CreatBot PEEK-300 High Performance PEEK 3D Printer Instruction Manual

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CreatBot PEEK-300 High Performance PEEK 3D Printer

INSTRUCTION MANUAL

What concept do you need to know first?

- Heat control system
  - High temp. hotend
  - hotbed
  - hot chamber
- Direct Annealing System
- Cooling system
  - liquid cooling
  - Air pump cooling

What parameters make us exciting?

- Hotend max. 500°C with dual extruder
- Heatbed max.200°C
- Hot chamber max. 120°C
- Build volume: 300 x 300 x 400 mm
- Triple heat isolation and liquid cooling system

What new technology can we except?

The Direct Annealing System (DAS) is a revolutionary technology designed and patent protected by CreatBot. It is the most advanced technology applied to 3D printing high performance material.

What printing materials are available?

- Engineering Plastics: PLA, PC, ABS, PA6, PETG, PVDF, POM-C, PP, TPU
- High temperature Material: PPSU, PEI (ULTEM), PA12, PSU, PPS, PA-CF
- Ultra performance material: Medical grade PEEK, PEEK, PEKK, CF-PEEK (Carbon fiber), GF-PEEK (glass fiber), etc

1. Direct Annealing Temperature: 0-400°C

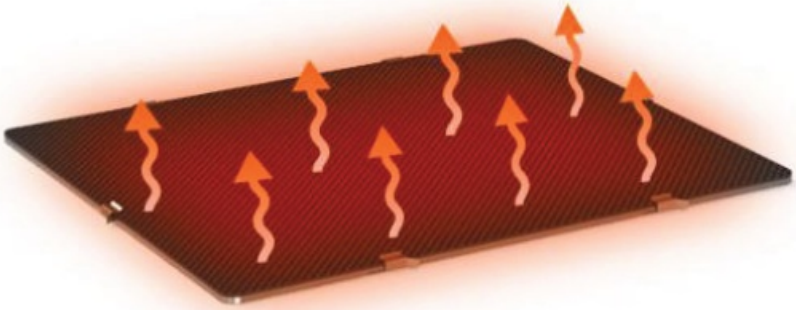
Direct Annealing System (DAS), the world's first and extraordinary technology by CreatBot. Annealing process is instant controllable during printing. It aims to provide best quality parts in one time without warping and cracking printing of big size functional materials. (The technology is patent protected and available by CreatBot only)

2. Smart Auto-rising dual extruders 500 °C

The PEEK-300 equiped with CreatBot new technology smart Auto-rising dual extruders. Water cooling, DAS system, Auto-rising extruders. The dual nozzle temperature up to 500°C. You can print any 3D printer materials in the world. We can say it is best choice of polymer materials.

3. Hotbed 200 °C

Common but necessary.
Base of printing big models with no warping.



4. Hot Chamber 120°C

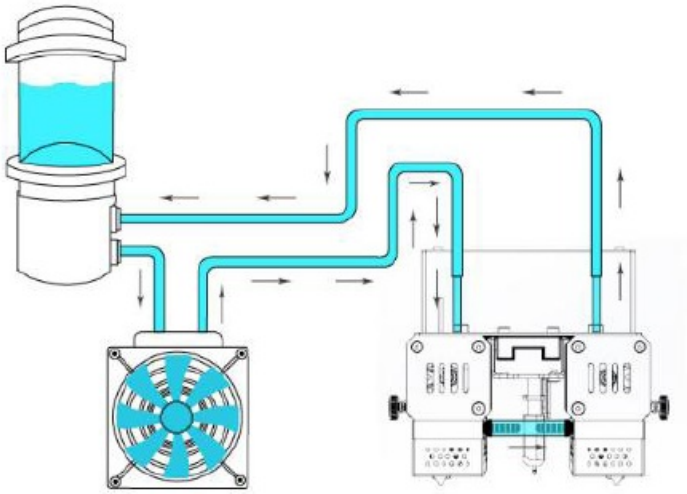
Outstanding and important.
The protector of no cracking printing.

5. Triple Heat Isolation

Triple heat isolation is made of double insulation chamber, advanced insulation materials and vacuum double PC boards. It is guarantee of ultra performance and safety.

