cadmicro

ONE CLICK METAL
made with mind

ONE CLICK METAL
BOLDSERIES

The **BOLD**SERIES, developed by One Click Metal, represents a holistic and user-friendly metal 3D printing system. At One Click Metal, the overarching goal is to simplify the complexity of metal additive manufacturing technology, making it accessible and understandable for everyone. With this goal in mind, the **BOLD**SERIES focuses on affordability and ease of use, while ensuring high-quality parts. Key features such as the cartridge system and the intuitive step-by-step HMI support this philosophy by enhancing user experience and simplifying operations.

The **BOLD**SERIES, comprises several components:

- The **M**PRINT, a metal 3D printer that forms the core of the system.
- The **M**PUREpro, a 2-in-1 unpacking and sieving station that streamlines post-processing steps.
- The **M**ONE, a digital platform for location-independent monitoring and control of the **M**PRINT.
- The **M**PURE, a sieving station, available as an alternative option if sieving is regional within the **BOLD**SERIES.
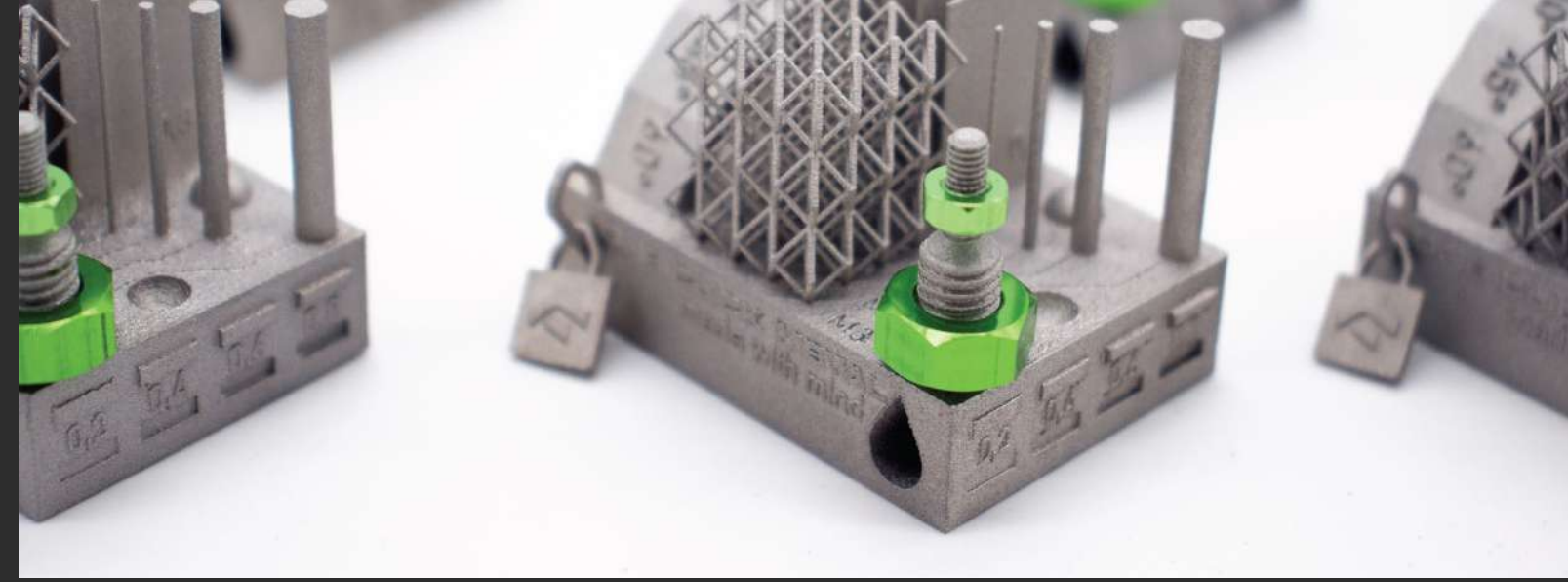
Sieving Station   Metal 3D Printer   Unpacking and Sieving Station

MPRINT

The **M**PRINT is the printing unit of the **BOLD**SERIES. Powered by a 200W fiber laser, it offers high productivity and precision across a wide range of applications.

The **M**PRINT features a cartridge system that ensures the safe and clean handling of powder, minimizing direct contact for the user. With a generous build volume of 150mm x 150mm x 150mm, it provides ample space for creating components with flexible designs. The user-friendly interface of the **M**PRINT guides users through each step of the printing process, facilitating the creation of high quality printed components with ease.
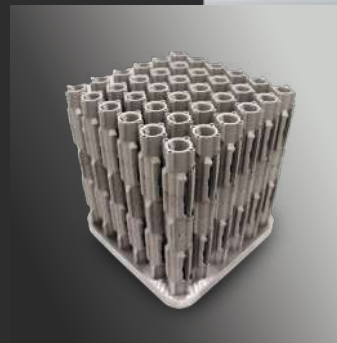
approx. 43inch

110cm
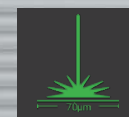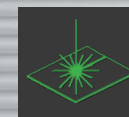
MPRINT

HIGHLIGHTS

- 200W fiber laser allows **high productivity**
- 70μm high precision focus diameter and a Galvo scanner open up a **wide field of applications**
- Interchangeable build modules allow **flexibility for applications** and material with one system
- The **M**ONE provides online remote monitoring and maintenance capabilities, **enhancing convenience and efficiency**
- Intuitive HMI simplifies machine operation, ensuring **user-friendly control**
- Patented cartridge system guarantees **secure and simplified powder handling**

