

INSTRUCTION MANUAL

(translation of the original instructions)



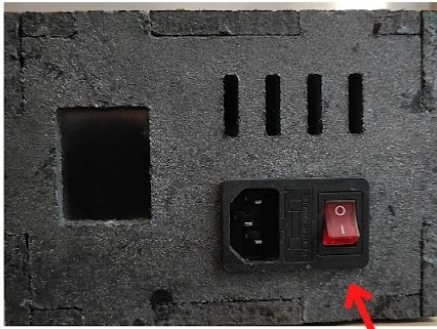
SAFETY WARNINGS AND SAFETY INSTRUCTIONS

For successful plastic recycling, FIXstruder operates at high temperature, high pressure and high torque. At the same time, some processed polymers can be potentially toxic during thermal decomposition.

Therefore, when working with the FIXstruder, follow the safety rules:

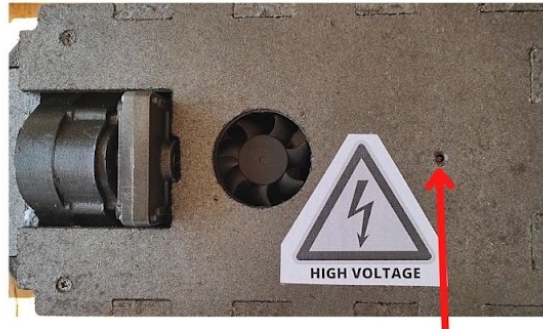
- work in a ventilated area
- install smoke and carbon monoxide sensors
- work with protective glasses, gloves and clothing
- don't open the working FIXstruder
- don't touch the rotating parts of the working FIXstruder
- always turn off the power supply if you need to check the internal parts of FIXstruder
- **don't leave the working FIXstruder unattended !**
- learn the basics of working with the materials that you recycle
- **always use a grounded socket !**
- don't change the settings of the PID controller! Doing this, the safety of the extruder is not guaranteed

Back side



Main power switch

Top side



Adjust
cooling fan speed

OPERATING INSTRUCTIONS

If you are going to extrude a rod without using a winder, then place FIXstruder so that the nozzle is about 1.5 meters from the floor.

1. Turn on the Main power switch
2. Set the desired temperature on the pid controller
 - * Approximate temperature: ABS - 210-240 ° C PLA - 180-215 ° C
 - * When switching from ABS to PLA, remove the remaining plastic from the barrel, clean the nozzle and change the mesh.
3. Avoid high temperatures. Select the temperature individually for each type of plastic.
4. After the nozzle reaches the desired temperature, wait for about 5-10 minutes for the plastic remaining inside the nozzle to completely turn into a molten state.
5. Fill the plastic into the inside of the funnel
 - * the neck of a plastic bottle can be used as a funnel.
6. Turn on the motor.
7. Turn on the cooling fan.
 - * some types of plastic do not require cooling during extrusion.
8. At the end of the work, try to empty the nozzle tube from the plastic as much as possible, i.e. allow FIXstruder to work empty for about 20 minutes and then turn it off.

MOTOR OVERLOAD PROTECTION

By default, the extruder motor is configured for safe operation. Any increase in the output voltage power can cause a breakdown of the gearbox or the connection of the feed screw.

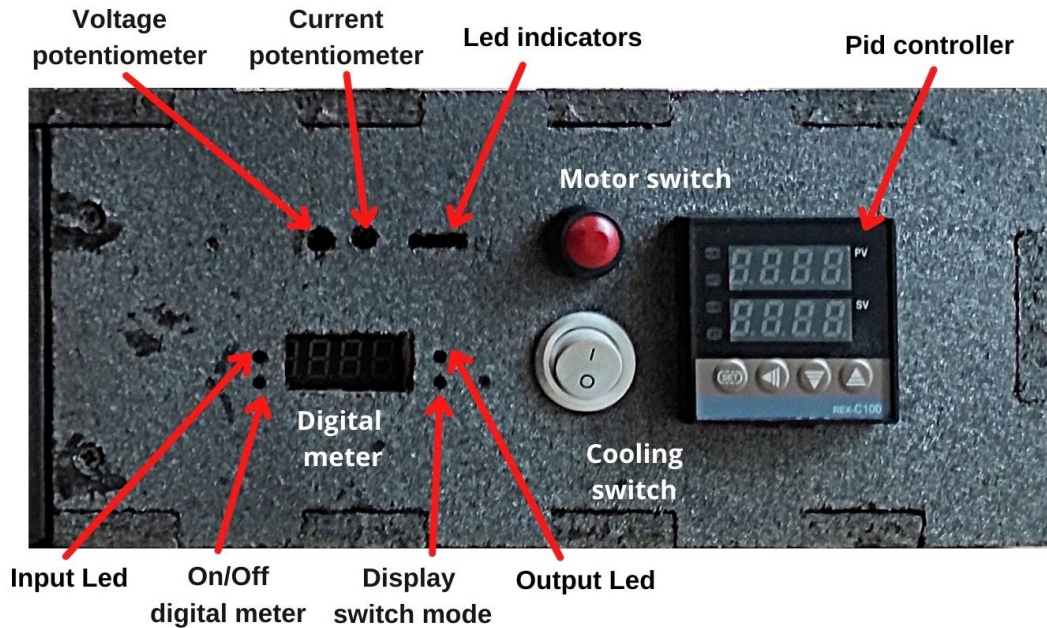
We are not responsible for the breakdown if you change the settings.

