SmartB

- Replace weight sensor
- Replace motors mechanism Smartb
- Smartb motors - how it works

Replace weight sensor

In this document you will find a description how to replace the weight sensor in the Smartb

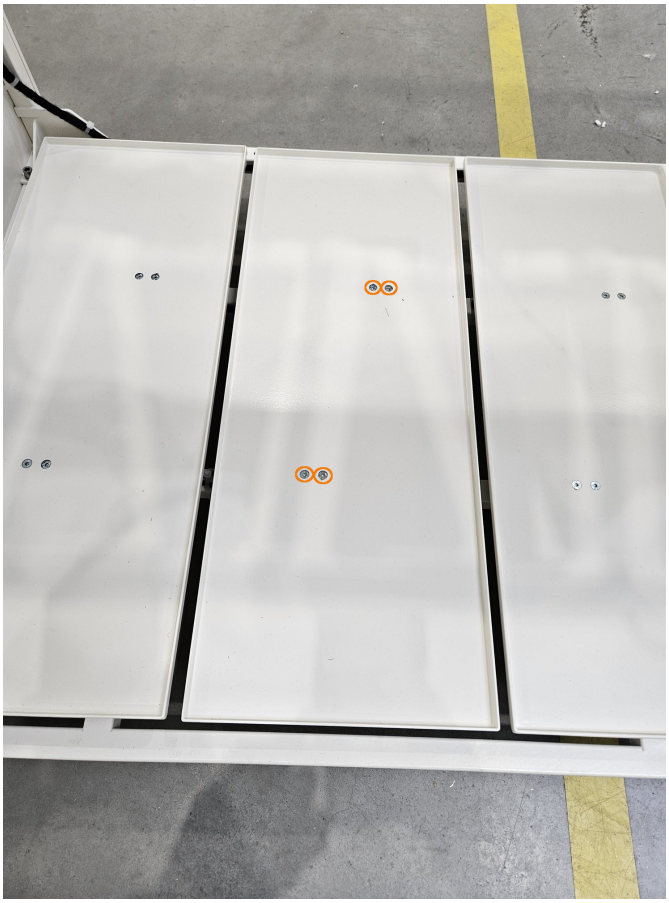
You will need:

- a new weight sensor kit
- a set of allen keys
- trimmers
- cutters

> Before replacing disconnect device from the power supply!

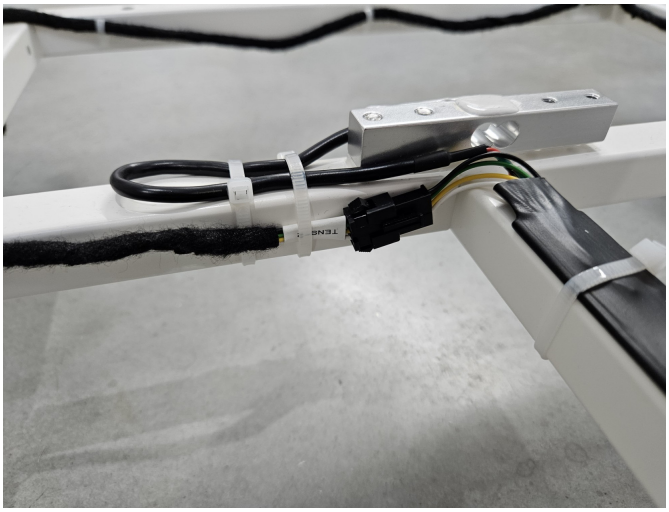
Step 1 Unscrew the top floor

- The top floor is bolted directly from the strain gauge beams
- Unscrew the 4 screws marked on the picture

