MCM3D

Product presentation
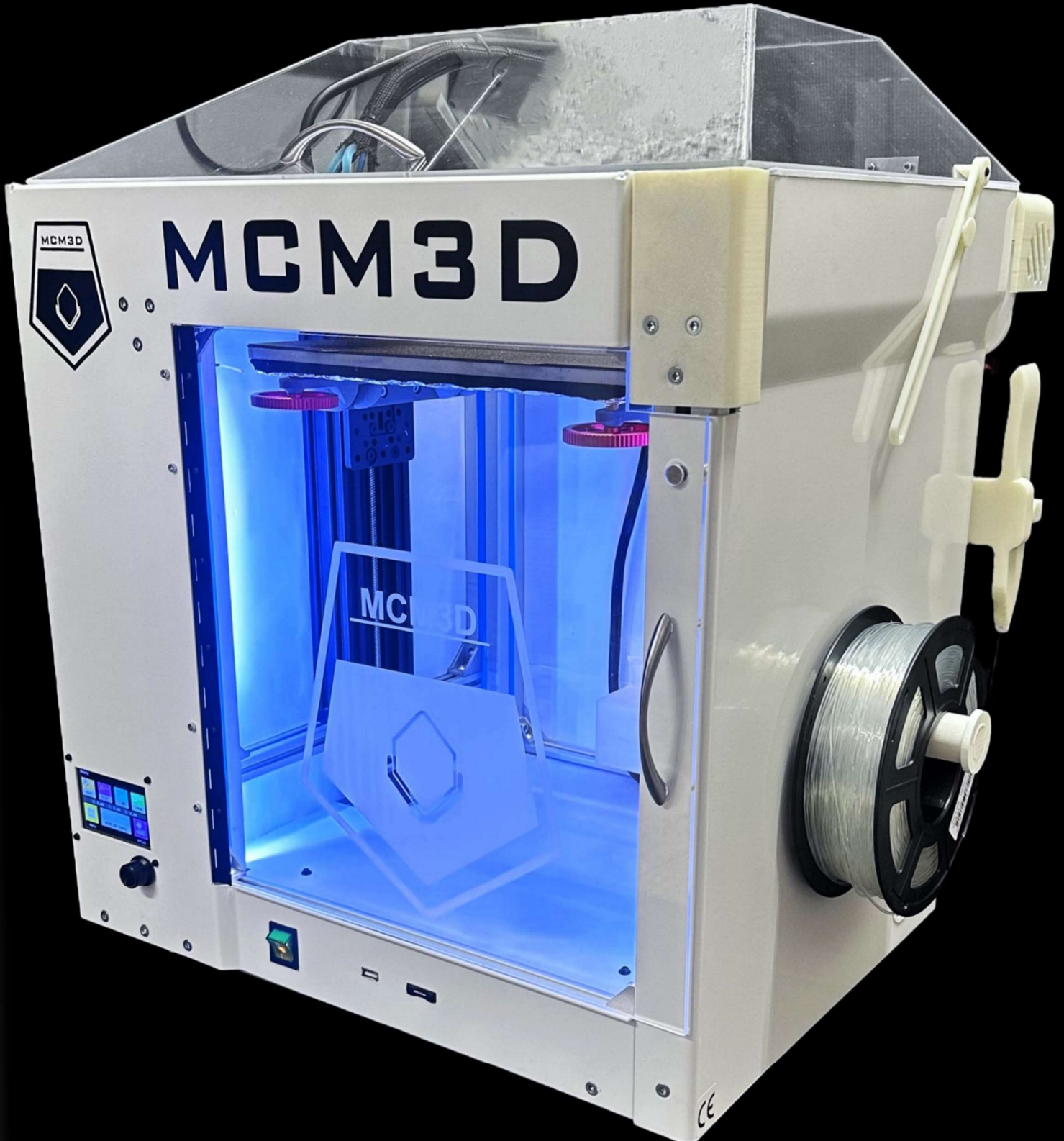
MCM0.05

Contents

Who is MCM3D?

MCM3D is a start-up company that develops and produces 3D printers for private and commercial use. Our 3D printers are designed for high demands on precision and surface quality and are constantly being further developed. We are excited to introduce you to our flagship product, the MCM0.05 PRO, and provide insights into the advanced solutions and software offerings that make MCM3D a game-changer in the world of 3D printing. We pride ourselves on developing advanced and innovative technologies that enable our customers to turn their visions and concepts into reality.

MCM3D

Our current products

- > **MCM0.05 PRO**
- > **MCM0.05 Standard**
- > **MCM0.05 Configurable**

MCM0.05 PRO

The MCM0.05 PRO: Precision Redefined for High-Performance Materials

At the core of our product lineup is the MCM0.05 PRO 3D printer, a device engineered to meet the most demanding precision and surface quality requirements. What truly sets it apart is its ability to print high-performance materials with unparalleled precision. Employing Fused Deposition Modelling (FDM) technology, this remarkable printer constructs components layer by layer with a dimensional accuracy that reaches an impressive 0.05mm.

