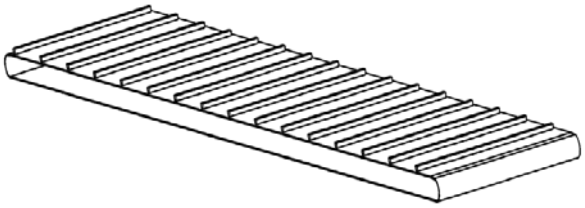
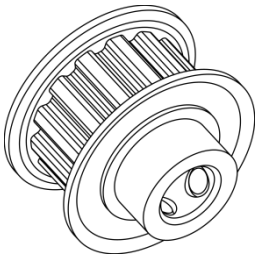
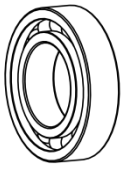


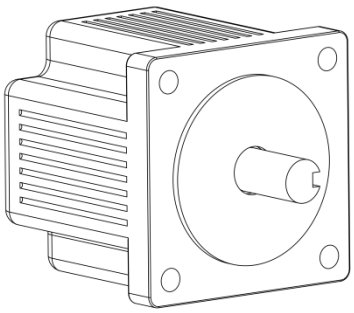
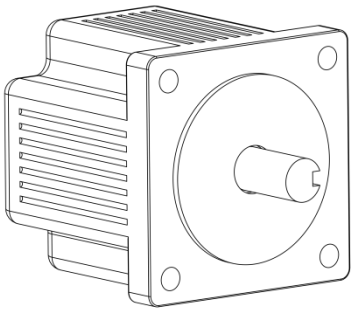
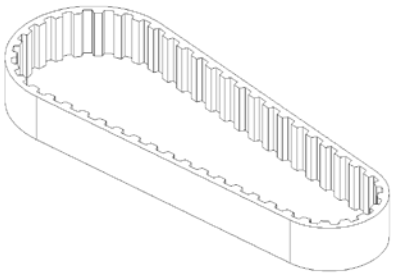
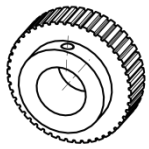
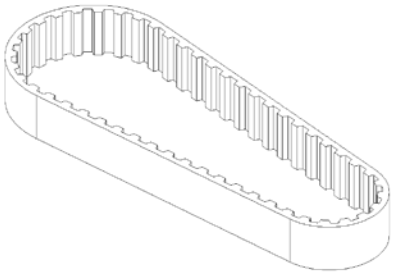

In the table shows the all alarm with time and state.

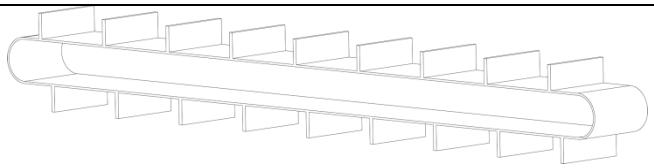
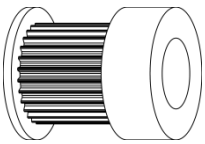
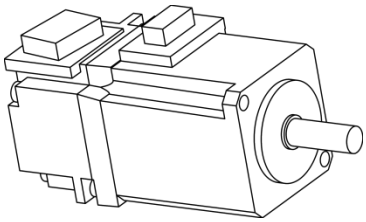
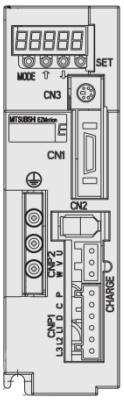
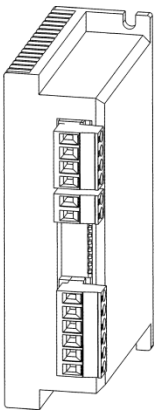



To empty the log press the RESET button.

## *ELA-4170 Spare parts list*

| | Description | Part nr.: |
|---|---|---|
|  | Conveyor Belt (Short) 200x2235mm | |
|  | Conveyor Belt (Long) 200x3835mm | |
|  | Cleated conveyor belt 400x5235mm | |
|  | Timing belt pulley T5 Z20-27 | 300100-006525 |
|  | Bearing SKF 6002 ZZ | SKF6002ZZ-006525 |

| | | |
|---|---|---|
|  | Stepper motor 4.0 Nm | STP4.0N-006525 |
|  | Stepper motor 6,4 Nm | STP6.4N-006525 |
|  | Timing belt T5 330x16mm | 300100-006525 |
|  | Timing belt pulley for Servo drive | 6011-006525 |
| | | |
|  | Timing belt for servo T2.5 | 6012-006525 |

| | | |
|---|---|---|
|  | Cleated timing belt | 6017-006525 |
|  | Timing belt pulley for Servo drive (motor side) | |
|  | Mitshubishi SERVO Drive | Servo-006525 |
|   | MR-E- SERVO Controller | MR-E-006525 |
|  | MSD 80 5.6 Stepper driver | MSD80-5.6AI-006525 |