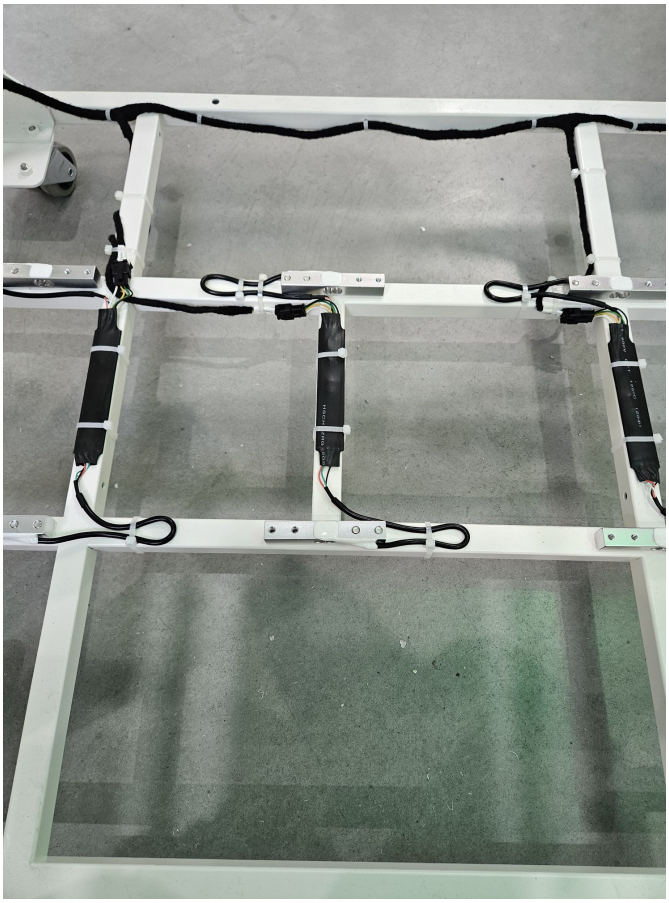


Step 2 Unplug the sensor

- Unplug the sensor

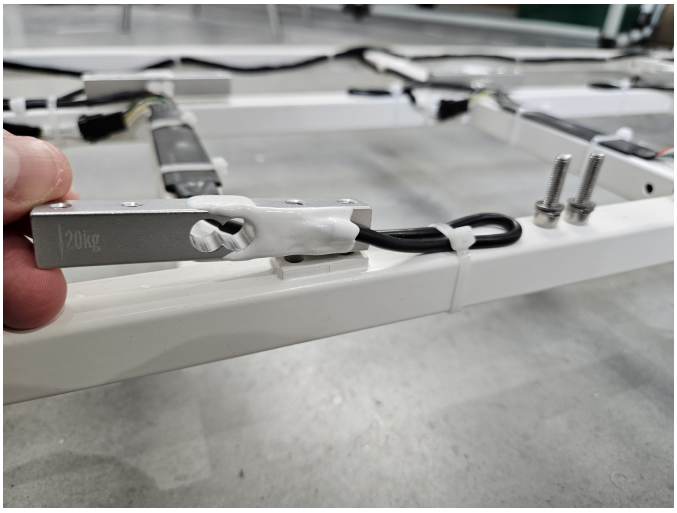


Step 3 Remove zippers



Step 4 Unscrew sensor form frame

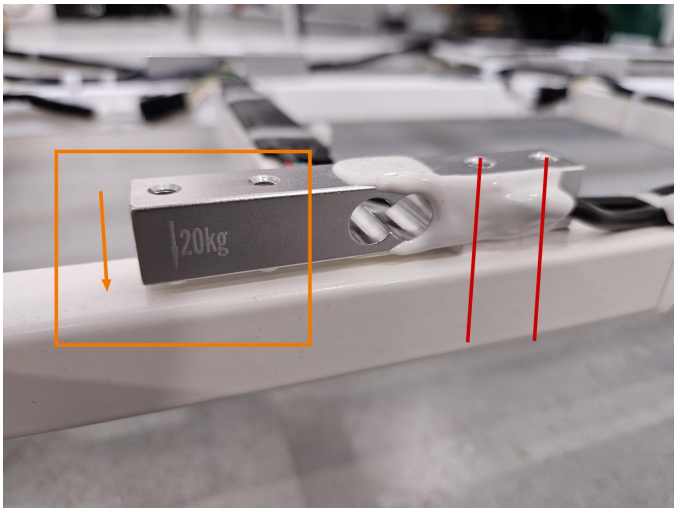
- There are two bolt (for each load cell) form bottom (alen key 4)



Step 5 Set new sensor

> Pay special attention to the direction! The beam has an arrow drawn on it. This arrow should point down and be on the opposite side of the mounting screws to the frame! (see photo below)
> On the front of the device, the arrow should be on the left and on the back on the right.