POWDER SUPPLY
for five supply catridges

ERGONOMIC HANDLING
simple touchscreen operation

200 WATT
fiber laser

INTUITIVE
software

REMOVABLE BUILD MODULE
print platform

HIGH-PERFORMANCE
galvo scanner

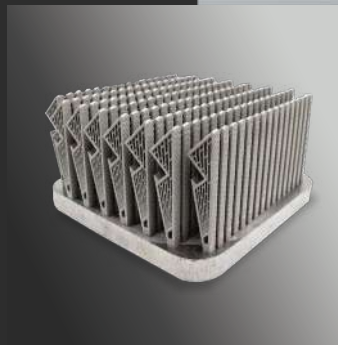**INTEGRATED CAMERA**
process monitor

MPUREpro

The **M**PUREpro serves as the unpacking and sieving unit within the **BOLD**SERIES. Once the printing process is complete, the component in the build module is transferred into the dedicated unpacking chamber of the **M**PUREpro, guaranteeing a secure depowdering process. The excess powder is efficiently collected within an overflow cartridge, ready for further processing in the integrated sieving station. Through the automated ultrasonic sieve, the powder is carefully prepared for future printing jobs.

By utilizing our cartridge system, direct user contact with the powder is minimized, prioritizing user safety and risk reduction. Our innovative approach does not only protect the end user but also guarantes that the powder is securely sealed within the cartridges, ensuring its optimal condition.

MPUREpro

HIGHLIGHTS

- Generously dimensioned glove box in the unpacking chamber allows **safe bulk powder removal**
- Integrated connection for external vacuum system reduces **initial investment cost**
- Patented supply and overflow cartridges ensures **safe and simplified powder handling**
- Fully automatic sieving process, simplifying the workflow and **reducing manual intervention**

MINIMIZED DIRECT POWDER CONTACT
due to handling in catridges

VACUUM CLEANER
connection

INNOVATIVE
cartridge system

SUSTAINABILITY THROUGH
reusable powder

COST SAVINGS DUE TO
material saving

**ULTRASONIC SIEVE STATION FOR**
powder reusal

MPURE

The **M**PURE is focusing only on the sieving of processed powder. It utilizes an ultra-sonic sieve to carefully prepare the powder collected from the overflow cartridge. This sieving process helps remove any impurities, ensuring that the powder is clean and ready for reuse in the next printing job. The sieved powder is automatically transferred into a fresh supply cartridge, making it effortless convenient for future printing operations.
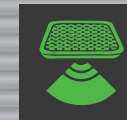
MPURE

HIGHLIGHTS

- Ultra-sonic sieve ensuring thorough and **effective sieving of the powder**
- Patented supply and overflow cartridges ensures **safe and simplified powder handling**
- Fully automatic sieving process, simplifying the workflow and **reducing manual intervention**
- Separate oversize container to collect any oversized powder particles, **maintaining the integrity of the sieved powder**

SUSTAINABILITY THROUGH
reusable powder

ULTRASONIC SIEVE STATION
for powder reusal

COST SAVINGS DUE
to material saving

INNOVATIVE
cartridge system

STARTER**KIT**

PERFECTLY EQUIPPED - GET STARTED RIGHT AWAY!

Professional start! Thanks to the comprehensive starter kit, your 3D- print production is ready for immediate use in just a few steps. It contains all the necessary components and offers the option of using both machines separately.

This includes an additional add-on module and two additional empty supply cartridges which enable the series to operate non-stop! While the first job in the **M**PUREpro is unpacked and cleaned, a new job with a second build module can be started directly in the **M**PRINT.

- Tried and tested parameters designed for your manufacturing
- The **M**ONE Abonnement (1 year)

- Personal protective equipment as well as required tools
- Set of 5 supply interfaces
- Set of 2 overflow interfaces
- Set of 2 overflow containers
- 10-pack of coater medium
- 3-pack substrate plate
- Bayonet lock
- Electric lifting device incl. construction module fork

POWDER

PERFECTLY MATCHED TO THE **BOLD**SERIES

In addition to software and hardware, the powder in particular is of great importance for production success. The **M**SUPPLY powder is a certified and quality-tested powder for the **M**PRINT and its parameters to set up dental applications.

Supplied ready to start in the proven form – the powder container also serves as a supply container in the machine – the material can be fed directly into the process, without cumbersome filling of cylinders or building chambers of the machines. The powder has excellent process and flow properties.

Highly complex frameworks can be built with the **M**SUPPLY. Thus, the **M**SUPPLY forms the perfect basis for a variety of veneering ceramics and composite build-ups, such as model casting.