> **Advanced Features for Seamless Operation**
> The MCM0.05 PRO comes equipped with an array of advanced features, ensuring a seamless and efficient printing process:

• **Dual Nozzles:** With liquid cooling and the capability to reach temperatures of up to 500°C, these nozzles enable compatibility with a wide range of high-performance materials, including PEEK, carbon fiber composites, and more.

• **Filament Drying Station:** Our enclosed drying station ensures that high-performance filament remains in optimal condition, enhancing the reliability of your prints.

• **Multiple Connectivity Options:** The MCM0.05 PRO offers a range of connectivity options, including SD, USB, WIFI and Ethernet making it easy to upload files and control the printer remotely.

• **Webcam Monitoring:** The built-in webcam allows you to monitor the printing process from anywhere, offering real-time oversight of your projects.

Reliability and Cost-Efficiency

Our commitment to quality extends beyond our products to our customer support. The MCM0.05 PRO is engineered to thrive in even the most demanding environments, making it the ideal choice for industries requiring high-performance materials. Our dedicated customer support team is always available to assist you. Furthermore, our competitive pricing and low cost of ownership make the MCM0.05 PRO an appealing investment for businesses of all sizes.

MCM0.05 in Detail

The MCM3D 3D printer is a cutting-edge device designed for commercial and corporate environments that demand high precision and surface finish requirements. Utilizing FDM technology, the printer creates components layer by layer from the bottom up, using thermoplastic fibers that are heated and extruded. With a filament diameter of 1.75mm, the MCM3D 3D printer is capable of producing highly accurate and detailed components with dimensional accuracy of up to 0.05mm.

One of the standouts features of the MCM3D 3D printer is its fully enclosed and heated chamber. This allows the printer to work with a wide range of high-performance materials, making it ideal for even the most demanding projects. The heated print bed, which can be heated up to 150°C, is equipped with a magnetic PEI-Steel Sheet that makes it easy and safe to remove printed objects. Additionally, the printer has two nozzles that are liquid cooled and can be heated up to 500°C.

To ensure maximum control over the filament flow, the MCM3D 3D printer is equipped with two filament sensors. This helps to guarantee extreme precision and dimensional accuracy, ensuring that your projects are completed to the highest standards. The printer also features a filament drying station on the left side, where you can store used filament and keep it dry for safe and reliable printing.

The MCM3D 3D printer is designed to make your life easier, with a range of advanced features that ensure smooth and efficient operation. In the event of a power failure, the printer has a power-loss recovery system that ensures that your projects are completed successfully, every time. The printer also has different connection methods, including a SD port, a USB port, and a WIFI connection, which makes it easy to upload files and control the printer remotely.

Further, the MCM3D 3D printer is equipped with a webcam, allowing you to monitor the printing process from anywhere. This level of control and oversight makes it easier to ensure that your projects are completed to the highest standards, every time. In addition to its advanced features, the MCM3D 3D printer is also incredibly user-friendly and easy to operate. With a simple and intuitive interface, even those with little experience with 3D printing can start creating high-quality components right away. Whether you're working on a complex project or simply want to create something fun and creative, the MCM3D 3D printer has you covered.

Another important aspect of the MCM3D 3D printer is its reliability. The printer is designed to work in even the harshest environments, and it is built to last. The premium components used in the construction of the printer ensure that it can withstand even the most demanding projects, and the manufacturer provides top-notch customer support, so you can get the help you need if anything goes wrong.

Finally, the MCM3D 3D printer is also incredibly cost-effective. With a competitive price point and a low cost of ownership, it is an excellent investment for businesses looking to take advantage of the many benefits of 3D printing. Whether you're a small startup or a large corporation, the MCM3D 3D printer has everything you need to succeed.

In conclusion, the MCM3D 3D printer is the ideal tool for businesses looking to bring their ideas to life. With its combination of high performance, precision, versatility, reliability, and affordability, it is the perfect investment for anyone looking to take their projects to the next level. So why wait? Invest in a MCM3D 3D printer today, and start bringing your ideas to life!

Our strengths at a glance

> Tolerances of a few hundredths of a millimetre using the FDM printing process
> High printing speed
> Printability of high performance materials & fibre composites, e.g. PEEK, carbon

Precision:
MCM3D printers are known for their extreme precision and dimensional accuracy of up to 0.05mm.

Speed:
Increased speeds can be easily handled by our printers.

High Temperatures:
Both nozzles can be heated up to 500°C (**PRO 500°C: Water-cooled Extreme Hotend**), the print bed up to 150°C and the enclosed chamber is heated too.

Noise:
Silent drivers keep the motors running smoothly and quietly, while silent fans cool the system.