- first place the beams in their final positions
- screw the first one (closer to the front door)
- then the second one at the back similarly to the description (on the back it is on the other side)



Step 6 Secure cable and PCB with zippers

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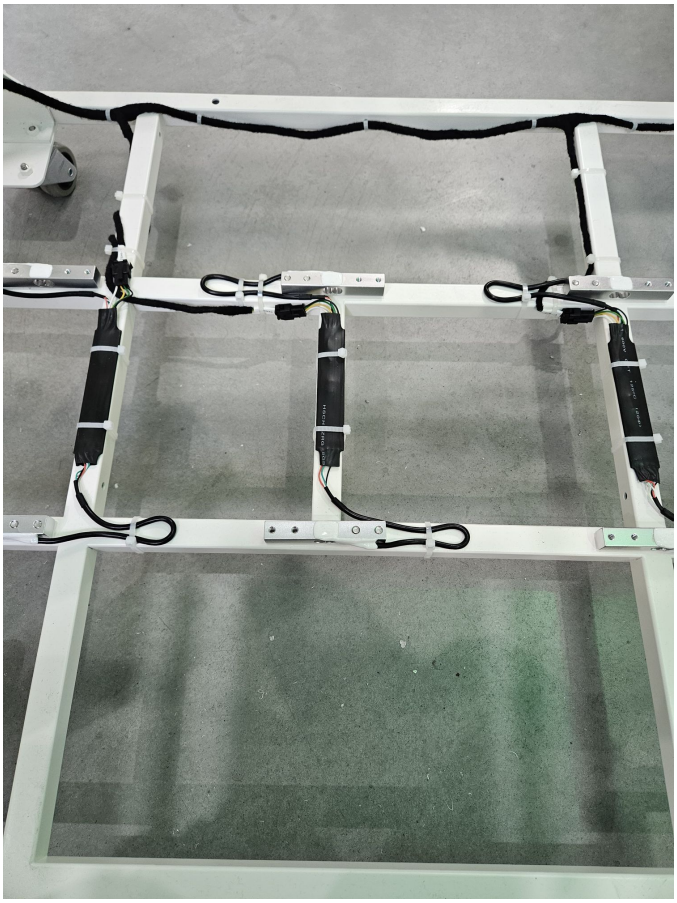
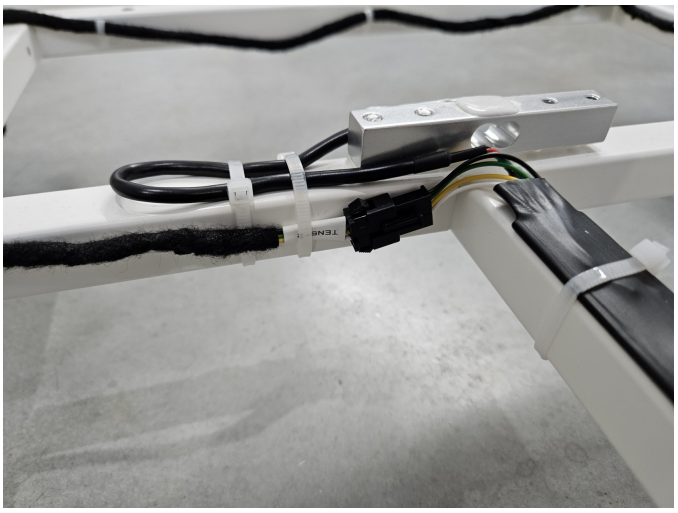
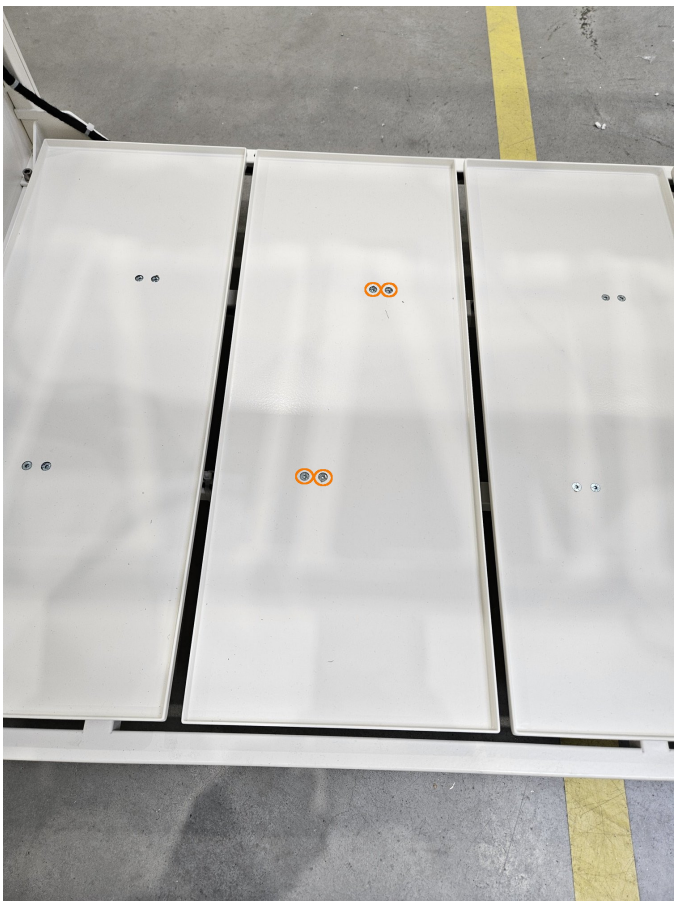


