

Press Release

June 14, 2017

DMG MORI to Begin Taking Orders for Its New Additive Manufacturing Machine, LASERTEC 30 *SLM* with Selective Laser Melting

DMG MORI CO., LTD. (hereinafter called DMG MORI) will begin taking orders for the LASERTEC 30 *SLM* that employs Selective Laser Melting (hereinafter, SLM), an additive manufacturing technique, on June 20, 2017. The machine will be making its Japan premiere on the same day at IGA INNOVATION DAYS 2017 to be held at DMG MORI Iga Campus.

The LASERTEC 30 *SLM* is an additive manufacturing (hereinafter, AM) machine developed in collaboration with REALIZER GmbH which joined the DMG MORI Group in February this year. Featuring the AM technology that creates 3D objects by adding material, the machine reduces the number of parts and streamlines the production process. With two AM technologies - SLM and Direct Energy Deposition - now available on DMG MORI machines, we will further promote our technological innovations.

Here are features of the LASERTEC 30 *SLM* in terms of: 1) Additive manufacturing by SLM, 2) Space saving, 3) Workability, 4) Production process chain, and 5) Open material information.

1) Additive manufacturing by SLM

SLM is a process in which powder material is built up layer by layer and then selectively melted by laser. This is also called "powder bed process." The LASERTEC 30 *SLM* can achieve highly accurate additive manufacturing of 3D parts with a layer volume of 300 × 300 × 300 mm and a layer thickness of 20 to 100 μm. SLM, for example, enables manufacturing of small workpieces such as impellers and dental crowns which are difficult to cut because they are inaccessible with ordinary tools. The machine is especially suitable for production of high-mix, low-volume parts or complex-shaped workpieces.

2) Space saving

Having fewer movable axes and a simple machine construction, the LASERTEC 30 *SLM* has achieved the smallest footprint in its class.

3) Workability

The LASERTEC 30 *SLM* employs a cartridge-type powder material supply/collection system. The system made it possible to increase the powder recycling rate to 95% - 98%. The use of cartridges facilitates easy powder change.

Additionally, thanks to the touch-screen operation panel, 3D simulations and programming for additive processes can be done with a simple touch.

4) Production process chain

The LASERTEC 30 *SLM* can handle the additive process with the highest precision but cannot handle subsequent machining processes. DMG MORI, however, is able to provide a total solution to complete the whole process including finishing. For example, our HSC 20 *linear* high-precision, high-speed 5-axis machine offers finishing with the highest precision and surface quality. Taking advantage of the DMG MORI CAD/CAM database which was created based on our extensive experience and expertise, DMG MORI constructs and offers the optimum production process chain from additive manufacturing on the LASERTEC 30 *SLM* to finishing on a 5-axis machine.

5) Open material information

DMG MORI also provides customers with the database containing data or information on powder supply, machining, experiments and manufacturing. At the same time, we help our customers directly purchase high-quality materials from material providers both at home and abroad following our guidelines.

DMG MORI will continue to provide products that are reliable, highly functional and worthy of investment to meet each and every customer need.

Type	Laser metal additive manufacturing machine
Model Name	LASERTEC 30 <i>SLM</i>
Market	Medical equipment, automotive, aerospace, energy industries, etc.
Start of order taking	June 20, 2017 ^{*1}

^{*1}Order taking has already started in Germany. Estimated machine delivery to Japan is 2018.

■Main specifications

Item		LASERTEC 30 <i>SLM</i>
Machine size (Height x Width x Depth)	(mm)	1,903 ^{*1} x 2,303 x 865
Layer volume (X x Y x Z)	(mm)	300 x 300 x 300
Layer thickness	(µm)	20 - 100
Laser type		Fiber laser
Laser output ^{*2}	(W)	400 - 1,000

^{*1}Signal tower excluded

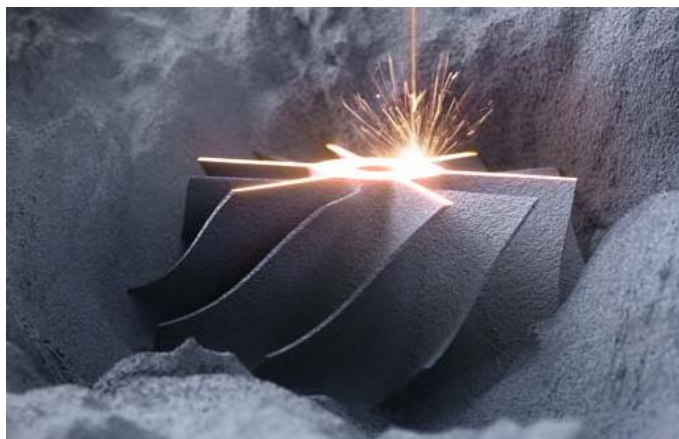
^{*2}It varies depending on specifications.



Picture1. LASERTEC 30 *SLM*



Picture 2. Replacement of powder cartridge



Picture 3. Processing scene