

### Speed, Quality, Power



With a build envelope 23% larger than the competition and patented multi-laser technology, the SLM 280 2.0 enables high volume serial production of metal components direct from CAD data.

The SLM 280 2.0 is available with several laser configurations to meet the needs of the most demanding production and material development applications. Up to 1,400 Watts of laser power can be applied simultaneously for fast production.



SLM Solutions’ unique top feed powder design allows the addition of material at any time without disturbing the inert atmosphere of the build chamber. Powder is fed to the system and recovered after processing in specially designed, fully sealed containers. Powder supply/return connections are easily accessed from outside the machine allowing automated powder feed scenarios.



The complete process is carried out in an inert atmosphere and the gas flow characteristics of the SLM 280 2.0 have been refined through sophisticated CFD techniques to ensure a consistent gas flow profile across the build chamber. This gas flow is optimized to clear all contaminants and soot from the powder surface and beam entry glasses for precision and optimal use of the full laser power.

The integrated SLM Build Processor and open software architecture offers the freedom of controlling system parameters to run standard builds or optimize to meet strict production needs and gain a competitive advantage. Achieve greater component quality for complex, delicate, yet fast part builds.

## SLM 280<sub>2.0</sub>

#### 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 400 W), Twin (2x 400 W), Single (1x 700 W),  |
| Dual Configuration:                                 | Twin (2x 700 W), Dual (1x 700 W and 1x 1000 W)          |
| with switching unit                                 | IPG fiber laser                                         |
| Build Rate                                          | up to 55 cm <sup>3</sup> /h                             |
| Variable Layer Thickness                            | 20 µm - 75 µm                                           |
| Min. Feature Size                                   | 150 µm                                                  |
| Beam Focus Diameter                                 | 80 - 115 µm                                             |
| Max. Scan Speed                                     | 10 m/s                                                  |
| Average Inert Gas Consumption in Process            | 2,5 l/min (argon)                                       |
| Average Inert Gas Consumption Purging               | 70 l/min (argon)                                        |
| E-Connection / Power Input                          | 400 Volt 3NPE, 63 A, 50/60 Hz, 3,5 - 5,5 kW             |
| Compressed Air Requirement / Consumption            | ISO 8573-1:2010 [1:4:1], 50 l/min @ 6 bar               |
| Dimensions (L x W x H)                              | 2600 mm x 1200 mm x 2700 mm                             |
| Weight (without / incl. powder)                     | approx. 1300 kg / approx. 1800 kg                       |
| System configuration for all types of metal powders |                                                         |
| Technical changes reserved                          |                                                         |



**SLM Solutions** is a leading provider of metal-based 3D additive technology and machinery for prototypes and manufacturing production. SLM Machines support an optimal approach for safe, flexible and cost efficient metal part production across the aerospace, automotive, academia, energy and medical industries. Systems include the SLM 125, SLM 280 and SLM 500. With multi-laser options, bi-directional recoating, open-software controls and closed-loop powder handling, Selective Laser Melting systems achieve best-in-class safety and increased build speeds for complex and completely dense metal parts.

Headquartered in Lübeck, Germany, SLM Solutions Group is a publicly traded company (TecDax AM3D.DE) with its North American offices located in Metro-Detroit. SLM Solutions NA, Inc. offers full support for local customers featuring a development lab, application engineering team, staff metallurgist and service engineers located around the county.

SLM and SLM Solutions are registered trademarks by SLM Solutions Group AG, Germany.

**SLM Solutions NA, Inc.** | 48561 Alpha Drive, Suite 300 | Wixom, MI | 48393  
248.243.5400 | info@slm-solutions.us | www.slm-solutions.us



## SLM 280<sub>2.0</sub>

### Selective Laser Melting Machine

Multiple Lasers for Demanding Applications



**Ideal for Volume Production and Large Prototype Applications**  
Fast, safe metal 3D printing with 23% greater build volume

## Production Optimized

The SLM 280 2.0 selective laser melting machine provides the largest build envelope in its class. One or two high power fiber lasers expose the build field via advanced 3D scan optics. Available in multiple laser configurations to meet specific application needs, the SLM 280 2.0 offers combinations of 400, 700, and 1,000W lasers employed to optimize your production process.

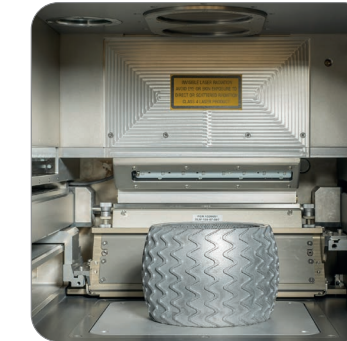
SLM 280 2.0 systems regularly achieve 80% higher build rates than competitive offerings; accomplished by proper laser configuration and SLM Solutions' patented bi-directional powder recoating system.



## Open, Robust, Safe



Processing a job on the SLM 280 is easy and safe. At the end of a build, powder can be vacuumed into a sieving station or cleaned off the part through the gloves with tools located in the equipment compartment in the build chamber. Powder is reclaimed for the next build while still in an inert gas atmosphere. This is the safest way to recycle powder for future runs and is safe for operators.



Custom software streamlines the process to optimize and store build parameters for individual applications. As an open system, The SLM 280 2.0 allows the use of materials from any supplier. Operating parameters are easily tested and developed, simplifying the task of material development. In addition, the refined parameters can be directly transferred to other machines in the SLM series - SLM 125 and SLM 500.

Extensive process monitoring is included with the system. Chamber temperature, oxygen, gas flow and other variables are constantly monitored and logged. This level of process control results in consistent, high quality builds.



The SLM 280 2.0 is equipped with a unique 2+1 filter solution. Two standard main filters operated in parallel offer long run times between changes. A third, finer filter removes any remaining particles keeping the build process free from contamination.

When a filter change is needed, the operator is notified automatically. A new set of filters can be swapped in quickly and the operator has no exposure to powder or process condensate. Minimal protective gear is required for a filter change!