Step 7 Plug in a new sensor



Step 8 Screw flor again

> The floor is not symmetrical! Orient it similarly to the others!



Step 9 Wieght calibration

Full calibration is required after load cell replacement. THIS IS A DIFFERENT CALIBRATION THAN ZERO CALIBRATION FROM THE MENU. Right now there is no possible full calibration from user menu.

Calibration consists of 4 stages
1. empty beam
2. load placed at the back
3. load placed in the middle
4. load placed at the front


5KG


5KG


5
KG

Replace motors mechanism Smartb

In this document you will find a description how to replace the throw flaps motors system in the Smartb

You will need:

- a new set of motors mechanism
- a set of allen keys
- cross screwdriver

> Before replacing disconnect device from the power supply!

> With practice, some points can be omitted, but the simplest path will be described here

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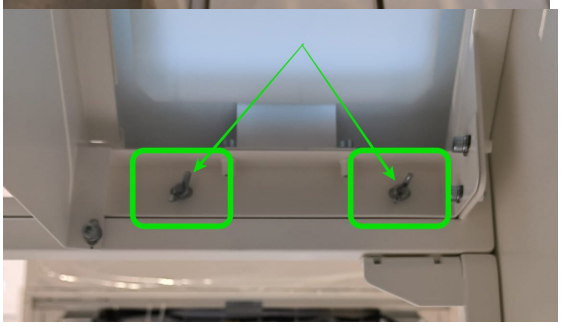
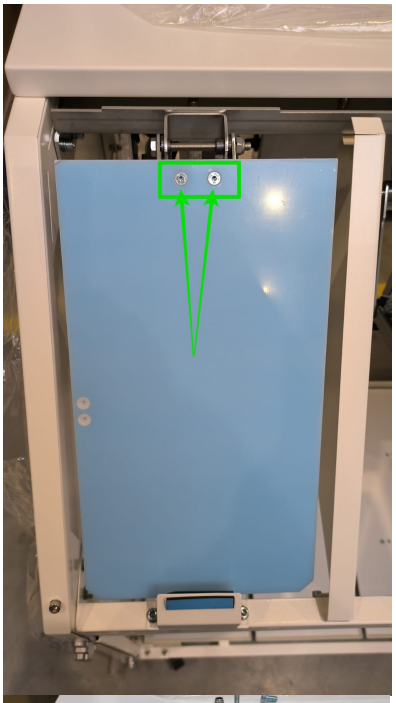
Step 1 Remove metal cover with shape

