

EPSILON W50 SC



FFF | Double Head

PRODUCT DESCRIPTION

The BCN3D Epsilon W50 Smart Cabinet 3D printer manufactures solid parts thanks to its humidity-controlled chamber and Independent Double Extrusion (IDEX) system. The Epsilon W50 + SC 3D printer produces functional and robust parts with quality and precision. Smart Cabinet (SC) increases throughput by keeping materials in optimum condition and improving final part quality



FEATURES

- Heated base up to 120°C: Equipped with a heated base that can reach up to 120°C, ideal for printing with technical materials and avoiding deformation problems.
- e3D™ Hotends: The e3D™ hotends have been carefully designed by the e3D™ manufacturer to provide the smoothest and most reliable extrusion.
- 5" multilingual touch screen: Equipped with an intuitive multilingual interface that will guide you through its advanced functions.
- Aluminum housing: The aluminum structure guarantees strength and durability over time.
- Bondtech™ Extruders: Extruders composed of two high-tech Bondtech™ gears, offering more control, sharper detail and superior performance with any type of filament.
- End-of-filament sensor: Sensor that detects when the filament runs out and stops the printing process until it is reloaded.

3D printer for manufacturing functional parts with robust mechanical properties

It can be used for a wide range of technical applications with BCN3D's industrial materials, developed by two of the most renowned chemical companies: BASF and Mitsubishi Chemical. You can also work with confidence with any material of your choice thanks to our Open Filament System:

Standard: PLA Pro / rPET / TPU 85A

Technical: BVOH / ASA / HIPS

The Smart Cabinet is the ideal complement to the BCN3D 3D printers of the Epsilon industrial range, offering seamless integration and enhanced performance.

- With filament **humidity control**, your materials will be kept in optimum condition. This function is designed to extend the life of the materials. The silica gel, when open to the dehumidifier environment, absorbs moisture from the air in the chamber. Once saturated, the gel is isolated from the materials and heated until it releases the moisture, removing it from the system. This process keeps the filament dry and in optimal conditions for its use.
- The **Uninterruptible Power Supply (UPS)** provides an additional 2 minutes of printing time after a power outage. This allows the 3D printer to automatically return to its initial position. When the power is restored, you can resume printing from its last position.
- In addition, the dehumidifier supports up to **8 small spools** of 3D printer filament (between 750 g and 1 kg) or **4 large spools** (up to 2.5 kg). These can be loaded directly into this professional 3D printer from this humidity-controlled environment, allowing printing while the materials remain in perfect condition.
- It also has a tool drawer that provides you with all the tools you may need. Moreover, thanks to the additional space for your laptop or tablet, you can have a complete workstation next to your 3D printer.



- Finally, thanks to ample storage space for materials and tools, you can keep your workspace organized and clean at all times. In addition, the transportable structure of the Smart Cabinet for BCN3D 3D printers will allow you to easily move this 3D printer around your facilities.

Independent double extrusion system (IDEX)

Developed by BCN3D, the independent double extrusion technology makes the difference in 3D printing.

- Mirror mode: Prints the models and their symmetrical parts at the same time, increasing the iteration speed.
- Duplication mode: Prints the same models with both printheads simultaneously, thus doubling the production capacity.
- Soluble media mode: Print with soluble media to create complex structures and avoid geometric limitations.
- Multi-material mode: A technique that allows printing two different materials and combining their properties.

TECHNICAL DATA

Technology	FFF (Fused Filament)
Printing Materials	Plastic filaments
Printing Volume	420 length x 300 width x 400 height (50 liters)
Purpose	Final Piece
Filament Diameter	2.85 mm
FDM filaments	Standard, technical, composites
Chamber Temperature	Heated base up to 120°C
Max. temperature Extruder	300°C
Nozzle diameter	Brass nipple: 0.4mm (default) 0.6mm 0.8mm 1.0mm Hotend X: 0.6mm - Hotend M: 0.4mm
Dimensions	690mm (W) x 530mm (D) x 900mm (H)
Weight	43.9 kg
Power Requirements	AC 100-240V, AC 3.6-1.5A, 50-60Hz

Smart Cabinet

Sensors	Indoor and outdoor humidity
Data Connection	USB (Type A to Typo B Cable)
UPS Type	Online 1kVA



Dimensions	800mm (W) x 600mm (D) x 1240mm (H)
Weight	85.9 kg
Power Requirements	AC 100-240V, AC 8.4-3.5A, 50-60Hz

RELIABILITY AND SAFETY

- The Epsilon W50 and Epsilon W27 3D printers have a fully enclosed, passively heated print chamber, which keeps the internal temperature controlled and can reach up to 60°C, while the heated base can reach up to 120°C.
- These printers have a Safety Pause feature, which will stop the 3D printing process every time the door is opened, ensuring a completely safe experience.
- As for filters, BCN3D Epsilon printers are equipped with a HEPA filter that protects the working environment from possible harmful particles that may be emitted when printing with industrial materials. In addition, the carbon filter of these printers protects the environment from possible harmful vapors produced by the materials used.

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