You can find more materials in our store
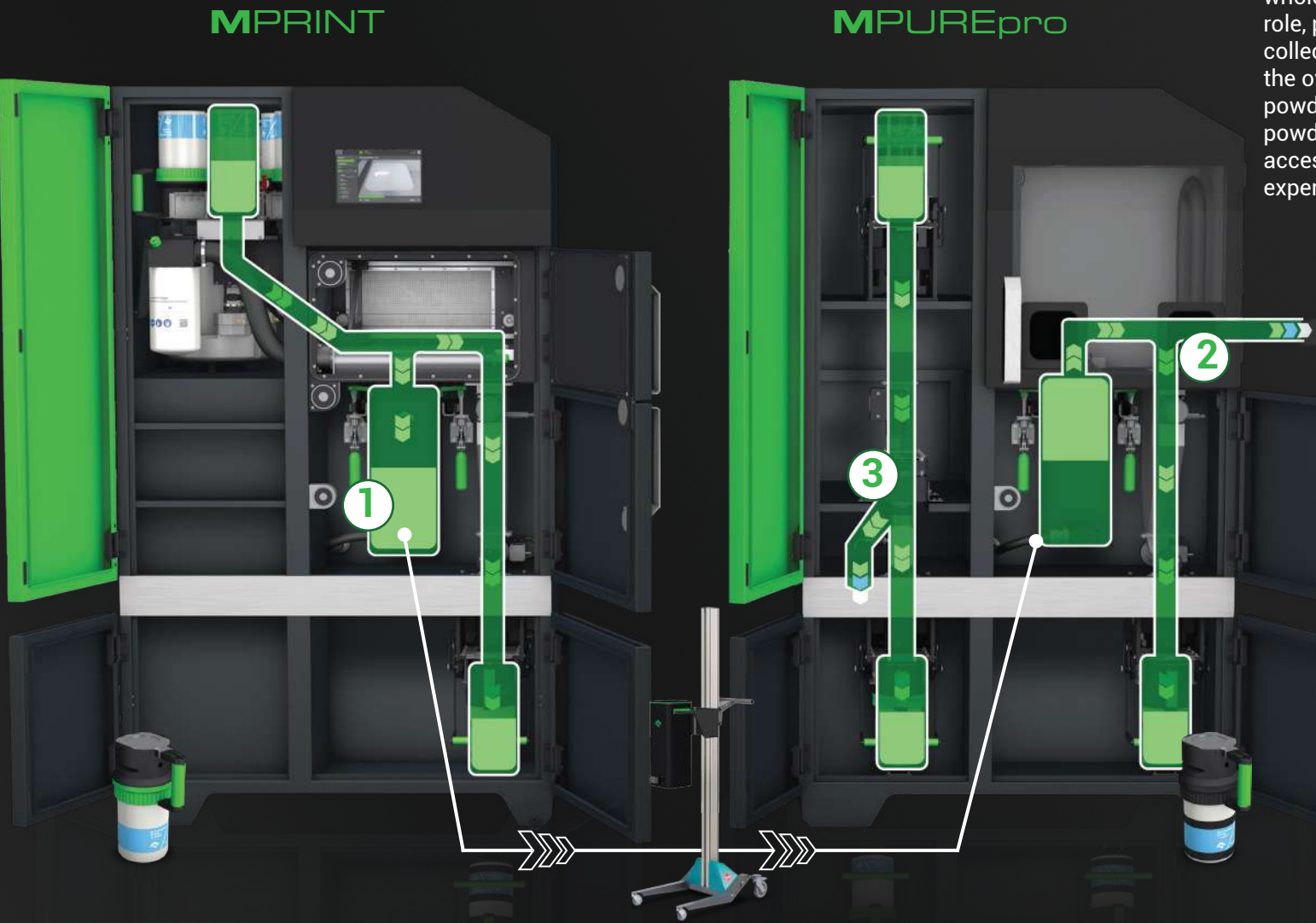
POWDER MANAGEMENT

① Printing Process

As the printing job progresses, any excess powder is carefully collected in the designated overflow cartridge. Once the printing is complete, the build module has to be transported to the unpacking chamber of the **M**PUREpro for further processing.

② Unpacking Process

During the depowdering process of the component, the processed powder is effectively collected in a separate overflow cartridge.

③ Sieving Process

The overflow cartridges are inserted into the sieving station, where the powder is sieved. The sieved powder is then carefully collected in fresh supply cartridges.

MPRINT

MPUREpro

SUSTAINABLE PRODUCTION IN JUST A FEW STEPS

The **BOLD**SERIES features a sophisticated cartridge system that enables efficient powder management throughout the whole process chain. The supply cartridges serve a dual role, providing fresh powder for the print job while also collecting sieved powder in the sieving station. Meanwhile, the overflow cartridges efficiently collect the processed powder. The cartridge system significantly reduces direct powder contact, making the **BOLD**SERIES user-friendly and accessible to individuals, regardless of their prior experience.

VIDEO

MACHINE OPERATION

JUST A FEW STEPS TOWARDS A SUCCESSFUL START

The control software enables absolutely intuitive operation of the MPRINT. The handling is self-explanatory and allows a quick start in dealing with the machine. Take advantage of the saved time for your workflow and start with just a few clicks.

STATUS:
PRINTING

STATUS: PRINTING - 50%

SIX SIMPLE STEPS!

STATUS:
PREPARED

OVERVIEW

JOB MANAGER

BUILD MODULE

POWER SUPPLY

OVERFLOW POWDER

MAINTENANCE

FIRST LAYER

LATER   START

1. **BUILD JOB**
   select print file

2. **BUILD MODULE**
   prepare build module

3. **POWDER SUPPLY**
   check powder status

4. **OVERFLOW POWDER**
   check overflow status

5. **MAINTENANCE**
   do necessary maintenance

6. **FIRST LAYER**
   apply first layer

FEATURES

- Guided functions for operating and maintaining the BOLDSERIES
- Forecast for powder supply
- Intuitive design
- Process camera for process overview

DATA PREPARATION

AUTODESK
FUSION 360

Autodesk Fusion 360 combines CAD, CAM, CAE, and PCB into a single, integrated cloud software platform. It includes all the tools that you need to go from design to manufacturing, seamlessly.

FEATURES

- Cloud based software
- Holistic process chain (Design – Manufacturing – Post-Process)
- Import of CAD-Files (Siemens NX, SolidWorks, Catia, ProE/Creo, IGES, STEP, STL)
- Automated support structure generation
- Collision detection
- Process simulation

AUTODESK
NETFABB

Detect and minimize manufacturing errors by simulating additive manufacturing processes using metal powder bed bonding and laser metal deposition.