Closed Chamber:
The chamber is closed and can be heated so that materials such as ABS, PC, PA, etc. can also be printed.
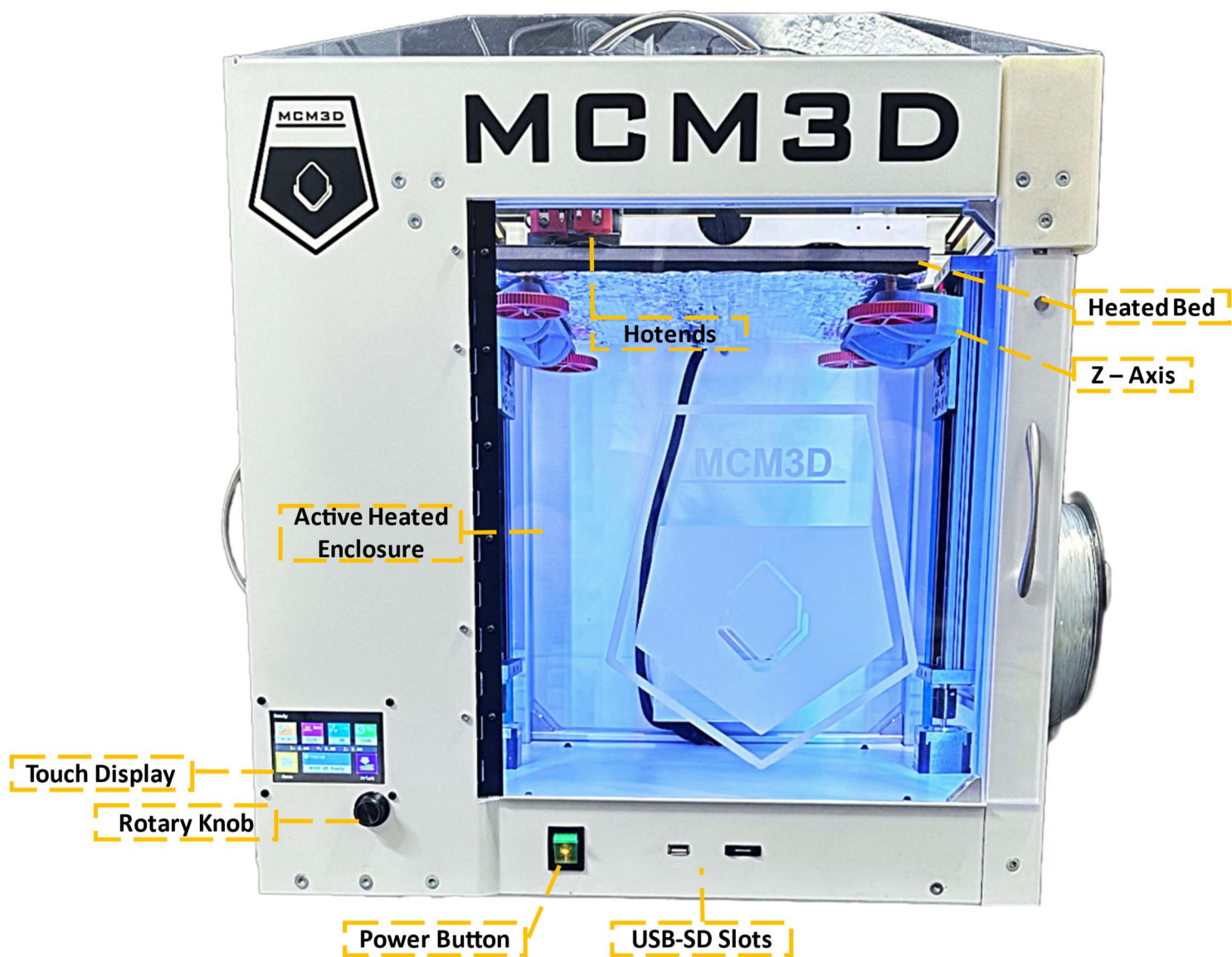
Closed Filament drying station:
