

AL3D-METAL 200

ADDITIVE MANUFACTURING
WITHOUT DIRECT POWDER CONTACT

The closed powder circuit ensures more safety at work because the operator doesn't come into contact with the powder during the entire printing process. Specially developed for the precision mechanics, medical technology, dental and jewellery industries as well as research and development laboratories, our 3D printer offers optimum detail accuracy, precision and maximum safety in handling the laser and the metal powder.



SAFETY IN 3D-PRINTING

POWDER HANDLING RETHOUGHT

AL3D-CARTRIDGE

Intelligent cartridge system for safe and economical powder handling

- Material supply made easy
- Fast process preparation
- Plug & Play - transfer of material information to the printer
- Unmatched material utilization
- Ideal for high-priced materials and precious metals



AL3D-CABIN

AL3D-CABIN

The unpacking station

- High operational safety for the user by a closed process chamber
- Clean separation of the sintered component from the residual powder
- Collection of residual material for possible reuse
- Ergonomic workplace



AL3D-METAL 200

EASY TO USE

USER-FRIENDLY AND PROCESS-SAFE



Select a cartridge with the desired material - insert into the printer - select print file - start the printing process

AL3D-METAL 200-50 / AL3D-METAL 200-100

Ideal for the production of finest and complex geometries

- Very fine laser spot for finest and complex geometries
- Powerful laser
- High powder yield
- Exact print process with the intelligent software AL3D-OS
- Footprint of just 600 × 600 mm
- Closed gas-circuit for a reduced gas consumption
- Little energy consumption





AL3D-METAL 200-50 AL3D-METAL 200-100

LASER & OPTIC

Laser type/wave length	Fiber laser 200 W CW, 1,070 nm
Welding spot Ø	50 µm
Scan speed	max. 5 m/s
Process parameters	Open access to machine and process parameters

SOFTWARE

Operation	15.6" Touchscreen, keyboard and mouse possible
Connectivity	Ethernet; 2 × USB
Software	AL3D-OS, offline version for project creation, TeamViewer remote access
Externe software	Autodesk Netfabb connection
File format CAD import	STL
Print preparation	Easy support; integrated slicer in software

MATERIALS

Alloys	Non-reactive metal powder, grain size fraction between 10-45 µm	
	Iron alloys	
	Nickel-based alloys	
	Cobalt-chrome alloys	
	Precious metals	
Achievable component density	> 99 %	
Construction volume	Ø 50 mm; z 50 mm	Ø 100 mm; z 60 mm
Layer thickness	10-50 µm	

EXTERNAL CONNECTIONS

Electrical connection	230 V, 50 Hz / 60 Hz, max. 16 A
Permissible humidity	max. 70 %
Permissible ambient temperature	15-30° C
Protective gas/argon (necessary connection)	Pressure reducer with flowmeter 0-20 L/min
Gas consumption during operation	< 3 L/min

CABIN

Connection for ext. vacuum cleaner	NW32 connection
------------------------------------	-----------------

EXTERNAL DIMENSIONS

Weight	180 kg
W × D × H	600 × 617 × 1,770 mm

EXTERNAL DIMENSIONS CABIN

Weight	100 kg
W × D × H	600 × 617 × 1,770 mm

www.alphalaser.de