A.3. Assembly manual

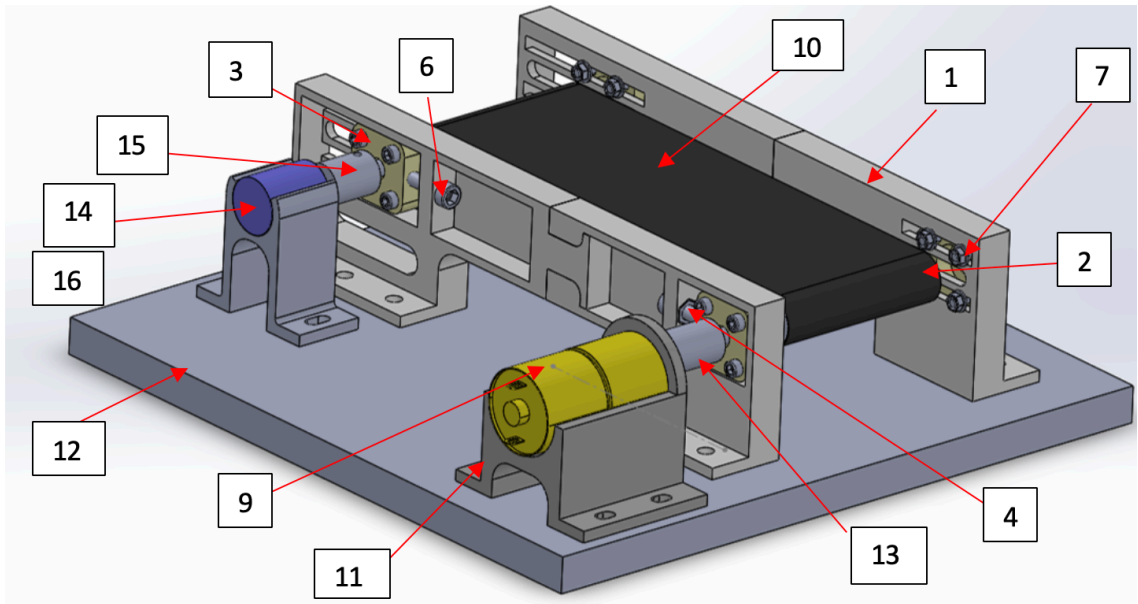## A.3.1. Mechanics

Overview

*Figure **Error! No text of specified style in document.**.1 - Kit's mechanics assembly*
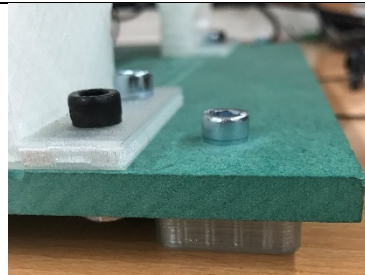
*Table **Error! No text of specified style in document.**.1 - Kit's mechanical components*

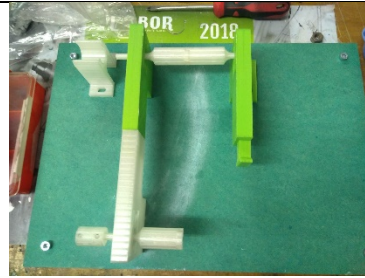| Nr	Description	Quantity
1	Support frame components	4
2	Shafts	4
3	Tensioners	4
4	Nuts M6	4
5	Washers M4	16
6	Screws M6x30	4
7	Screws M4x20	16
8	Nuts M4	16
9	Motor	1
10	Belt	1
11	Motor support	1
12	Base 300x300 mm	1
13	Motor coupler	1
14	Motor feedback (generator)	1
15	Generator coupler	1
16	Generator support	1
17	Base screws M4	18
18	Base nuts M4	18
19	Base feet supports	4

Follow these basic steps to assemble the kit's mechanics:

