

Press Release

September 3rd, 2024

Up to 4 laser oscillators for 1.5x more build volume! Meet the high-speed, high-precision AM machine LASERTEC 30 SLM 3rd Generation

DMG MORI CO., LTD. (hereinafter referred to as “DMG MORI”) has released the LASERTEC 30 SLM 3rd Generation for high-quality SLM applications with larger build volume than ever before. With the advancing Digital Transformation in the manufacturing industry, product development and release cycles are getting shorter and shorter. This creates high demand for Additive Manufacturing capable of fast processing of parts with complex geometries. Furthermore, Additive Manufacturing limits the deposition of material to only the needed parts, thus reducing the amount of waste chips and supporting green and sustainable processes. At DMG MORI, we have developed the LASERTEC 30 SLM 3rd Generation not only for prototyping applications but for mass production as well.

With this machine, we greatly updated the design from its predecessor by reflecting our accumulated machine tool know-how. This is the first AM machine that utilizes a cast iron frame with thermo-symmetrical structure for high rigidity as well as Magnescale’s scale on the Z-axis to improve positioning accuracy. These technologies are already standard on other machine types of DMG MORI, and now they have been integrated into the latest AM model. Combined with a careful review of the machine's structure, this enabled even more precise deposition. Furthermore, the 80 μm laser spot diameter and the high-precision optical module for the entire build area allow for deposition in a space of 325 x 325 x 400 mm³ – 1.5 times larger before. A maximum of four powerful laser oscillators with up to 1,000 W accelerates the process. Other features include the powder module rePLUG for safe and fast material changeover, and CELOS X with easyAM, an operating system with guided workflow for easy and safe machine operation and maintenance.

With the LASERTEC 30 SLM 3rd Generation, we could improve our internal manufacturing process of the powder nozzle body used in our LASERTEC DED *hybrid* series. We adopted a honeycomb structure only possible with laser deposition, thus reducing the number of parts by 95% and the weight by 60%, while also improving the part’s tensile strength. Also, the ultrasonic sieving and filtering system of the rePLUG model can efficiently filter and reuse the powder and inert gas used in the deposition. This makes the LASERTEC 30 SLM 3rd Generation the ideal solution for effective use of resources and a contributor to a recycling-oriented society.

The LASERTEC 30 SLM 3rd Generation will be on display at the AMB2024 in Germany from September 10 to 14 and the JIMTOF2024 at Tokyo Big Sight from November 5 to 10.

Please have a look at the video on our website as well. *1

- Video : https://www.dmgmori.co.jp/en/movie_library/movie/id=7230

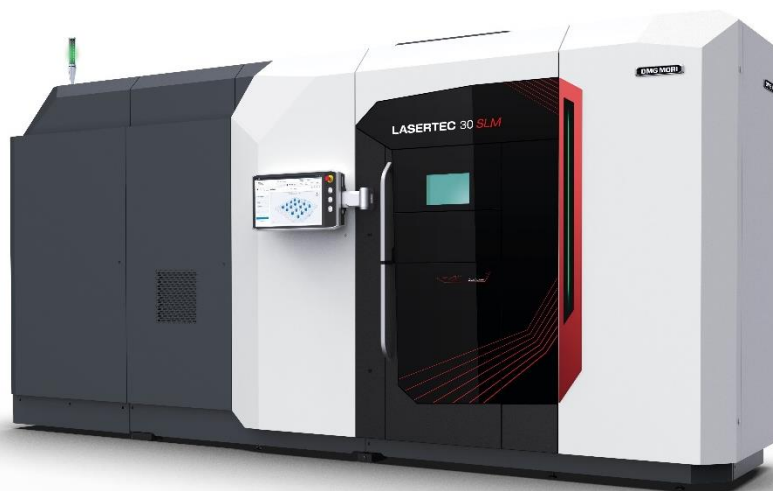
Features

- ① Designed with DMG MORI's machine tool knowhow
 - Thermo-symmetrical cast iron frame for high rigidity
 - High positioning accuracy with Magnescale's scale on Z-axis
- ② Larger build area for high-speed, high-accuracy deposition
 - Max. workpiece size 325×325×400 mm³
 - Powerful laser with 600/1000 W and 4 laser oscillators
 - Laser spot diameter with 80 μm and high-accuracy optical module across the full build area
 - With active thermal compensation and a floating process chamber to separate heat sources and casting components
- ③ Workability
 - The first SLM machine with exchangeable deposition containers for faster setups between jobs
 - Including the rePLUG powder module for safe and fast material exchange
 - No powder scattering and safe powder exchange thanks to the airtight integration of the material powder supply and recovery unit, recycling system, and other peripheral equipment
 - High level of powder safety with ultrasonic sieving system
 - Highly durable & material-independent filtering system for inert gas
- ④ Improved operability with CELOS X
 - Use the guided workflow of "CELOS X with easyAM" to improve operability and maintainability
 - Support applications for regular machine maintenance

DMG MORI will continue to address customer needs with highly functional and reliable product releases worth your investment.

Product	Additive Manufacturing Machine
Model	LASERTEC 30 SLM 3 rd Generation
Target industries	Aircraft, Space, Medical, EVs, Die & Mold, etc.

*1 Our product catalogs are limited to Web members. Sign up for a free membership to access a variety of special contents.
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LASERTEC 30 SLM 3rd Generation



Powder nozzle body used in the LASERTEC *DED hybrid* series