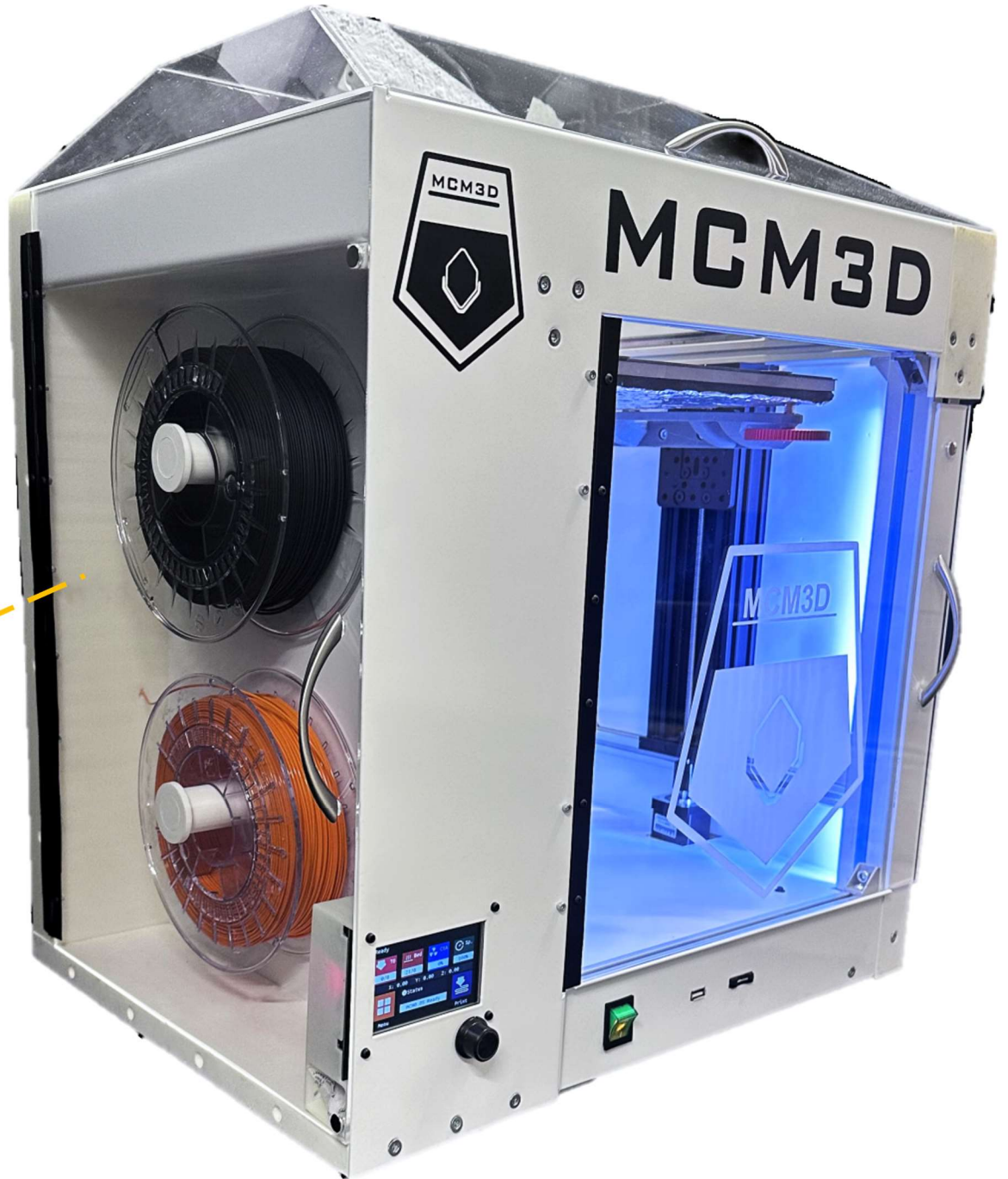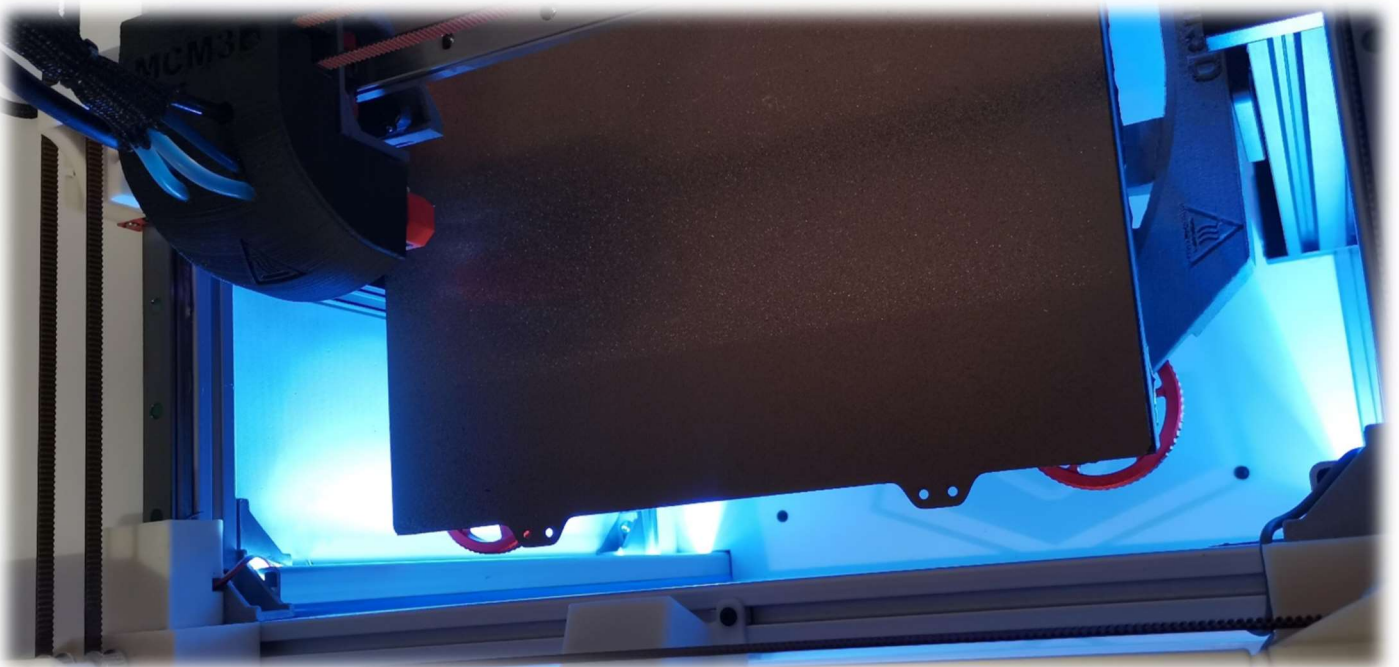The completely enclosed drying station ensures that the filament used remains dry.

