

Wizard 480+

Industrial CFF/FFF AM System



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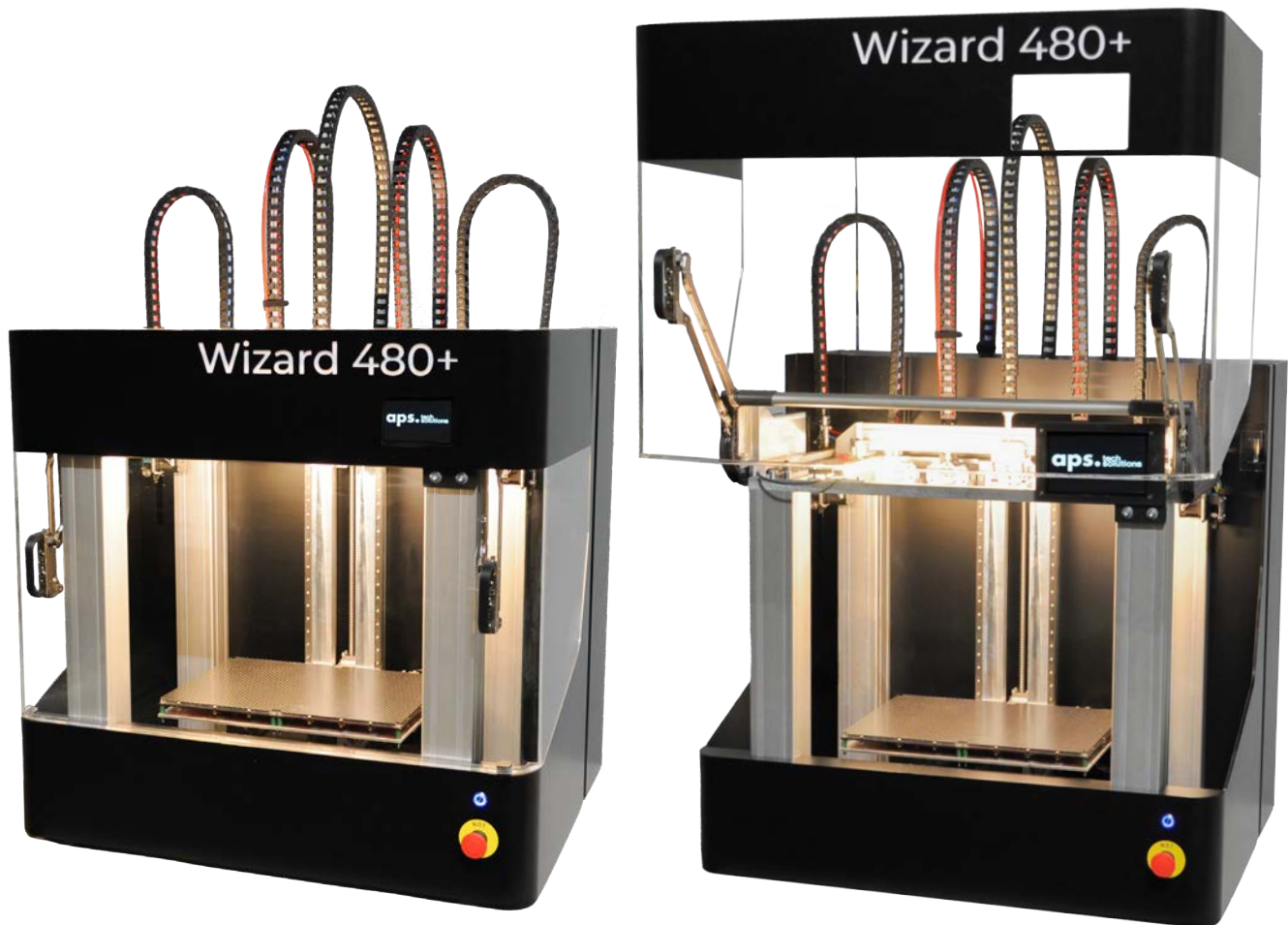
Industrial CFF/FFF AM System

The innovation in industrial 3D printing

The „WIZARD 480+“ combines several innovations into one complete system.

With our own developed and patent pending print head technology and the dynamic tool change system enabling the production with CFF (Continuous Filament Fabrication) and FFF (Fused Filament Fabrication) and their combination for components in the dimensions of 400 x 300 x 400mm.