FEATURES

- On premise software
- Intuitive and easy usage
- Import of CAD-Files (Siemens NX, SolidWorks, Catia, ProE/Creo, IGES, STEP, STL)
- Easy and automated repair of defect files
- Automated support structure generation
- Nesting options
- Part labeling
- Collision detection
- Process simulation

ONE CLICK METAL
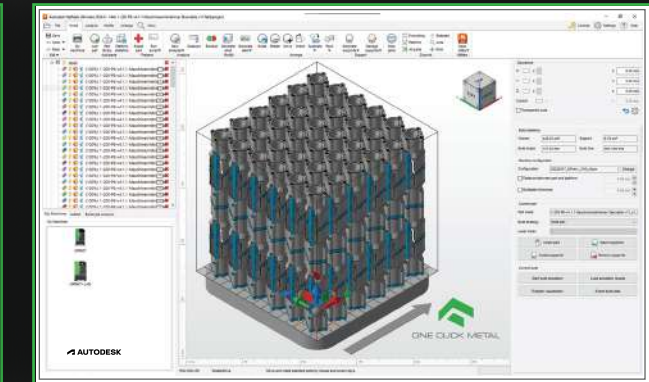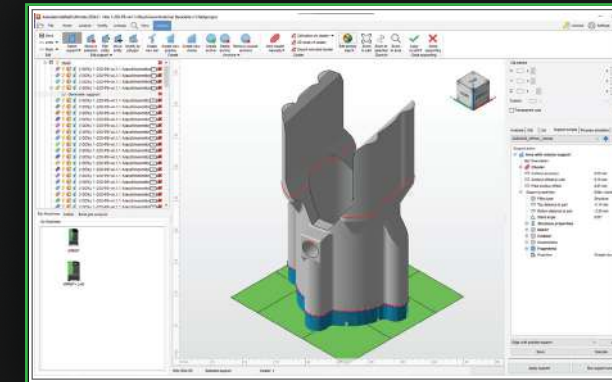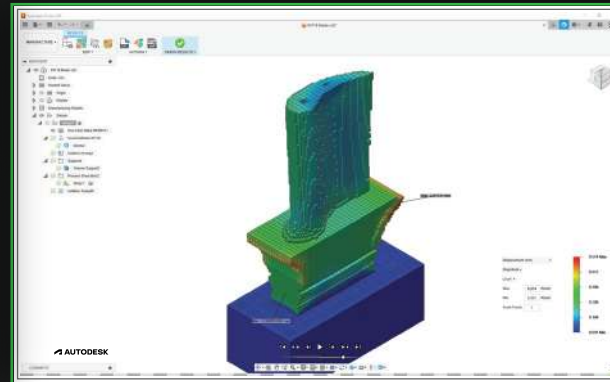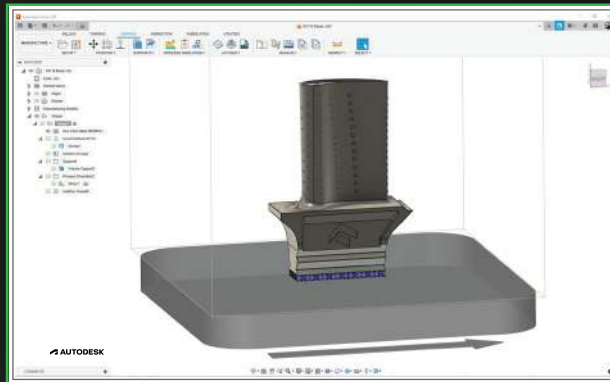
BOLDSERIES **MODULES FUNCTIONS**

FLEXIBILITY TAILORED TO YOUR GOALS
PRODUCTION - RESEARCH - EDUCATION
ALTOGETHER

- Setup and powder removal can be performed parallel to production for high productivity demands

Build Plate (WxH): 150mm x 150mm
Build Height: 150mm

STANDARD
MODULE

- Easy use of different materials
- Usage of small powder amounts for material research and precious metals

Build Plate (LxB): 78mm x 53mm
Build Height: 90mm at 1,5 times dosing
Heating Temperature (maximum): 200°C
Removable Overflow Funnel
Integrated Powder Supply

LAB
MODULE

- Improving part quality for big and voluminous components

Build Plate (WxH): 150mm x 150mm
Build Height: 150mm
Heating Temperature (maximum): 200°C
Preheating Time: < 60min

HEATING
MODULE

CONSUMABLES & ACCESSORIES
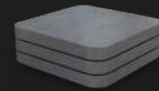

Standard Module
150 x 150 x 150 mm

Heating Module
150 x 150 x 150 mm

Lab Module
Mounting surface: 78 x 53 x 90mm

Substrate Plate | 3-pack

- Dimensions: 152 x 15 x 152 mm (W x H x D).
- Provides the perfect base for welding the component
- Avoidance of distortion as well as optimal heat dissipation

Replacement cartridges for supply & overflow

- Ergonomic handling with max. 8 kg filling quantity
- Integrated NFC tag (prohibition of unwanted batch mixing, quality assurance of the powder, fill level query)

Main filter | 6-pack

- Dimensions: 135 x 235 x 135 mm
- Optimal filtering of the welding fumes for reuse of the gas

Electric lift incl. construction module fork

- Uncomplicated transport of the building module with a lifting speed of 100 mm/s (with load) with a load capacity of 80 kg
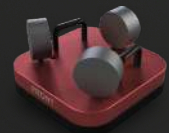
PSA package for one person

- Personal protective equipment: 1 x powder gown | 1 x safety goggles | 5 x disposable respirator mask | 1 x pack of rubber gloves (L)

Levelling aid building panel

- The leveling aid is used to align the building panel

Digital platform for location-independent monitoring and control

- Upload of build jobs and job planning
- Status monitoring of machines, job parameters, print progress and powder supply

MSUPPLY powder package

- Powder packages in different sizes for required machine utilization
- Lower annual machine utilization: 6 Supply containers
- Medium annual machine utilization: 9 Supply containers
- High annual machine utilization: 12 Supply containers

Further accessory equipment

For further accessory equipment please contact your reseller.