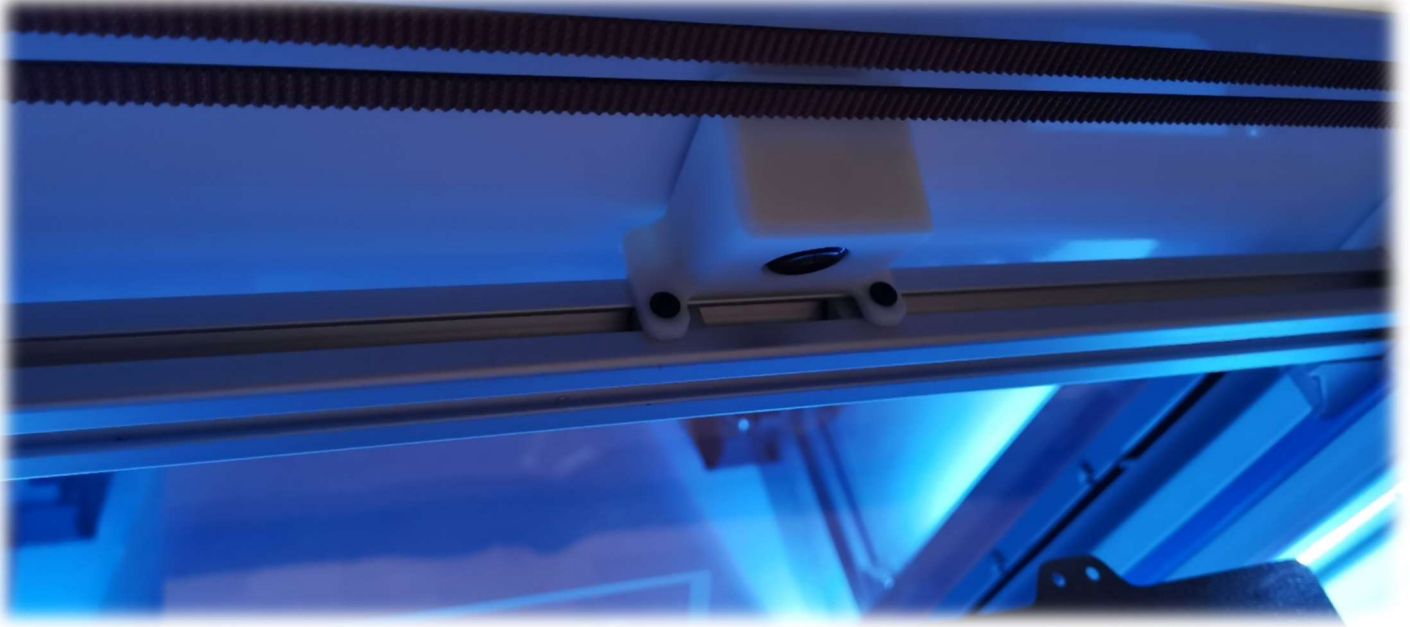**Dual-Hotend:**
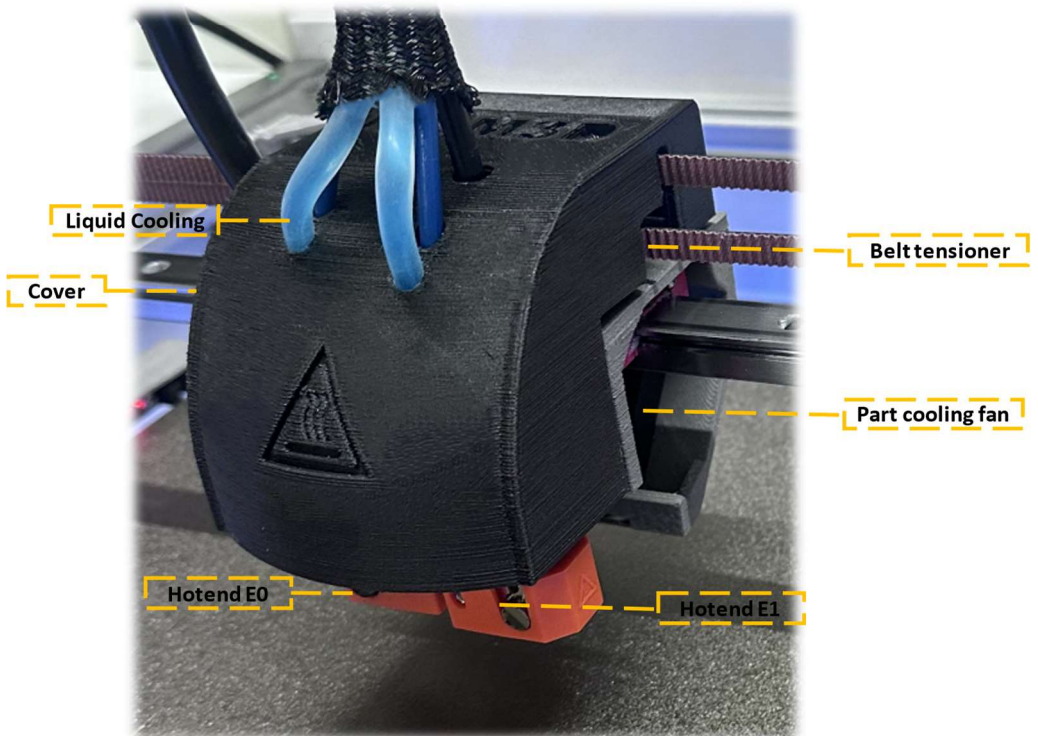Two nozzles allow models to