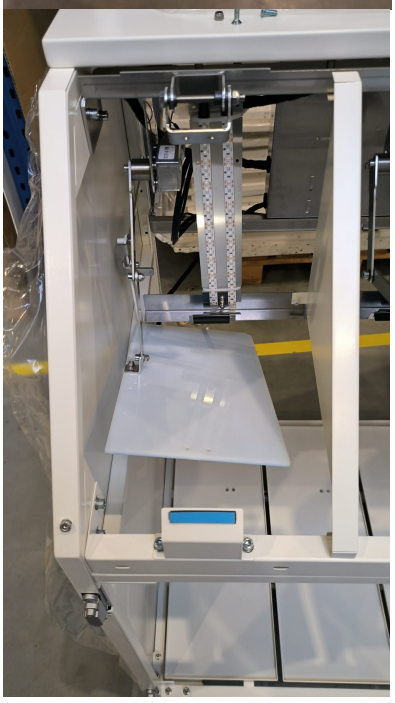
- Open door
- Unscrew metal cover



Step 2 Unscrew plastic flaps (optional)

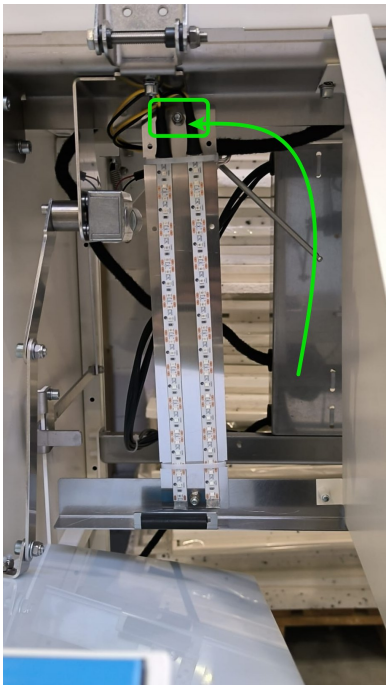
- this is just to have easier access to the motor plug and screw. Is not always necessary
- **Depending on the hardware version, may be blind rivet nuts or a separate nut**

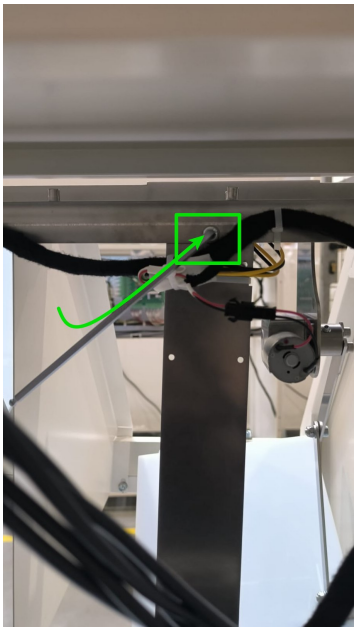




Step 3 Unscrew led holder (optional)

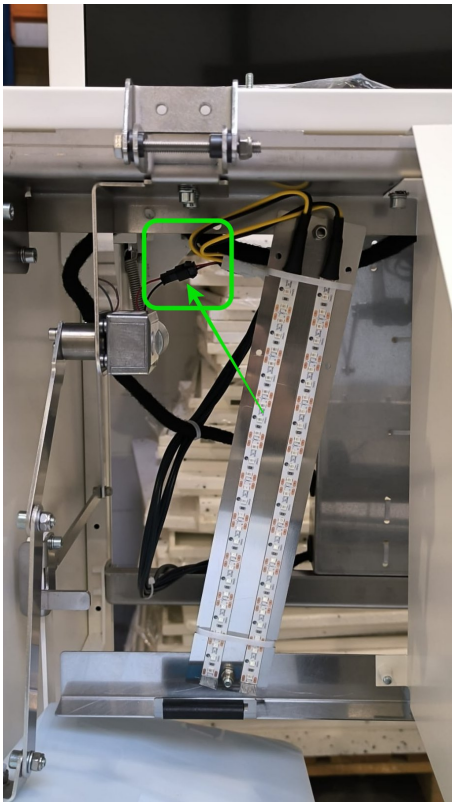
- this is just to have easier access to the motor plug and screw. Is not always necessary
- **Depending on the hardware version, the bolt may be from the front or rear**