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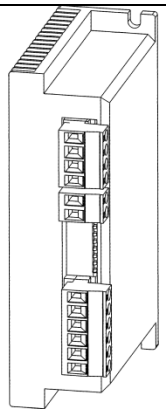
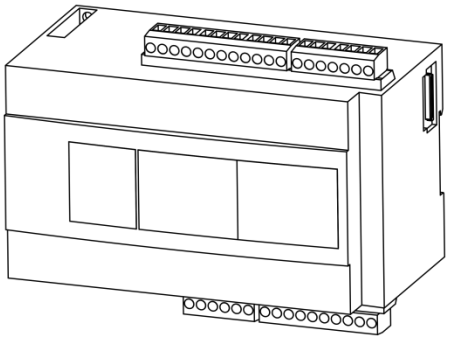
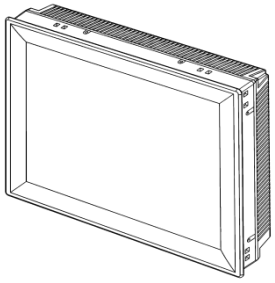
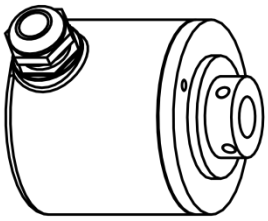
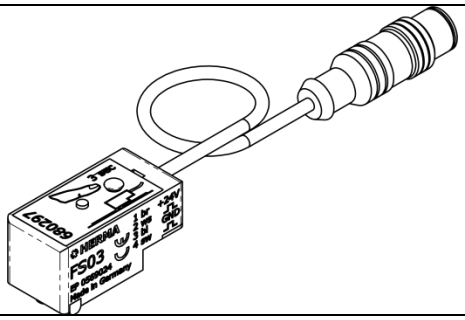
|  | MSD 80 5.6Ai<br>Stepper driver | MSD80-5.6-<br>006525 |
|  | Schneider-<br>Electric<br>MODICON- M238<br>PLC | SCH-M238-<br>006525 |
|  | Schneider-<br>Electric<br>HMI STU665 | SCH-HMI-<br>006525 |
|  | Shaft Encoder<br>Res: 2000pulse | ENCR2000-<br>006525 |
|  | Label sensor<br>(HERMA FS03) | 680229-<br>006525 |

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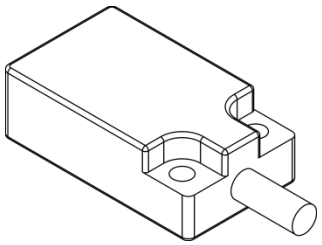
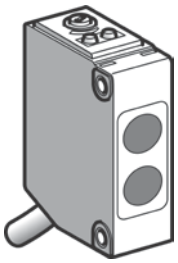
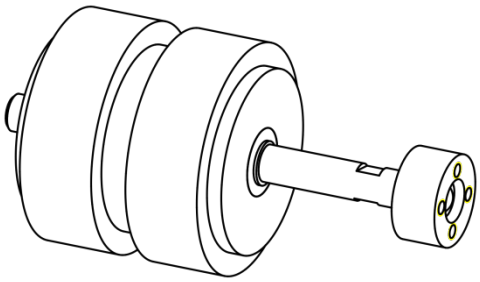
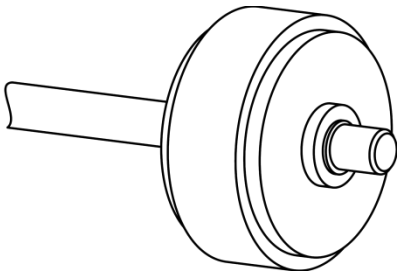
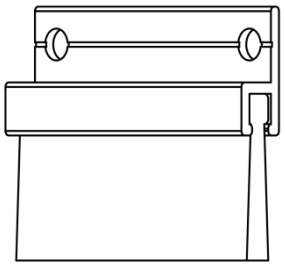
|---|---|---|
|  | Proximity switch Fotek | Sens-prox-006525 |
|  | Schneider-Electric xum9apcnl2 Opctical sensor | SCH-OPT_006525 |
|  | Sponge roll (For sending conveyor) | 7101-4017-006525 |
|  | Sponge roll ( for the servo side) | |
|  | Braking brush | 6075-006525 |