be printed in a variety of plastics, including composites, without hesitation.
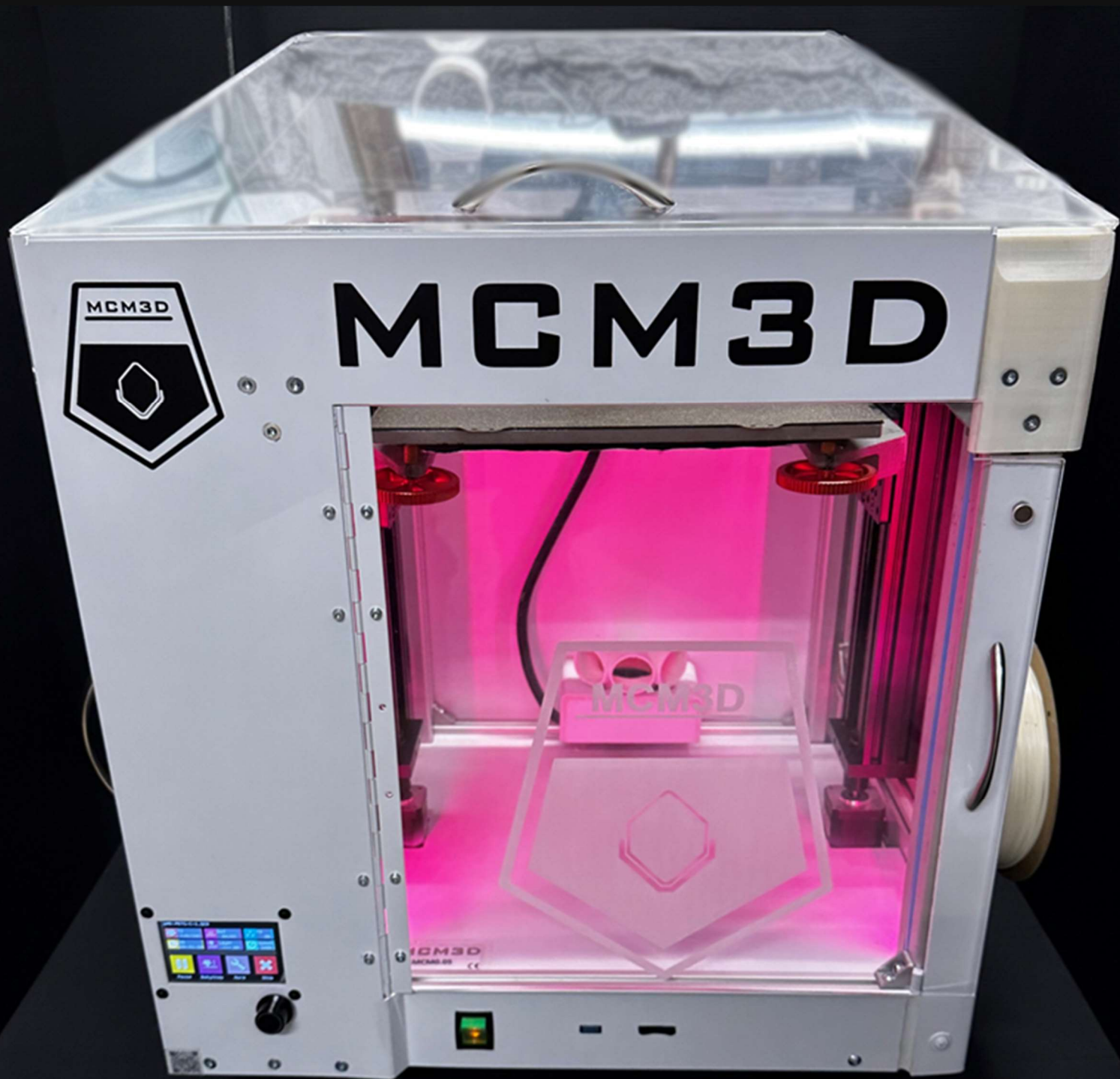
MCM3D