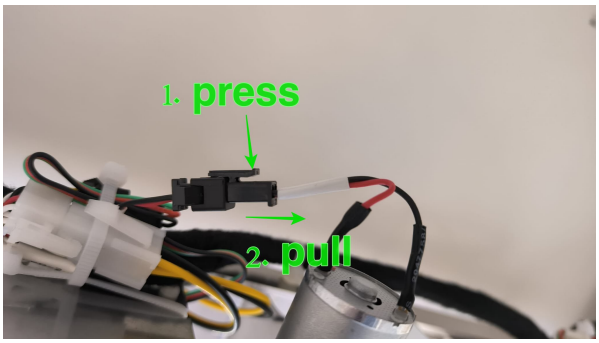


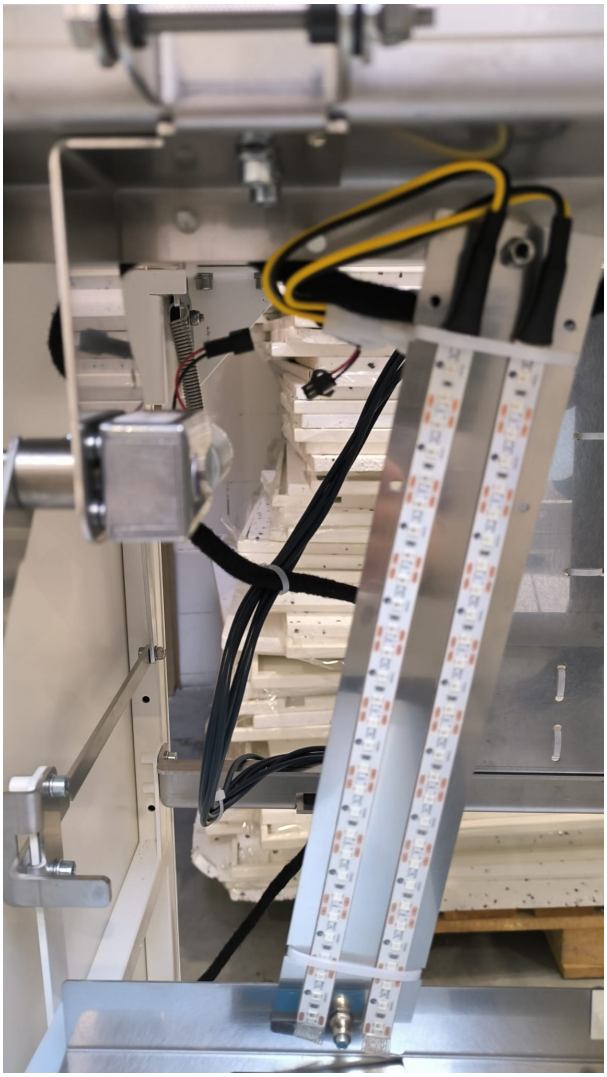
Step 4 Unplug motor cable

- there is only one two-pin plug with a red and black cable



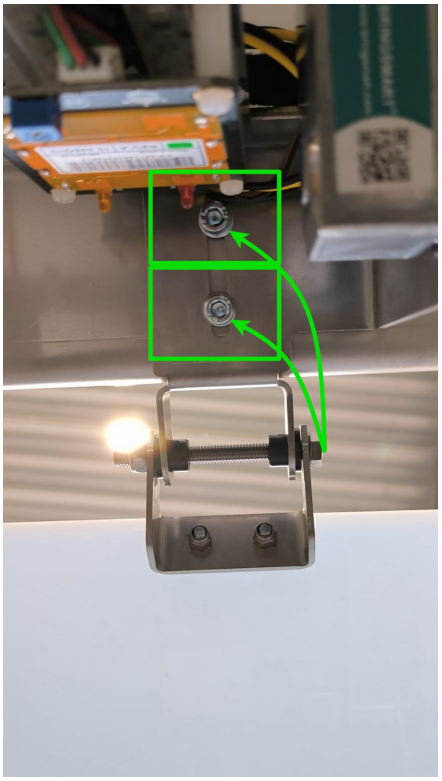
> Never pull the cables, only the plastic connector!