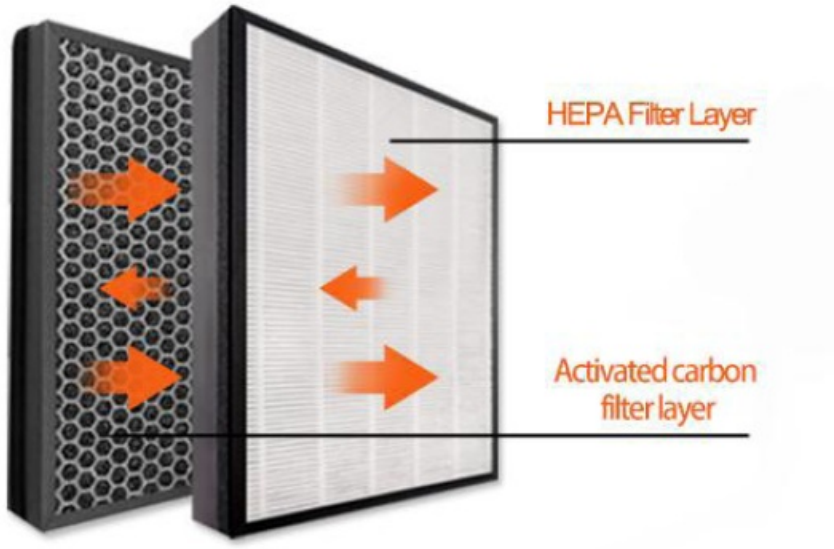
6. Cooling System

Cooling system is one of the important parts to constitute the whole thermal system. It is made of
(1) liquid cooling. Circulating liquid can be used effectively for a long time.
(2) Air pump cooling. Air pump provide cold air from outside instead of hot air inside chamber.



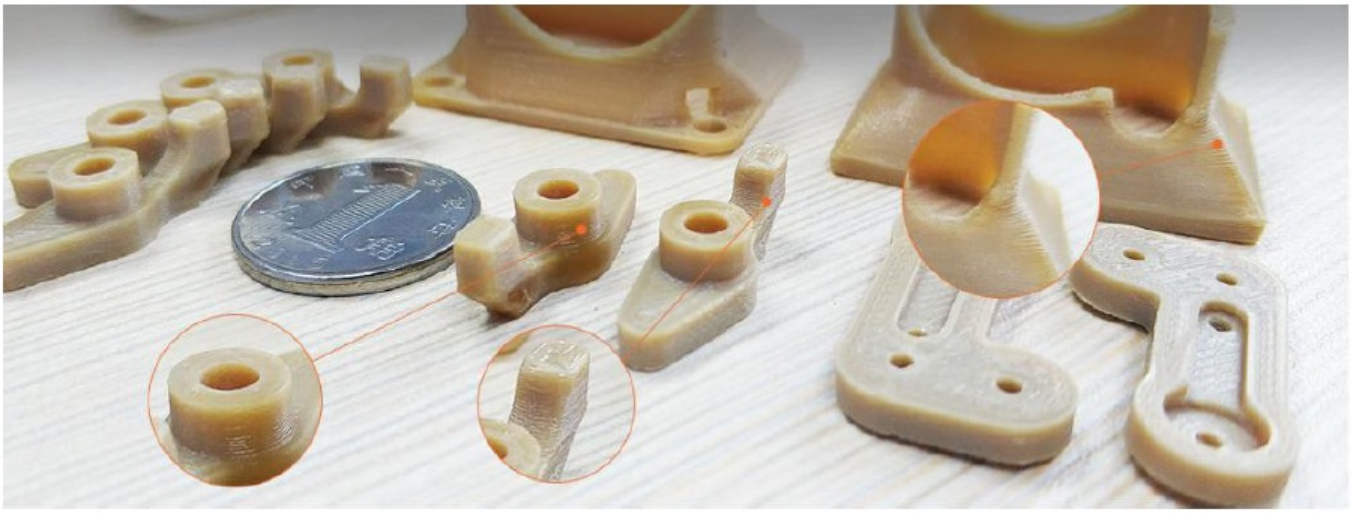
7. HEPA Air Filtration

The air filter system can adsorb impurities and gases that generated by printing special filament, more safe and environmental protection which is more suitable for house, school, office space.

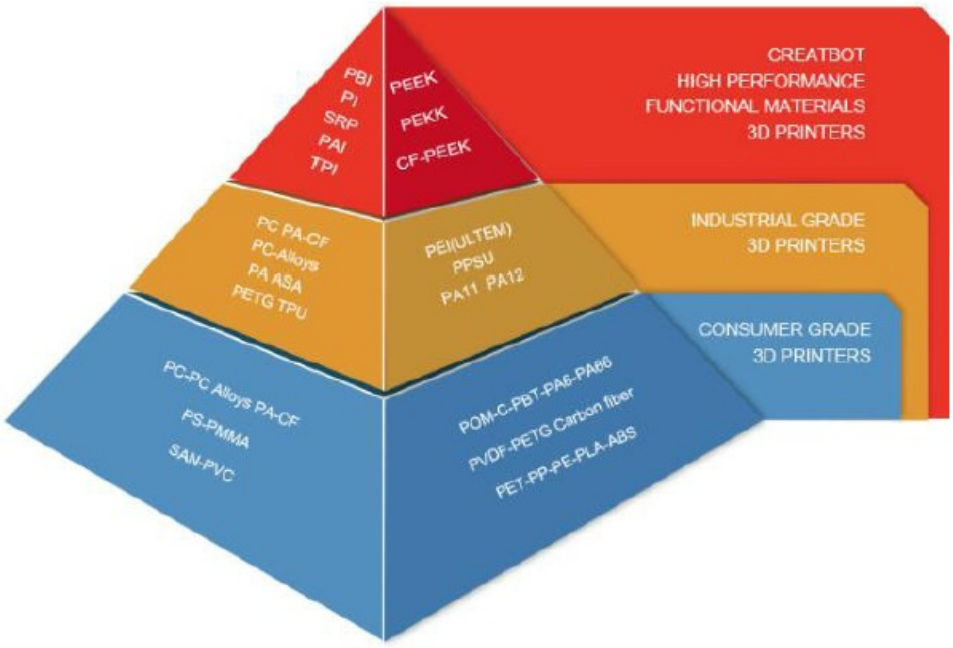


8. Resolution 0.04mm

0.04mm is an available resolution for normal plastics, but it is an extraordinary resolution for high warping and high deformation materials. 3D printing high performance material need not only high temperature, but better cooling. For high resolution with high small details, high temperature will ruin layers to a mess if heat and cooling are not in a balance.