Hotends

Heated Bed

Z – Axis

Active Heated Enclosure

Touch Display

Rotary Knob

Power Button

USB-SD Slots

Filament
drying station

Liquid Cooling

Cover

Belt tensioner

Part cooling fan

Hotend E0

Hotend E1

Product Specifications	Technology	FDM/FFF
	Printhead	Dual extrusion for high performance filaments
	Print volume	X: 270 Y: 255 Z: 210 mm
	Filament-Diameter	1.75mm
	Layer hight	0.04 - 0.6mm
	XYZ-layer resolution	0.05mm
	Print speed	up to 160mm/sec.
	Print surface	Heated Printbed
	Temperatures Printbed	up to 150°C
	Printbed levelling	Manual or active levelling
	Supported Materials	PLA, ABS, PETG, TPU, ASA, PC, PVA, PET, Carbon, PA, Nylon, Wood, Hips, PEEK, PP, ULTEM, PVC, PVB, Glow in the dark, ...
	Feeder-type	Bowden Dual Gear Extruder
	Nozzle diameter	0.4mm (replaceable 0.1 - 0.8mm)
	Temperature Nozzle (H1 - Extreme)	up to 500°C
	Temperature Nozzle (H2 - Extreme)	up to 500°C
	Heating time nozzle	1 - 2 min
	Heating time bed (20-80°C)	< 4min
	Operating noise	<60dB
	Power adapter	1000W
	Filament Runout	Active runout sensor
	Connectivity	WIFI, USB port, SD port
	Display	TFT Touch Display
	Supported languages	German, English, Italian
Working Current (Output)	DC Voltage	24V
	Rated Current	14.6A
	Rated Power	350.4W
Input	Voltage Range	90 ~ 264VAC 127 ~ 370VDC
	Frequency Range	47 ~ 63Hz
	AC Current	4A/115VAC 2A/230VAC
	Leakage Current	<0.75mA / 240VAC
	Power consumption	max. 1000W
Protection	Overload	110~140% rated output power
		Protection type: Hiccup mode, recovers automatically after fault condition is removed
	Over Voltage	26.4 ~ 31.2V
		Protection type: Shut down O/P voltage, re-power on to recover
	Over Temperature	Protection type: Shut down O/P voltage, recovers automatically after temperature goes down
Environment	Working Temp.	0-32°C
	Working Humidity	10-80% RH non-condensing
Safety & EMC	Safety Standards	EN60950-1: 2005 (second edition) + Am1: 2009 + Am2: 2013
	EMC-Emission	Compliance to EN55032: 2015 + A11:2020, Class A
	EMC Immunity	Compliance to EN55035: 2017 + A11: 2020, Test Standards: EN61000-4-2,3,4,5,6,8,11, EN61000-6-2, Pass
Others	Dimension (Product)	570 x 660 x 660 mm (LxWxH)
	Weight	30kg
	Warranty	24 Month

One of the key components of the 3D printing process is the slicer software. This software is used to convert a 3D model into a set of instructions that the printer can understand, telling it where to lay down each layer of material. With so many slicer software options available, it can be difficult to know which one to choose for your MCM3D 3D printer.

Fortunately, the MCM3D 3D printer is compatible with a wide range of slicer software options. The recommended slicer software options for the MCM3D 3D printer are Ultimaker Cura, PrusaSlicer and SuperSlicer. These software options are both user-friendly and provide a wide range of features and settings for creating high-quality 3D prints.

However, the MCM3D 3D printer can also be used with other popular slicer software options, such as Simplify3D, Slic3r, and many more. These slicer software options can be customized to suit your specific needs and preferences, allowing you to create high-quality 3D prints with ease.

To make the process even easier, MCM3D can provide recommended settings and profiles for different materials that we suggest. These settings and profiles have been tested and optimized to provide the best possible results with the MCM3D 3D printer, taking into account factors such as filament diameter, print speed, layer height, and more.

In conclusion, the MCM3D 3D printer offers compatibility with a wide range of slicer software options, giving you the flexibility to choose the software that best suits your needs. With recommended settings and profiles available for different materials, you can start creating high-quality 3D prints with ease, knowing that your MCM3D 3D printer is compatible with the slicer software of your choice.

Look forward!

AI-Powered Software Solutions

In addition to our cutting-edge hardware, MCM3D offers a suite of AI-powered software solutions. One of our software applications is designed to detect printing failures, providing proactive alerts, and preventing costly errors. Another software tool calculates the costs of a print job in advance, including energy consumption, maintenance, and CO_2 emissions, allowing for informed decision-making.

Revolutionizing Print Farms and Automation

One of the most exciting developments on our horizon is the transformation of print farms and the dawn of complete automation in 3D printing. MCM3D is at the forefront of this revolution, and we're dedicated to making your print farm operations more efficient and cost-effective than ever before.

Material Station for Print Farms

Our upcoming material station is a game-changer for those managing print farms. With the ability to control multiple 3D printers simultaneously, it streamlines operations and minimizes downtime. Imagine the productivity gains when you can oversee and manage several printers from a centralized station. This innovation will significantly enhance the scalability and efficiency of print farms, making large-scale 3D printing projects more manageable and profitable.

Complete Automation: Removing Barriers to Efficiency

But we're not stopping there. MCM3D is actively working on a comprehensive automation solution that takes your 3D printing to the next level. This system is designed to autonomously remove finished printed parts from the build platform and seamlessly initiate the next print job. Here's how it works:

• **Effortless Part Removal:** Our automation system delicately and precisely removes completed prints from the build platform, minimizing the risk of damage or errors.

• **Continuous Printing:** Once a print is removed, the system automatically prepares the printer for the next job, ensuring minimal downtime and maximum efficiency.

• **Monitoring and Optimization:** The system continuously monitors the print farm's performance, identifying opportunities for optimization and adjustment.

This complete automation solution promises to save you time, reduce labour costs, and maximize the utilization of your 3D printers. Whether you're running a busy print farm or seeking to enhance your production capabilities, our automation solution will be a game-changer.

