SLM SOLUTIONS

SLM®

PRODUCTION READY

SELECTIVE LASER MELTING

280PS

MULTIPLE LASERS AND PROCESS STABILITY

FOR DEMANDING APPLICATIONS

PREMIUM QUALITY
AND THE HIGHEST PRODUCTIVITY

Larger build chamber and multiple lasers increase productivity without sacrificing build quality

With a build plate 25% larger than standard mid-sized machines to fit more parts per build, high-power and multi-laser machines further promote production-oriented additive manufacturing. The leader in multilaser systems, SLM Solutions offers a patented multilaser scan strategy to minimize soot interference, alter layer stitching and deliver results with the same density and mechanical properties as single-laser builds.

Open system architecture puts selective laser melting users in control; your powder, your parameters

All SLM® systems allow the use of materials from any supplier. The integrated SLM® Build Processor and open software architecture offer the freedom to run standard parameters or optimize them to meet specific production needs and gain a competitive advantage. In addition, refined parameters and an identical optical bench allow processes to be directly transferred to other machines, such as scaling up to the SLM®500.

INDUSTRY-LEADING GAS FLOW DELIVERS CONSISTENT QUALITY

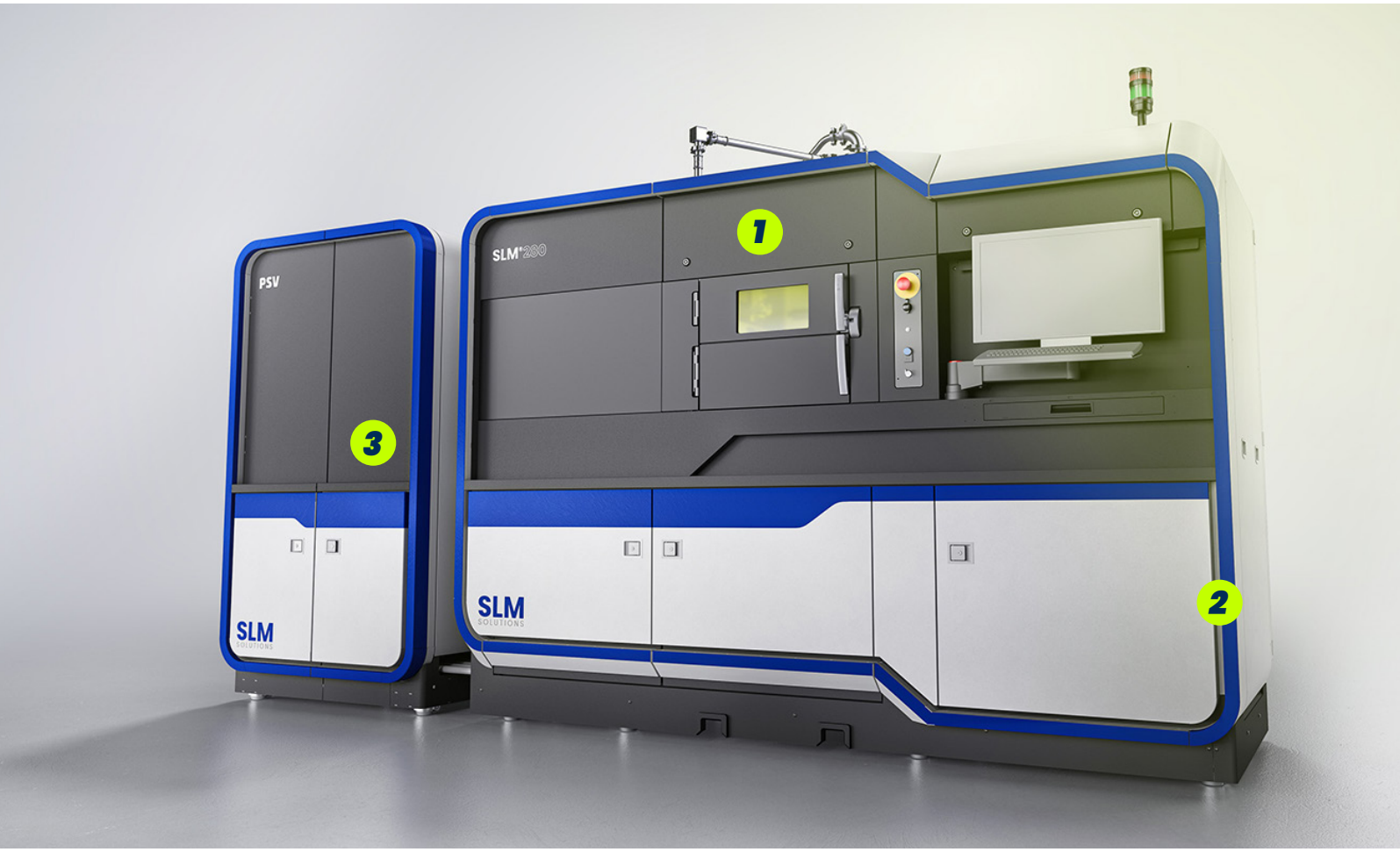
UP TO TWO

700

WATT LASERS

SLM®280

PRODUCTION SERIES



TECHNICAL SPECIFICATIONS

Build Envelope (L x W x H)	280 x 280 x 365 mm reduced by substrate plate thickness
3D Optics Configuration	Single (1x 400W or 1x 700W), Twin (2x 400 W or 2x 700W)
Real Build Rate	up to 113 cm³/h*
Variable Layer Thickness	20µm - 90µm, more available on request
Minimum Feature Size	150 µm
Beam Focus Diameter	80 - 115 µm
Maximum Scan Speed	10 m/s
Average Inert Gas Consumption in Process	13 l/min (Argon)
Average Inert Gas Consumption in Purging	160 l/min (Argon)
E-Connection / Power Input	400 Volt 3NPE, 63 A, 50/60 Hz, 6.1 kW
Compressed Air Requirement	ISO 8573-1:2010 [1:4:1] 7 bar
Machine Dimensions (L x W x H)	4150 mm x 1170 mm x 2525 mm (includes PSV)

*depending on material and build part geometry

POWERFUL **AND COMPACT**

1

The patented, enhanced gas flow, flowing through a sintered wall, creates a clean process environment to increase build quality, and also reduces gas consumption, an important operating cost.

2

The permanent filter module traps process soot in a sintered plate filter and coats the waste material with an inhibitor for dry disposal. Machine uptime is increased, gas flow is stabilized and consumable costs are reduced, all while increasing safety.

3