LED color codes:

- Red: the protection has worked and something is blocking the auger. Check what is blocking the auger. You may need to clean the nozzle. Check if the temperature is too low to heat the plastic.
- Blue: normal operation of the motor.
- Green: This is possible if the motor is not driving a load.

In normal condition, the motor protection should not be triggered. If this happens, then try:

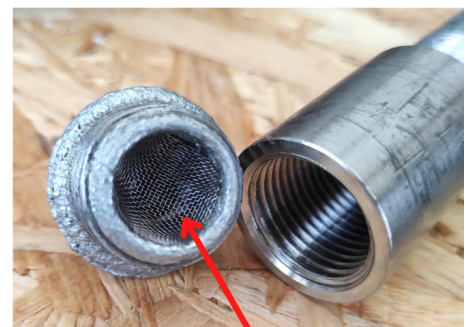
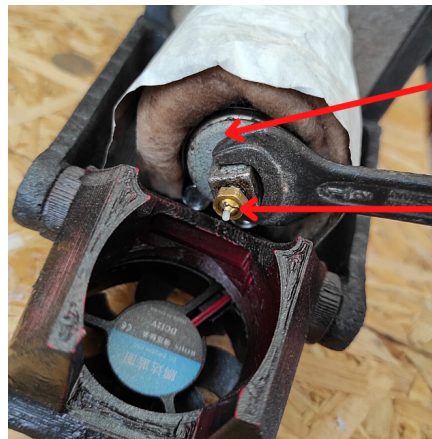
- Add half or one turn clockwise (voltage and current potentiometers)
- If 1 didn't help, then it may be necessary to clean the nozzle, because something is blocking the auger.



CHANGING THE NOZZLE

To replace the nozzle, you need to wait until it heats up and then, using a wrench N. 11-12, unscrew the outer nut.

1. Pull out the filter mesh.
2. Unscrew the nozzle.
3. Clean the channel.



SPECIFICATIONS

1. Size 60*15*10 cm
2. Attention! The heater operates at 110V
3. Heater power 70W
4. Maximum peak power consumption 130W (with heater)

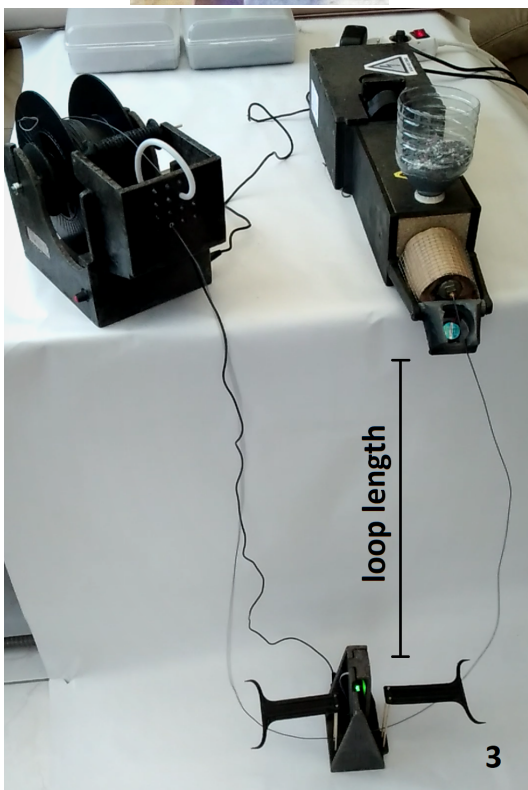
TROUBLESHOOTING



- The uniformity of the spilling of the crushed material into the hopper affects the speed and quality of the extruded rod. If the rod turns out to be thin and similar to a sponge, and the extrusion speed has decreased (photo 1), this means the material is stuck in the hopper.
- A similar extrusion defect can also be caused by a blockage in the nozzle. In this case, it is necessary to change the filter - the metal mesh.



- The air accumulating inside the extruder barrel during the melting of the material can cause defects in the rod at the beginning of extrusion (photo 2).
- It can also be caused by an increased temperature due to the boiling of plastic. It is recommended to lower the temperature.



- The diameter of the rod is regulated by the relationship between the temperature and the tension of the loop length going into the winder.
- Default placement of the extruder and winding machine for automatic production.