THE FINAL PROCESS

CAD + SLICER/ DATA PREPARATION

At the beginning there is your use case, for which you must create a component design in a CAD program. For this, you can use Autodesk Fusion 360, for example.

JOB UPLOAD + DIGITAL PLATFORM

Using the MONE, you can quickly and easily load your component onto the machine. The MONE also allows you to keep track of the printing progress and powder supply of all your machines.

PRINTING PROCESS

After you have prepared the MPRINT for printing (see also the section **machine operation**), you can start the build job.

UPACKING PROCESS

Once the part is printed and the build module is inserted into the MPUREpro with the lifter, you can unpack it **without direct powder contact and sieve processed powder at the same time**
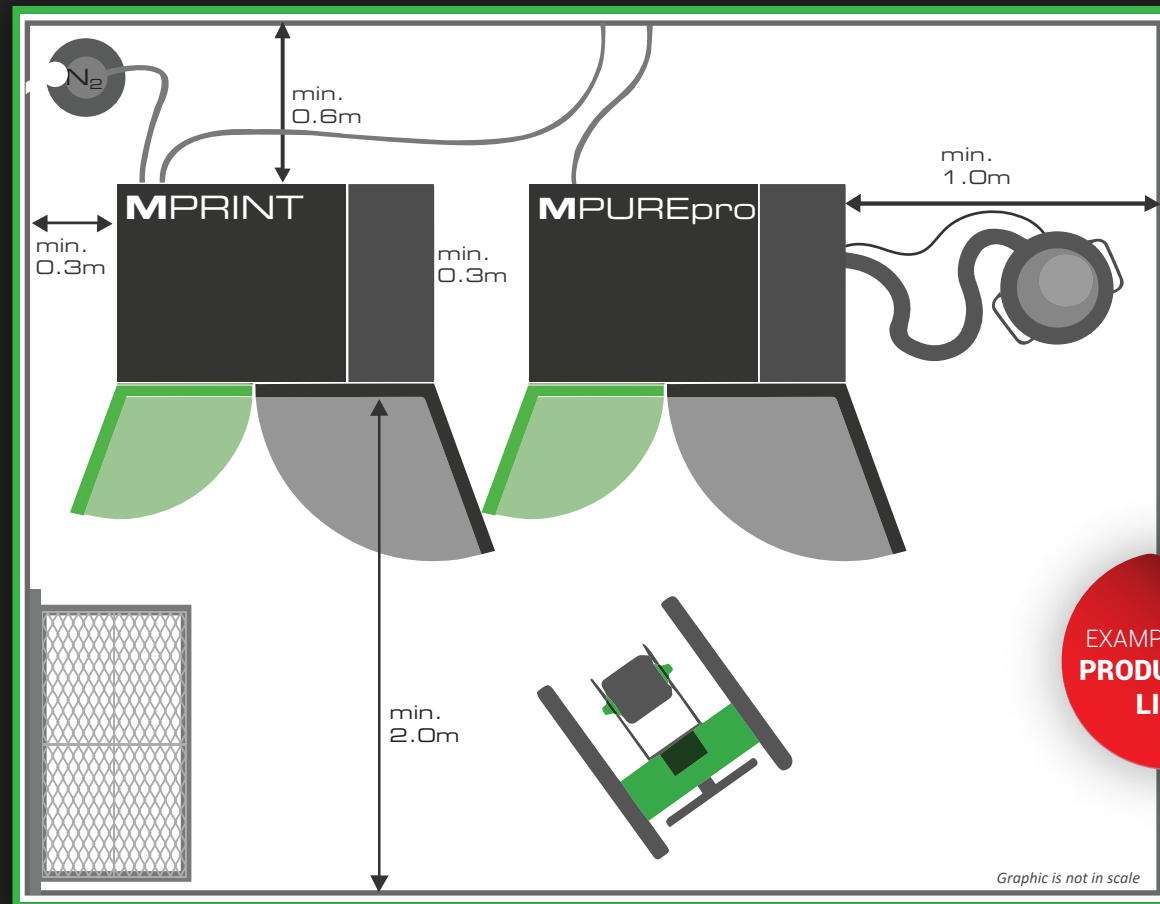
POST PROCESSING