The automated Powder Supply Vacuum (PSV) uses independent routes to supply sieved powder directly to the SLM®280, return overflow during a build and allows unpacking through a glove box sending powder back to the PSV at the completion the process for closed-loop powder handling.

Powder transport, sieving and storage is contained within an inert gas atmosphere to maintain material quality.

INNOVATION ***BECOMES STANDARD***

QUALITY ASSURANCE OF THE SELECTIVE LASER MELTING PROCESS

Comprehensive monitoring and quality assurance enable a high degree of process documentation and verification. Chamber temperature, oxygen, gas flow and other variables are constantly monitored and logged. This level of process control results in consistent, high quality builds.

LAYER CONTROL SYSTEM (LCS)

Layer Control System (LCS) is a testing and documentation system that examines the performance of each powder layer by monitoring the powder bed and detecting possible coating irregularities.

MELT POOL MONITORING (MPM)

Melt Pool Monitoring (MPM) is an available on-axis tool for visualizing the melt pool in the SLM® process. Data from PM can be used as a resource for efficiently developing and evaluating the process parameters. In the production of safety-critical parts, the data collected serves as documentation for quality assurance.

LASER POWER MONITORING (LPM)

Laser Power Monitoring (LPM) is an available on-axis monitoring system that continuously measures and documents target and actual emitted laser output throughout the production process.

INNOVATION COMES STANDARD

SLM Solutions is known as the innovation leader in selective laser melting, being the first to introduce both twin- and quad-laser production systems. Features such as bi-directional powder recoating to reduce manufacturing time, open powder architecture allowing use material from any supplier and full process parameter access for custom development come standard on every selective laser melting machine.

QUALIFIED MATERIAL SOLUTIONS

SLM Solutions offers expert know-how that drives unique specifications to assure mechanical properties through the combination of machine, parameters and powder audited for composition, quality and flowability. Our material experts are always collaborating with customers to develop and source new alloys optimized for selective laser melting.

CONSULTATIVE DEVELOPMENT AND EXPERT KNOWLEDGE-SHARING

SLM Solutions' consulting, applications, training and service teams put customer success first to ensure their return on investment is maximized. Our experts works with customers every step of their additive journey, from application identification and development to factory layout and full serial production ramp-up.