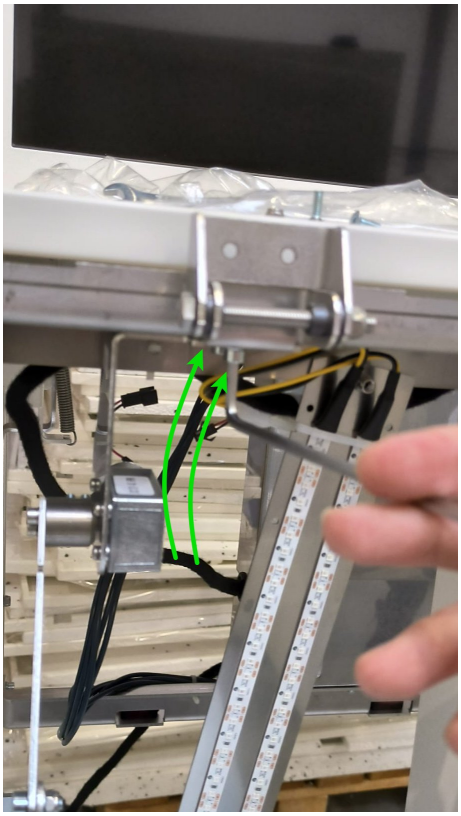




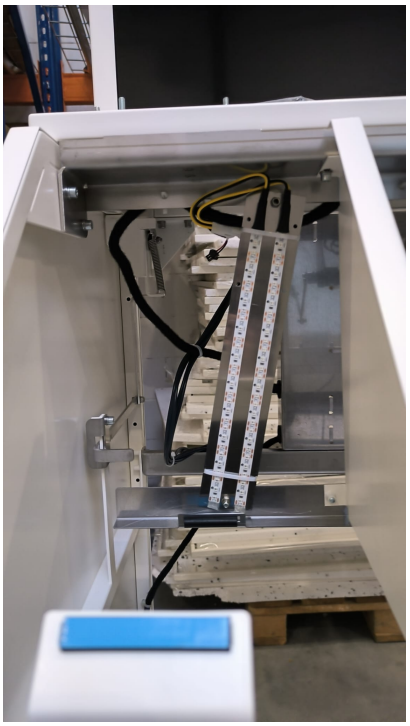
Step 5 Unscrew motor mechanism

- there are two Allen screws holding the entire mechanism





Step 6 Now you can replace with new mechanism and assembly with opposite direction of the points



- **when installing the new mechanism, make sure that the parts fit together as in the photo**

Checklist after replace:

- ☐ no screws remain
- ☐ motor work properly on full range in proper direction
- ☐ LEDs works OK

☐ person detect system works OK (on bin 2 and 4)

Smartb motors - how it works

<Do przeredagowania i translacji>

Sterowanie silnikami w smartb bazuje na pomiarze prądu i czasach ruchu. Nie ma w tym układzie krańcówek położenia skrajnego.

Działa to tak, że logika wysterowuje ruch silnika w zadanym kierunku i czeka aż na silniku wystąpi pomiar prądu powyżej **1A** (tzn, że coś blokuje dalszy ruch silnika, albo jest to odbojnik skrajny w urządzeniu albo coś innego)

Dodatkowo na początku ruchu uruchamiany jest timer który odlicza do **1s**, jeżeli silnik nie osiągnie prądu powyżej **1A** w czasie krótszym niż **1s** to jest emitowy błąd **TIMEOUT (S003).** Źródłem braku prądu w czasie 1s może być awaria silnika lub silnik nie jest podłączony.

Zwykle normalny ruch silnika trwa ok. **600ms**.

Jeżeli silnik osiągnie prąd **1A** w czasie krótszym niż **450ms** to zwykle znaczy, ze coś blokuje jego ruch. Jeżeli taki stan (osiągnięcie prądu poniżej 450ms) wystąpi **3x** pod rząd to emituje błąd **UNDERTIME (S002)**

Po wystąpieniu błędu **TIMEOUT** lub **UNDERTIME** silnik zatrzymuje się i LED świeci się na żółto.

> Co ważne, po wejściu w tryb serwisowy wszystkie silniki kasują swoją flagę o błędzie i próbują wykonać ruch ponownie wg. w/w opisu.