If your component has support structures, now is the time to remove them. Optionally, further finishing steps are possible, such as sandblasting, polishing, or grinding.
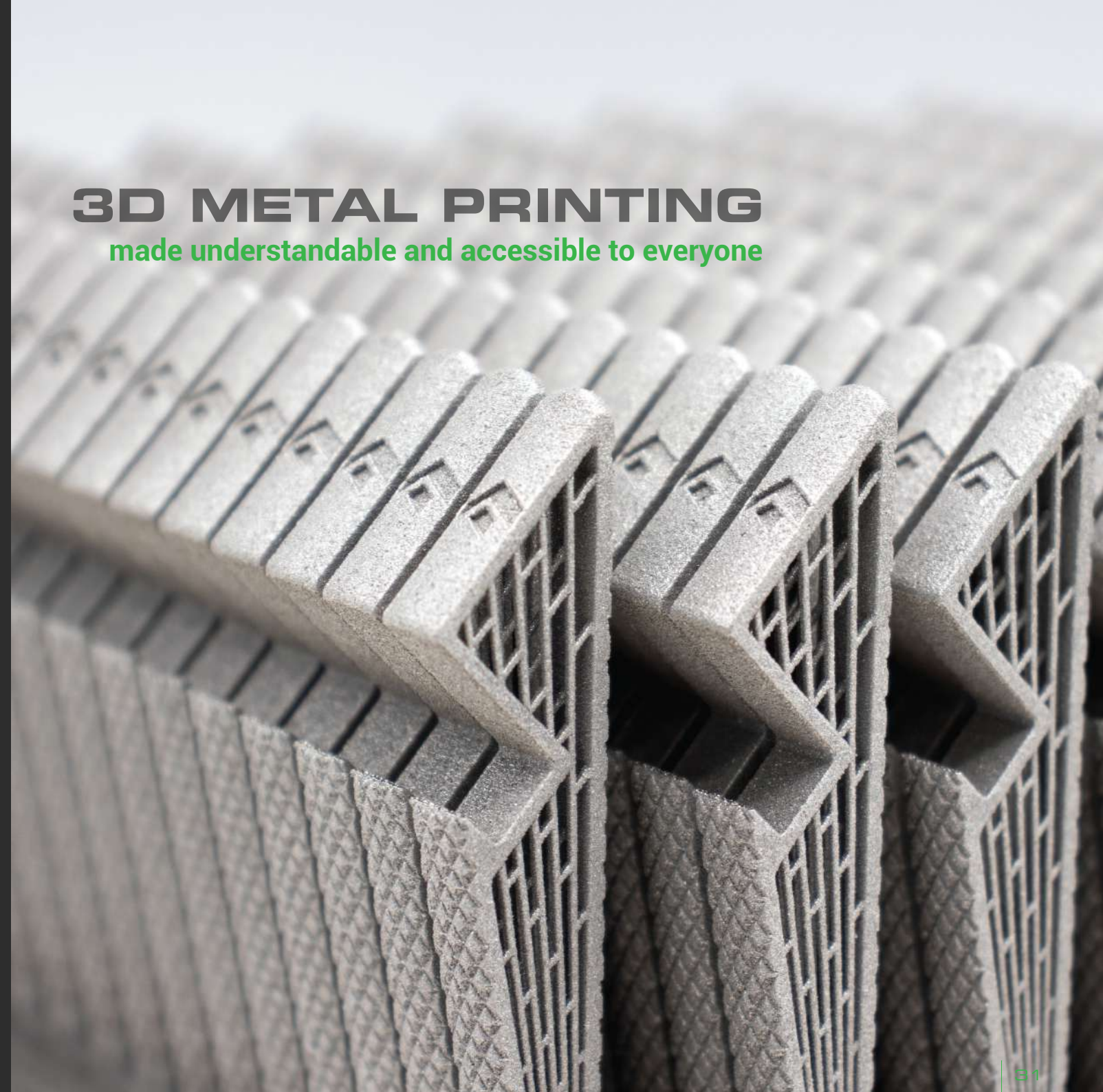
YOUR PRODUCTION LINE
IN THE SMALLEST SPACES

The **BOLD**SERIES is designed for easy setup, even in compact spaces as small as 15 to 20m², without compromising smooth and powerful production capabilities. The machines are equipped with wheels at the bottom, facilitating effortless mobility and allowing them to be easily moved to the desired location, including passing through standard-sized doors.
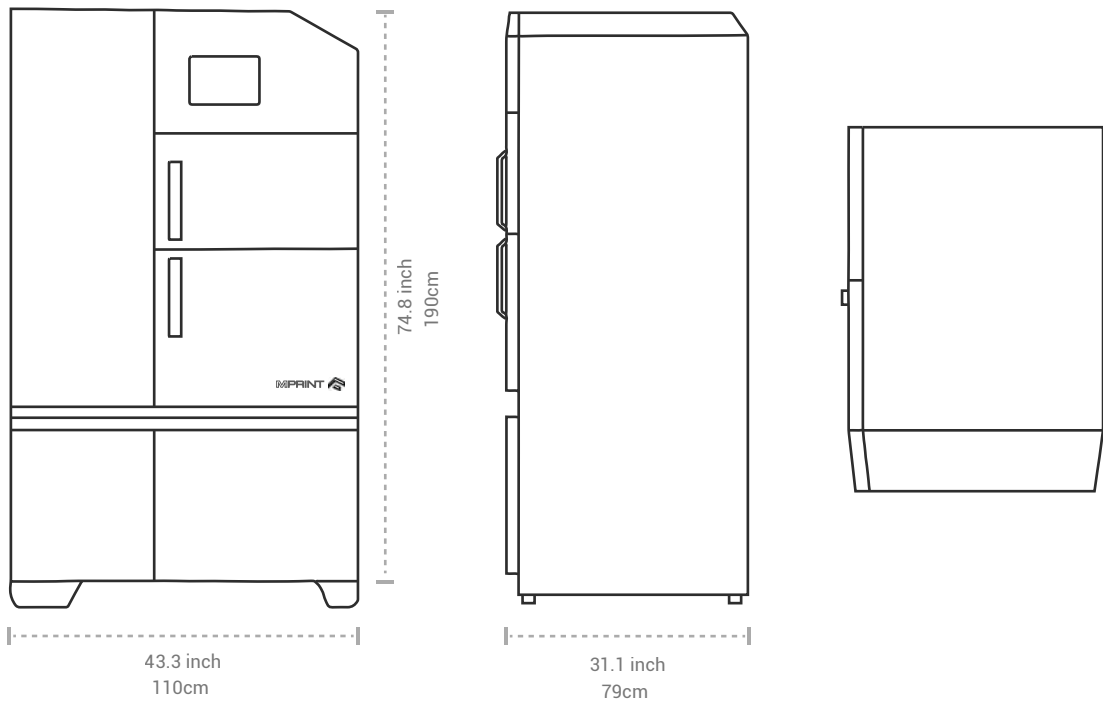

