

# 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-CARTRIDGE



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

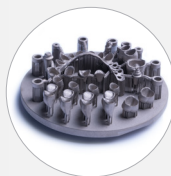
USER-FRIENDLY AND PROCESS-SAFE



*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



**LASER & OPTIC**

Laser type/wave length	Fiber laser 200 W CW, 1070 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 x USB
Software	AL3D-OS, offline version for project creation, TeamViewer remote access

Externe software	Autodesk Netfabb Materialise Magics CIM Systems Pyramis Open software interface for external post processing
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File format CAD import	STL
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Print preparation	Easy support; integrated slicer in software
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<b>MATERIALS</b>	Metal powder, grain size fraction between 10-45 µm
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Alloys	Iron alloys
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Nickel-based alloys

Cobalt-chrome alloys

Precious metals

Reactive metals/more on demand

Achievable component density	> 99 %
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Construction volume	Ø 50 mm; Z 50 mm	Ø 100 mm; Z 85 mm
	Ø 50 mm; Z 85 mm	Ø 100 mm; Z 120 mm

Layer thickness	10-50 µm
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**EXTERNAL CONNECTIONS**

Electrical connection	230 V, 50 Hz / 60 Hz, max. 16 A
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Permissible humidity	max. 70 %
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Permissible ambient temperature	15-30° C
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Protective gas/argon (necessary connection)	4.5-6 bar input pressure, Ø 6 mm hose fitting
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Gas consumption during operation	<5 L/min Purge function 20 L/min
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**CABIN**

Connection for ext. vacuum cleaner	NW32 connection
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**EXTERNAL DIMENSIONS**

Weight	180 kg
W x D x H	600 x 617 x 1770 mm

**EXTERNAL DIMENSIONS CABIN**

Weight	100 kg
W x D x H	600 x 617 x 1770 mm