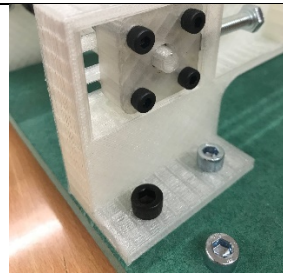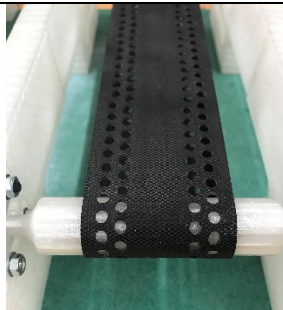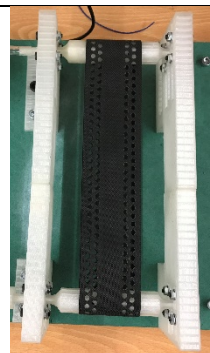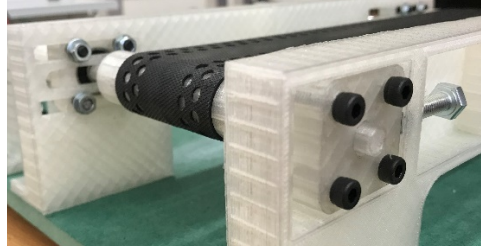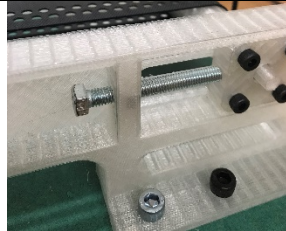|	
Step 1: screw the base's support using M6 bolts and nuts;	
Step 2: Attach the support frame elements;	
Step 3: Screw only one of the support frame elements to the base using M6 bolts and nuts;	
Step 4: Attach one of the sides of shaft couples to the support frame already screwed and insert the flat belt;	
Step 5: Attach the other side of the shaft coupler to the opposite support frame and screw it to base using M6 bolts and nuts;	

Step 6: Attach the tensioner to the shaft coupler and then screw it to the support frame using M4 bolts and nuts;
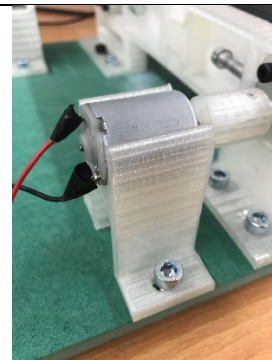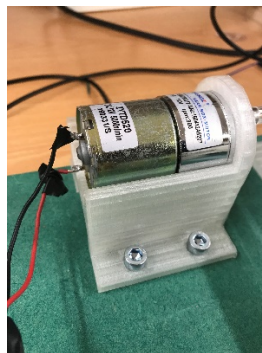

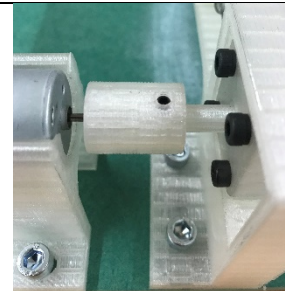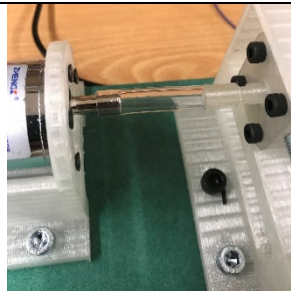**Step 7**: Use the tensioner in order to regulate the tension of the flat belt;

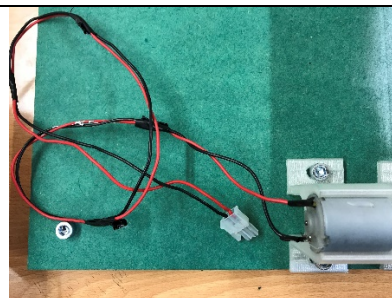**Step 8**: Screw motor and generator's supports, then place them in the respective supports using M6 bolts and nuts;

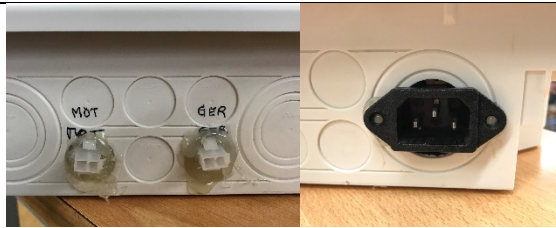**Step 9**: Connect the driver and idler's roller to the shaft coupler using the flexible joint;

Step 10: Solder the Molex connectors to the motor and the generator;

A.3.2. Electronics

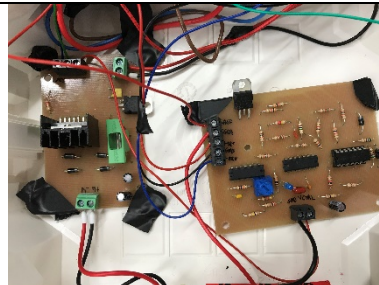Follow these basic steps to assemble the kit's electronics:

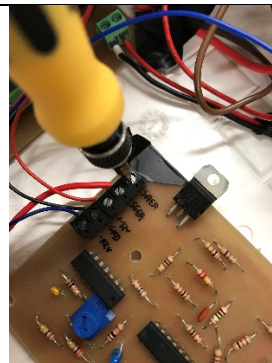**Step 0:** Check if the electronic box comes with the female connectors for power supply and motor and generator;

Step 1: screw the HMI's PCB using M4 bolts and nuts and connect wires to the board connectors;

Step 2: Add wires to the Actuator and Controller PCBs and fixate them at the base of the electronic box;

Step 3: Connect all wires to the appropriate places;

Step 4: Screw the electronic box cover with provided screws;