A dynamic tool change system enables the combined print with up to four materials in one part. The continuous fiber printing with carbon fibers, aramid, glass fiber or copper wire can be usefully supplemented with other materials in the FFF process, a new type of high-strength and very lightweight components can be engineered and produced. The Wizard 480+ CFF/FFF printing system combines a high-precision and very stable portal construction with a new - patent pending print head technology for continuous fiber printing to an industrial 3D high precision printing system.



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1 High Tech Made in Austria

Conceived, engineered and built in Austria with our own precision components and specially tested components to ensure the highest quality.

2 Continuous Carbonfiber

Production of high-strength and very lightweight components using our own high-tech filament made of continuous carbon fibre. Further endless fibres like aramid & glass fibre is also possible.

3 Tool changer

With currently up to 4 slots it is possible to change between the following tools within a few seconds:

- CFF print head
- FFF print head
- Copper wire Print head
- Laser for engraving, milling spindle, ...

4 Highest precision

A high-precision portal construction with powerful drives, combined with our longstanding experience in plant engineering and robotics, result in a highly precise printing system for industrial use.

5 Advanced FFF technology

Up to a temperature of 500°C our print heads can operate - this enables the processing of High performance plastics, metals, ceramics and other materials.

6 Water-cooled

Water-cooled print heads contribute to process safety, Precision and repeatability accuracy.

7 Open Material System

No restrictions on use of materials from third party suppliers. We offer also own high-tech filaments like our endless carbon fiber.

8 Build space

- Components in the dimensions of 400 x 300 x 400 mm
- Heating bed temperature up to 200°C
- Live Video Surveillance

9 Flexible extensions

Individual adaptation to your application purpose and Extensions:

- Heatable building space
- air filter, etc.

10 Individual solutions for your success

Specific requirements need customized solutions to perform any desired function to be able to do that. The development of Individual solutions is our strength.

The Design

Size of build volume	400 x 300 x 400 mm (2 fixed print heads)
	400 x 230 x 370 mm (print head exchange system)
Repeatability	up to 0,02 mm
Min. layer thickness	0,01 mm
Heat bed temperature	up to 200 °C
Extruder temperature	up to 500 °C
Optional upgrades:	<ul style="list-style-type: none">• heatable building space and adjustable up to 100 °C (building space is thermally separated from drive and guide units)• Air filter• Video Livestream• Foundation

Tool options

Automatic tool/ print head change system	4 slots (on request up to 7 slots)
Duration of tool change (filament change)	~5 seconds at a tool distance of 450mm
Printheads	<ul style="list-style-type: none">• FFF printhead (single or double nozzle)
(All printheads are water-cooled)	<ul style="list-style-type: none">• CFF Continuous fiber printhead with integrated inline cutting mechanism• Copper wire printhead with integrated inline cutting mechanism
Special tools	milling spindle, laser for engraving, ..

Hardware

Display / Input	7" Touchdisplay
Interface	Ethernet, USB
Width	900 mm
Depth	720 mm
Height closed	870mm
Height open	Approx. 1400 mm
Weight	Approx. 120 kg

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Software

Recommended Slicer	<u>Simplify3D (license included)</u>
Continuous filaments	<u>PlugIn für Simplify3D (included when buying a continuous fiber printhead)</u>

Materials

Continuous Filament Fabrication CFF

Continuous fiber	<u>Carbon fiber, glass fiber, aramid</u>
Special materials	<u>Copper wire</u>

Fused Filament Fabrication FFF

Plastics	<u>ABS, CPE, PET, PC, PLA, PVA, TPU, ...</u>
High-performance plastics	<u>PEI, PEEK, PEKK, Carbon Fiber PA, ...</u>

FFF for sinter applications

High-alloy chrome steels	<u>316L 1.4404</u> <u>17-4PH 1.4542</u>
Maraging steel	<u>1.2709</u>
Superalloys	<u>IN 718 2.4668</u> <u>IN 625 2.4856</u>
Light metals	<u>Ti Titan (unalloyed)</u> <u>Ti6Al4V 3.7165</u>
Hard metals	<u>WCo in different mixing ratios on request</u>
Ceramics	<u>ZrO2</u> <u>AlO3</u>

No restriction on third-party materials - parameterization by user.

We also offer our own developed filaments. Additional materials are available on request.

Power supply

Input	<u>230V (50Hz) 2500W</u>
Electrical Safety	<u>Depending on the country</u>

Leadtimes

6-10 weeks | by arrangement



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