9. Material Performance Comparison Chart



Product Parameter

Printing	
Build Volume	300*300*400 mm
Print Resolution	0.04 mm-0.4 mm
Filament Diameter	1.75 mm
Number of Nozzles	Dual Extruder
Print Speed	10-150 mm/s
Nozzle Diameter	0.4 mm (0.3~1.0 mm optional)
Filament Compatibility	Engineering Plastics: PLA, TPU, PC, ABS, PA6, PETG, PVDF, TPU High tem perature Material: PPSU, PEI (ULTEM), PA12, PSU, PPS, PA-CF, POM, PP
	Ultra-performance material: Medical grade PEEK, PEEK, PEKK, CF-PEEK (Carbon fiber), GF-PEEK (glass fiber), etc.
Software	
Software Bundle	Creatware, Simplify3D, Cura, Slice3r
Operating Systems	Win7/8/10, MacOS
Print File Type	STL, OBJ, AMF, Gcode
Special Function	
Outage Restored	Save data when power is off
Filament Detection	Pause printing when filament run out
Direct Annealing System (DAS)	Annealing process is instant controllable during printing. It aims to provide best quality parts in one time without warping and cracking printing o f big size functional materials.

Heat insulation	Triple heat insulation
Emergency stop switch	Support emergency stop
High temperature accessories	High temperature resistance motors, linear rails, belts and circuits to ensure long time high temperature printing.
Temperature	
Nozzle Max. Temperature	500 ℃
Chamber Temperature	120 ℃
Platform Max. Temperature	200 ℃
Direct Annealing Temperature	0~400 ℃
Mechanical	
Cooling	Air pump cooling & water cooling
Platform	PCB aluminum + PEEK print board
Positioning Precision	X Y axis 0.01mm, Z axis 0.0025mm
Extruder	Directly Drive
Machine Construction	Fully enclosed hot chamber
Bed Leveling	Manually/Automatic
Electrical	
Input Power	200~240 V, 120A
Max. Power	3 000 W
Screen	4.3” full color touch screen, multi-language
Print Method	USB Connectivity/USB Disk
Size & Weight	
Machine Size	650*600*750 mm
G.W	100 kg
Packing Size	820*720*1080mm
N.W	135 kg

Specs Comparison With Other Brands

	CreatBot PEEK-300	Stratasys F370	Intamsys Funmat Pro410	Apium M 220
Place of origin	China	USA	China	Germany
Build Volume (mm)	300*300*400	355*254*355	305*305*406	170*170*130
Max Nozzle temperature	500 °C	300 °C	450 °C	540 °C
Max Chamber temperature	120 °C	90 °C	90 °C	
Max hot bed temperature	200 °C		160 °C	
Temperature around the part is controlled	0-400 °C	None	None	0-200 °C
Min layer resolution	0.04 mm	0.013 mm	0.05 mm	0.1 mm
Number of extruder	2	2	2	1
Build platform	Carbon fiber sheet		Ceramic Glass	Medical grade material
Materials	PEKK, PEEK, medical PEEK, Carbon-PEEK, ULTEM, PEI, PPSU, PA/CF, PC, PA Alloys, PA6, PA12, ABS, Carbon Fiber, Nylon, ASA, PETG, ESD-Safe, HIPS, TPU, PLA, PVA, TPU 65A,ETC.	PLA, ABS, ASA, PC-ABS, TPU 92A	PEEK,PEI,PPSU, PA/CF, PC, PC Alloys, PA, ABS, Carbon Fiber-Filled, Metal-Filled, Fiberglass-Filled, Nylon, ASA, PETG, ESD-Safe, HIPS, TPU, PLA, PVA, ETC.	Medical PEEK
Machine size	650*600*750	964*711*1 626	720*680*1 470	850*685*675
Weight	120 kg	227 kg (with cabinet)	200 kg (with cabinet)	66 kg

FAQ:

Q: Can I use other filaments not listed in the compatibility chart?

A: It is recommended to use the specified filaments for optimal results and safety.

Q: How do I clean the HEPA air filtration system?

A: Follow the manufacturer’s instructions for cleaning and maintenance of the air filter system.

Documents / Resources

	CreatBot PEEK-300 High Performance PEEK 3D Printer [pdf] Instruction Manual PEEK-300 High Performance PEEK 3D Printer, PEEK-300, High Performance PEEK 3D Printer, Performance PEEK 3D Printer, 3D Printer, Printer

References

- User Manual