N₂

min.
0.6m

min.
1.0m

MPRINT

MPUREpro

min.
0.3m

min.
0.3m

EXAMPLE OF A
**PRODUCTION
LINE**

min.
2.0m

Graphic is not in scale

3D METAL PRINTING
made understandable and accessible to everyone

DIMENSIONS

MPRINT

74.8 inch
190cm

43.3 inch
110cm

31.1 inch
79cm

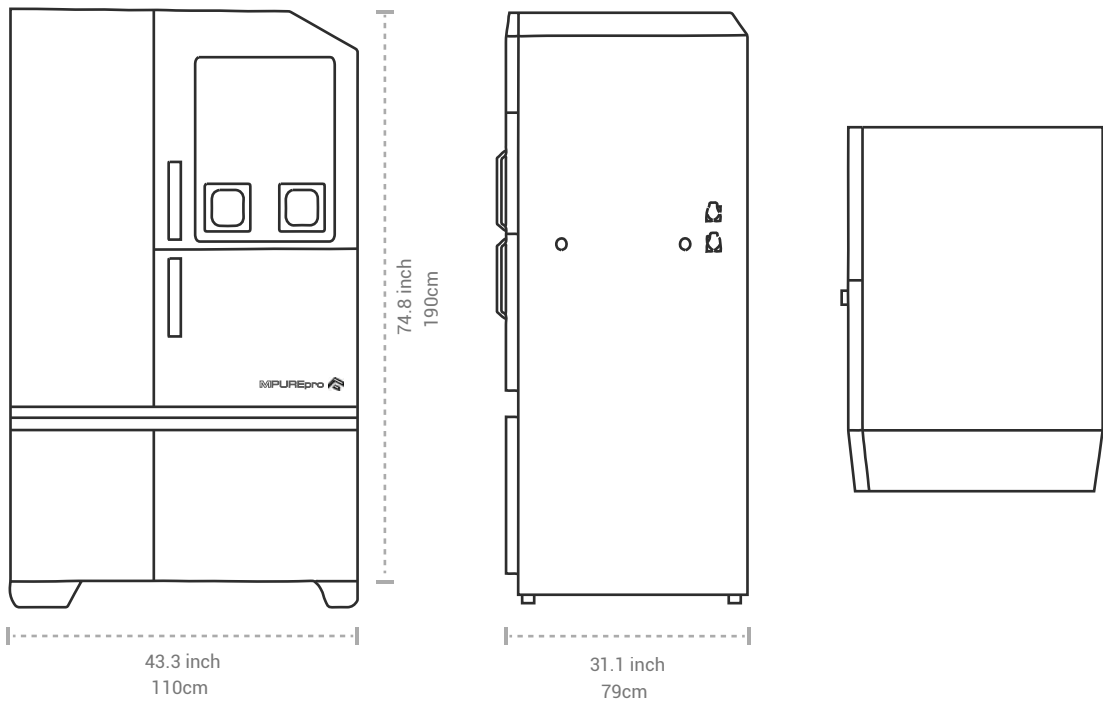| Process Chamber	
Printing method	LPBF (Laser Powder Bed Fusion)
Powder application	X profile
Focus diameter	70 µm
Scanning speed	Up to 3000 mm /s
Laser power	200 Watt (Fiber)
Building Module	
Machining volume	5.9 x 5.9 x 5.9 inch / 150 x 150 x 150 mm
Layer height	20 – 80 µm
Powder Supply	
Magazine	Up to 5 supply cartridges
Data Preparation	
CAM/Slicing software	Fusion 360 / Netfabb
Connection and Consumption	
Power supply	110 - 230 V / 50-60 Hz
Fuse	16 A
Inert gas	Nitrogen / Argon
Filter	Replaceable filter
Dimensions and Weight	
Width x depth x height	4.3 x 31.1 x 74.8 inch / 1100 x 790 x 1900 mm
Weight	440 kg

DIMENSIONS

MPUREpro

74.8 inch
190cm

43.3 inch
110cm

31.1 inch
79cm

Workflow	
Working Process	De-powdering + Sieving = Recycling (2in1 unpacking and sieving station)

Unpacking Chamber	
Chamber structure	Glove intervention for unpacking without direct powder contact
Suction system	Integrated connection for external suction system

Sieving Unit for Powder Recycling	
Sieving process	Ultrasonic sieve
Powder preparation	Reuse through sieved powder in supply cartridge
Residual disposal	Separate for disposal of the oversize powder

Connection and Consumption	
Power supply	110 – 230 V / 50 – 60 Hz
Fuse	16 A

Dimensions and Weight	
Width x depth x height	4.3 x 31.1 x 74.8 inch / 1100 x 790 x 1900 mm
Weight	310 kg

