



Solider 3D printer with FFF printing technology (Fused Filament Fabrication) allows to create large objects and prototypes in a single print thanks to its print plate that measures 500x400x500 mm. The printer is equipped with two E3D v6 extruders that allow printing with two colours or with support materials (PVA / HIPS) and reach an extrusion temperature of 300 ° C. Brass nozzles with a standard diameter of 0.4 mm (optional 0,25 -0,5 – 0,6 - 0,80 mm - 1 mm) can be interchanged with the aid of a 7 mm spanner. This system allows you to change the nozzle diameter to achieve different print resolutions.





Solider has a rugged chassis equipped with self-locking wheels to allow an easy movement of the 3D printer. To have available the necessary for 3D printing, in the back side there is a compartment to lodge six spools of 2,5 kg and in front side there is an illuminated glove compartment.

Solider is supplied assembled and ready for use.



The printer uses the Cartesian movement for the X, Y axes with a static support mechanism composed of 12 mm INA cemented linear bars and for the dynamic support of self-lubricated linear bars 10x2 mm each.

The Z-axis consists of four 12 mm INA cemented linear bars and four 10x2 IGUS trapezoidal bars. The components are in ergal 7075 T651.

Mechanical features that allow speed in printing and layer accuracy.

The linear movement is controlled by NEMA 23 1/32 step motors.

The printing speed is 10-100 mm / s with a layer resolution of 0,05 - 300 microns (0.05 -0.3 mm) with a dimensional accuracy of the X, Y \pm 0.3 mm axes.



Solider has no proprietary filaments, supports the following materials with a diameter of 1.75 mm:

- PLA
- ABS
- ABS X*
- PVA (solubile support)
- ETHIL LAY
- PLA Flex
- ASA X
- Laywood
- PETG
- HIPS
- T-glase
- TPU Shore 45-55D
- IGLIDUR
- PBT
- PC/ABS – PC/ABS V0
- ALFA+
- CERA WAX
- PLA CERAMO
- PCL POLICAPROLATTONI
- CARBON – P
- GRAFYLON
- TPU 98 shore A
- T-GLASE
- N-ASA
- POLYPROPYLENE



Solider is equipped with a 110 ° C heated bed and a 50 ° C tempered chamber (at 25 ° C ambient temperature). These features guarantee the correct adhesion of the large object to the printing surface and also allow the printing of special materials with high retractions.

Solider has a control panel display 128x64 on the front that allows managing, control and modifies all the printing parameters.

During printing, through the control panel, it is possible to modify some parameters to improve the default settings in the creation of the .gcode.

The parameters concern extrusion temperature, ventilation, flow, printing speed and filament change.



Solider offers the user the possibility of printing via USB input with the help of the computer or independently via an SD card.

It is also possible to remotely control the printing process via the dedicated IP camera via the webcam of the tablet supplied. Inside the tablet, supplied, there is an application for managing the printing parameters.

The printer is equipped with filament sensors that detect the absence of the wire inside the bowden and put the printer automatically to perform the function of pause - displacement of the extruder body for coil replacement - of the print.

Solider is equipped with self-leveling of the build plate. Before each printing, the plate is aligned through a probe which analyzes the points of the printing plane and performs the correction of the different heights.

Solider doesn't require continuous maintenance, but only a few precautions such as the cleaning and lubrication of the axes, so that the printer is always in conditions of optimum efficiency.

Solider supports files in .STL to .gcode format.

For the creation of these files, it is possible to use open source software like Cura and Slic3r.

With the Solider 3D printer is provided a starter kit which includes:

- User manual e maintenance
- SD Card
- USB cable
- Cutter for finishing
- Harmonic steel wire for cleaning the nozzles
- Spatula
- 2 spools 2,5 Kg di filament
- Grommets for filament cleaning
- DPI security
- Tablet



Technical specification

Tecnology: FFF-Fused Filament Fabrication

Build dimension: 500x400x500 mm

Resolution layer Z axis: 50 micron – 300 micron

Filament diameter: 1,75 mm

Nozzle diameter: 0,4 mm. Brass. Interchangeable

Extruders : n. 2 E3D v6

Connectivity: USB – SD Card – Tablet remote controle

Equipment: Key ignition, filament detection, wire change system, emergency stop button

CONTROL & FIRMWARE

Megatronics 3.1

Driver DRV8825

Marlin Firmware

DIMENSIONS & WEIGHT

3D printer dimensions : 790x710x1620 mm

Weight approx: 80 Kg

Shipping weight approx: 120 Kg

Dimensions wood box: 820x820x1700 mm

TEMPERATURE

Extrusion temperature max: 300°C

Operating temperature: 15° -32 °C

Heated bed: 110°C

Temperate chambre: 50°C (room temperature 25°C)

MECHANICS

Build plate: Heating plate and tempered glass 5 mm

Structure: Powder coated steel - lexan coating 5 mm

Frame: 45x45 aluminum profiles

XY Assi: XY static support: Linear cemented shaft INA

XY dynamic support: self-lubricated linear shaft

Z-axis : N° 4 Linear cemented shaft INA, n°4 trapezoidal shaft IGUS

Motors: NEMA 23 stepper motors. 1/32 step

Printing speed : 10 – 100 mm/s

Transfer speed : 10- 250 mm/s

OPERATING REQUIREMENTS

Power: 240 – 400 V AC 50 Hz 1000 Watt