microFORM DMP63

Micro Laser Sintering Machine for Nonreactive and Reactive Materials

The DMP63 is the perfect addition to the existing solutions from 3D MicroPrint GmbH when it comes to a strong demand for high flexibility, low running costs and ease of use as it often is required especially for Industry and R&D Environments.

The DMP63 Micro Laser Sintering machine serves the highest productivity for nonreactive and reactive materials. It includes a zero-point clamping system for easy post-processing with highest accuracy based on industrial standards. The system is also available with a high-power laser option for processing of high-melting materials.

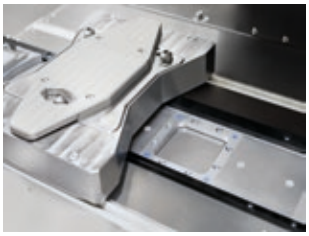
The DMP63 combines this with the proven high precision, detail resolution and user friendliness for the additive fabrication of micro metal parts.

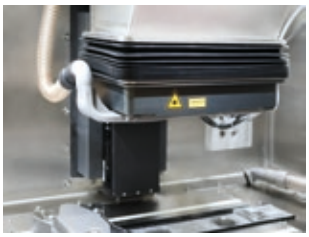
The DMP63 processes technical metals like:

- 1.4404 (316L)
- 17-4 PH
- Ti6AL4V (Grade 5)
- Molybdenum
- Tungsten
- Titanium
- Gold/ Platinum
- Customer materials (development required)

3D MICROMAC

microFORM DMP63 - System Configuration





The DMP63 is the perfect solution to achieve high flexibilty, low operating costs and user-friendliness, still focusing on the best detail resolution, accuracy and surface quality. It includes a zero-point clamping system for easy post-processing at the highest accuracy-level, based on industry standards.

Choose the machine of the DMP60 series that fits your needs best:

DMP60: This cost efficient machine is for R&D and universities and it processes nonreactive materials only.

DMP63: The most common of our machines. It serves the highest productivity for nonreactive and reactive materials. Includes a zero-point clamping system for easy post processing with highest accuracy based on industrial standards. Also with a high power laser option available for processing of high-melting materials.

DMP64: If you need superior detail resolution < 0.015 mm, the DMP64 is the right choice. It sets the pace with best detailed resolution, accuracy and surface finish. It is also equipped with a zero-point clamping system and processes reactive materials too.

Laser/Optics	▪ MOPA 70 W Fiber laser with cw and pulsed mode ▪ High-speed galvanometer scanner ▪ Laser spot size < 0.03 mm (1181.10 µin) / 0.015 mm (590.55 µin) ▪ Integrated laser power measurement
Powder handling	▪ Cartridges allow easy and quick powder replacement ▪ Safety glovebox containment with Rapid Transfer System for easy handling
Working area	▪ Platform 60 x 60 mm (2.36 x 2.36 in) ▪ >30 mm (1.18 in) build height ▪ Zero-point clamping system with automatic platform levelling
Process properties	▪ Powder particle size D90 < 0.005 mm (196.85 µin) ▪ Layer thickness ≤ 0.005 mm (196.85 µin) ▪ Dimensional tolerance ± 0.005 mm (196.85 µin) up to 10 mm (0.39 in)
Software	▪ Monitoring of hardware and process parameters ▪ Different user levels (administrator, supervisor, operator) ▪ Software implemented workflows for user guidance
Atmosphere	▪ Inert gas atmosphere with Argon (consumption < 30 liters/hour) ▪ Gas purification and particle extraction system ▪ Oxygen and moisture < 0.1 ppm
Dimensions	▪ 1780 x 2900 x 2000 mm (70.07 x 114.17 x 78.74 in) ▪ ~2500 kg (2,75 tn. sh.)

Rev. 2018-1

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