The Future of 3D Printing is Here

In conclusion, MCM3D is not just about hardware and software; we're about transforming the landscape of 3D printing. Our material station, designed for print farms, and our complete automation solution represent the future of 3D printing efficiency and productivity.

By embracing these innovations, you're not just staying ahead of the curve; you're defining it. Join us on this journey to revolutionize print farms and automate 3D printing, unlocking new levels of efficiency, scalability, and profitability.

Thank you for considering MCM3D as your partner in 3D printing innovation. We look forward to empowering your projects with our cutting-edge technology and expertise.
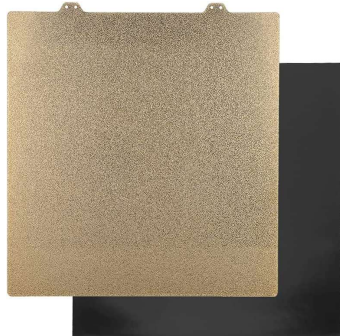
MCM0.05 PRO

- Dual Extrusion
- Filament runout sensor
- Heated Bed up to 150°C
- V6 High-Flow Hotend Extreme up to 500°C Liquid-Cooled

- V6 High-Flow Hotend Extreme up to 500°C Liquid-Cooled

- Stock Nozzle 0.4mm
- Bed levelling
- Closed and Heated Chamber
- Magnetic PEI Steel Sheet

- Touch Display

Details

- > Buildvolume
  - o X 270mm
  - o Y 255mm
  - o Z 210mm
- > Filament diameter   1.75mm
- > Input Voltage Range   90~264VAC   127~370VAC
- > Input AC current   4A/115VAC   2A/230VAC
- > Max. power consumption   1000W

- > Printable Materials
  Nearly every Material on the market
  PLA, ABS, PETG, TPU, ASA, PC, PVA, PET, Carbon, PA, Nylon, Wood, Hips, PEEK, PP, ULTEM, PVC, PVB, Glow in the dark, ...

MCM0.05 Standard

- Dual Extrusion
- Filament runout sensor
- Heated Bed up to 150°C
- MK8 Hotend All Metal up to 350°C

- MK8 Hotend All Metal up to 350°C

- Stock Nozzle 0.4mm
- Manual Bed levelling
- Closed (*not heated*) Chamber
- Magnetic PEI Steel Sheet
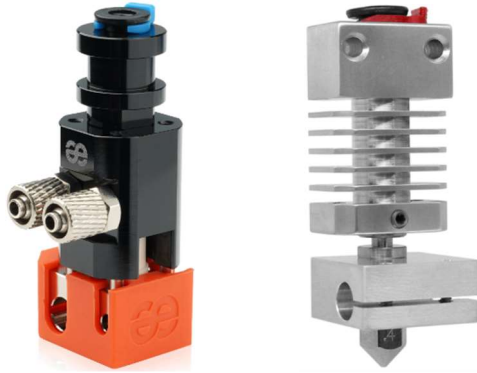

- Touch Display

Details

- > Buildvolume
    - o X 270mm
    - o Y 255mm
    - o Z 210mm
- > Filament diameter   1.75mm
- > Input Voltage Range   90~264VAC   127~370VAC
- > Input AC current   4A/115VAC   2A/230VAC
- > Max. power consumption   600W

- > Printable Materials
    PLA, ABS, PETG, TPU, ASA, PC, PVA, PET, Carbon, Wood, Hips, PP, PVC, PVB, Glow in the dark
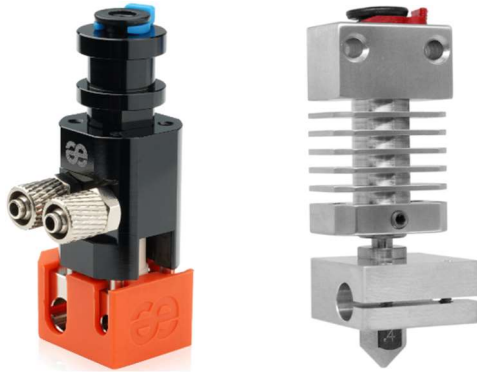
MCM0.05 Configurable

- o Dual Extrusion
- o Filament runout sensor
- o Heated Bed up to 150°C
- o Hotend *Configurable*

- o Hotend *Configurable*

- o Stock Nozzle 0.4mm
- o Bed levelling *Configurable*
- o Closed Chamber *Configurable*
- o Magnetic PEI Steel Sheets

- o Touch Display

Further requests can be accommodated.

MCM0.05 Configurable

Details

- > Buildvolume
    - o X 270mm
    - o Y 255mm
    - o Z 210mm
- > Filament diameter — 1.75mm
- > Input Voltage Range — 90~264VAC — 127~370VAC
- > Input AC current — 4A/115VAC — 2A/230VAC
- > Max. power consumption — 1000W

- > Printable Materials *depending on configuration*
    - *Nearly every Material on the market*
    - PLA, ABS, PETG, TPU, ASA, PC, PVA, PET, Carbon, PA, Nylon, Wood, Hips, PEEK, PP, ULTEM, PVC, PVB, Glow in the dark, …

Contact

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