DIMENSIONS

MPURE

74.8 inch
190cm

18 inch
46cm

25 inch
64cm
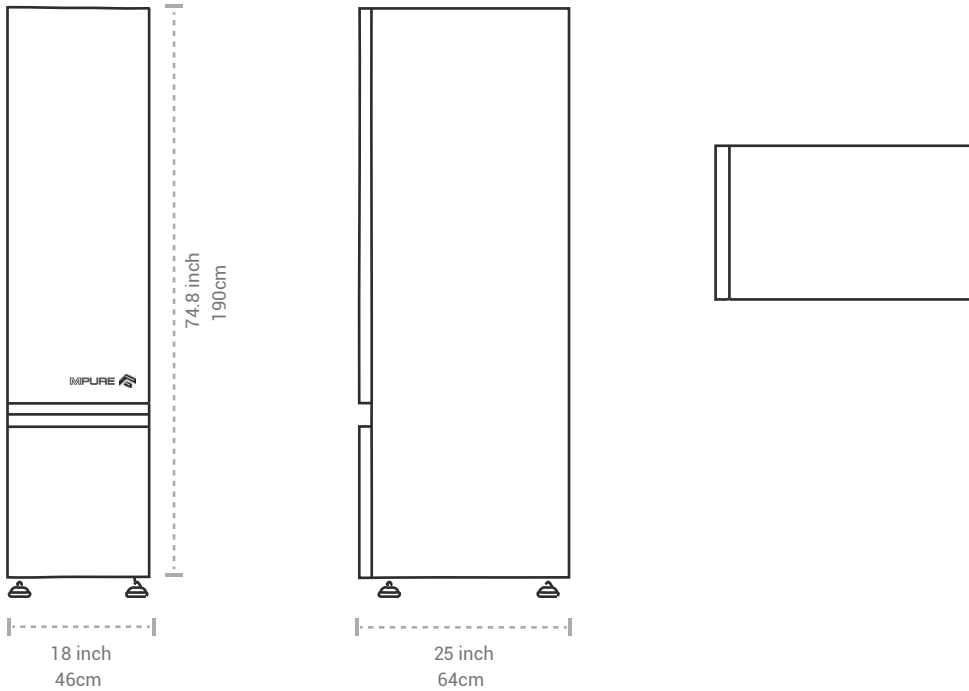
Workflow	
Working processes	Sieving + Recycling (Sieving unit for powder recycling)

Sieving Unit for Powder Recycling	
Sieving process Ultrasonic	Ultrasonic sieve
Powder preparation	Reuse through sieved powder in supply cartridge
Residual disposal	Separate for disposal of the oversize powder

Dimensions and Weight	
Width x depth x height	18 x 25 x 74.8 inch / 460 x 640 x 1900 mm
Weight	130 kg

SALES AND SUPPORT
PARTNERS WORLDWIDE
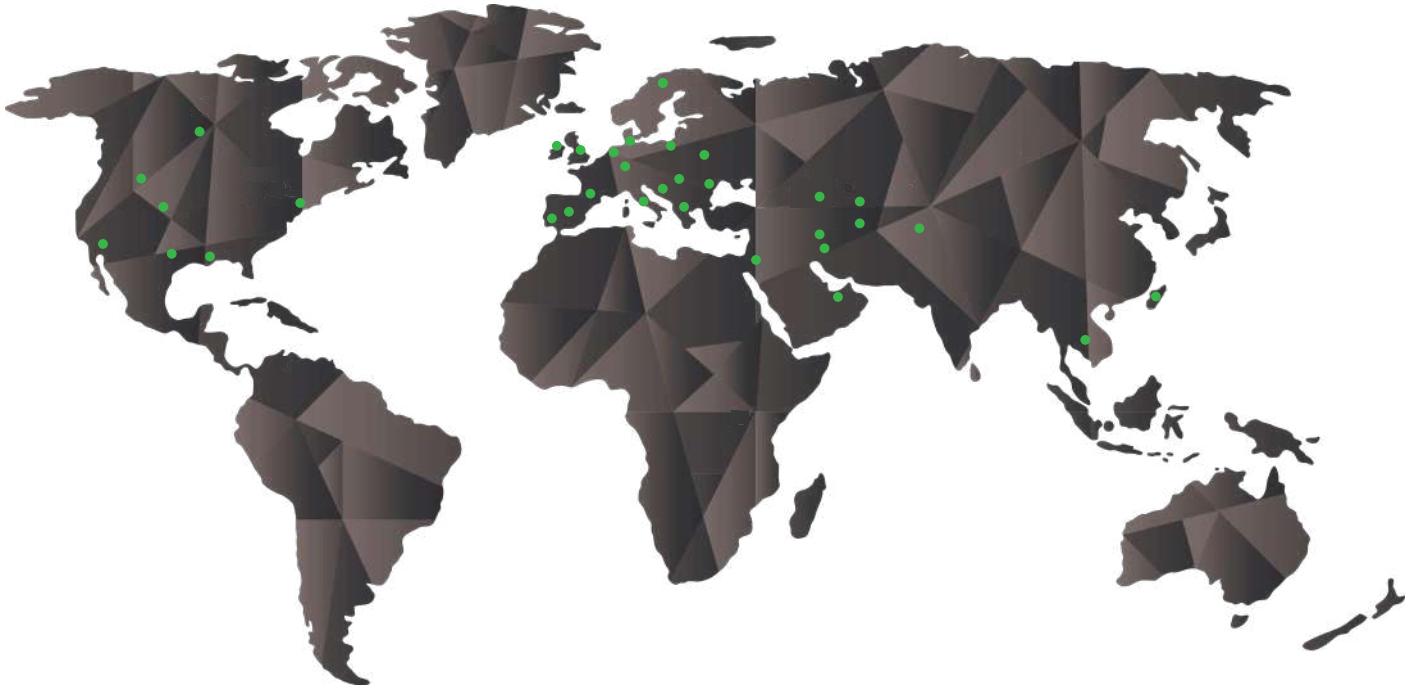
Founded in 2019, One Click Metal is an industrial B2B company and a subsidiary of INDEX Werke, based in Tamm near Stuttgart.

We believe that technologies can be made understandable and usable for everyone. That's why we simplify our product solutions so that anyone can use them successfully.

With our metal 3D printing system, we primarily serve small and medium-sized enterprises and thus ensure that metal 3D printing technologies become accessible to the general public. We are working on this with a strong team and a lot of motivation.

info@oneclickmetal.com

info@cadmicro.com

One Click Metal

cadmicro