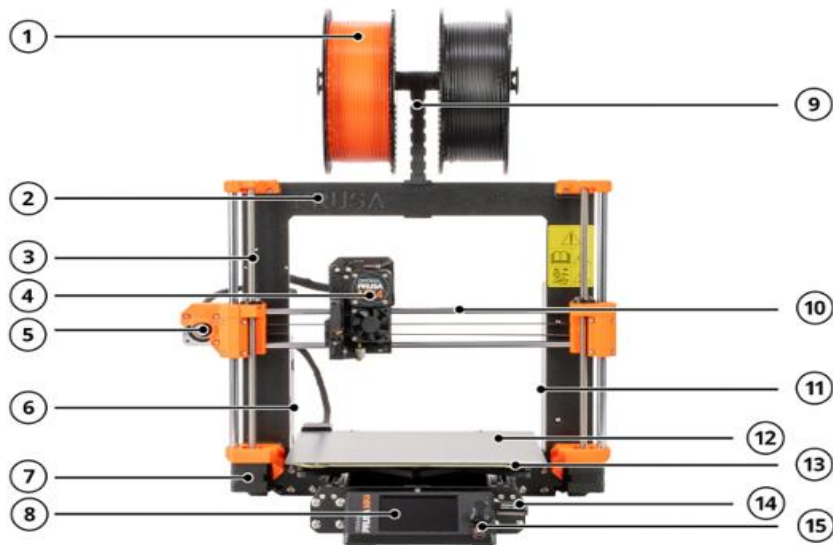## List of Parts

1. **Filament Spool** – The MK4 is compatible with 1.75 mm filament;
2. **Frame;**
3. **Z Axis** – Vertical, made of threaded and smooth rods; moves the Nextruder up and down;
4. **Nextruder** – Our new-generation extruder with planetary gear and load cell sensor;
5. **X-Axis Stepper Motor** – Moves the Nextruder left and right;
6. **Electronics Enclosure** – Housing for the xBuddy board. Ethernet and Wi-Fi ports are accessible from the rear.Z-Axis Stepper Motor – One of two total;
7. **Z-axis** motors move the Nextruder up and down;
8. **LCD Screen** – Used to control and configure the printer;
9. **Spool Holder;**
10. **X Axis** – Generic name for the horizontal group composed of two smooth rods, an X-axis motor, a belt, and plastic parts. The Nextruder moves left to right along the X axis;
11. **Power Supply Unit;**
12. **Print Sheet** – Easy to maintain, held in place by strong magnets integrated into the heated bed.Heated Bed – Proven MK52 heated print bed;
13. **USB Port and USB Drive** – Uses a USB drive to print G-code (print files) and flash firmware;
14. **Control Knob** – The main control knob with reset button located just below the screen.

List of Tools

1. n.1 Hex key set (for nozzle or part replacement);
2. n.1 Microfiber cloth (for cleaning bed);
3. n.1 Caliper (for checking filament diameter);

Procedure

1. Step 1: Design or obtain a 3D model using CAD software and export in .STL or .3MF format.
2. Step 2: Open the model in PrusaSlicer; configure layer height, infill, supports, and material settings (Figure 1).
3. Step 3: Slice the model to generate the G-code file (Figure 2).
4. Step 4: Save the G-code file to a USB flash drive or SD card.
5. Step 5: Insert the USB or SD into the Prusa MK4 printer.
6. Step 6: Preheat the printer using the appropriate PLA profile.
7. Step 7: Load the filament (Figure 3).
8. Step 8: From the printer screen, select the G-code file and start the print (Figure 4).
9. Step 9: Monitor the first layers to ensure correct bed adhesion.
10. Step 10: Once printing is complete, allow the bed to cool and remove the part using the spatula.
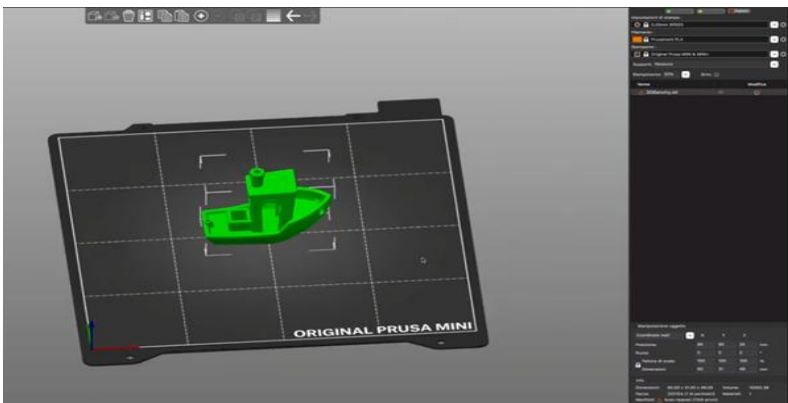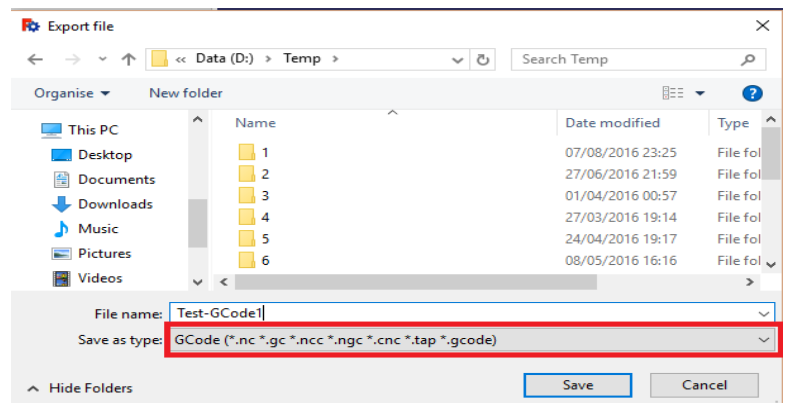

Fig 1

Fig 2

Fig 3

Fig 4