

# DMP Flex/Factory 350 Series

Expanded mid-frame direct metal printing configurations for rapid serial production



## High Precision, High Throughput

The DMP Flex/Factory 350 Series combines high throughput and high repeatability to generate precision quality parts from a broad range of alloys. The metal AM system integrates metal 3D printing with 3DXpert® software, thoroughly qualified materials and expert application support. With two-laser configurations, the DMP Flex 350 Dual and DMP Factory 350 Dual continue to deliver high quality parts while boosting productivity for lower operational costs.

## DMP Flex 350 and DMP Factory 350

### HIGH QUALITY POWDER\* & PROCESS MANAGEMENT

- Integrated powder handling and automatic sieving\*
- Consistent, low O<sub>2</sub> environment (<25 ppm)
- High powder recyclability—improved powder usability lifetime

### DESIGNED FOR SCALING METAL AM PRODUCTION

- Small footprint for reduction of overall required floor space\*
- Automated workflow steps
- Material-type dedicated\*
- Real-time process monitoring with DMP Monitoring

### HIGH THROUGHPUT METAL 3D PRINTING

- Fast bidirectional material deposition
- Short change-over time—high printer utilization
- Optimized scan strategies for maximum productivity

### HIGH REPEATABILITY FOR HIGH QUALITY PARTS

- Purest atmosphere during printing, consistent, low O<sub>2</sub> environment (<25 ppm)
- Excellent microstructure, very high density
- Repeatable, stable mechanical properties
- Consistent accuracy—part to part—machine to machine
- Thoroughly developed and tested print settings

### FLEXIBLE APPLICATION USE

- Ideal for application development, production and R&D
- Easily scalable, due to consistent machine to machine performance

\* DMP Factory 350 only

# DMP Flex 350 Dual and DMP Factory 350 Dual

DMP Flex 350 and DMP Factory 350 systems now come in a two-laser configuration, reducing build times by up to 50 percent. The Dual configuration boosts productivity while maintaining high quality and repeatability, yielding lower operational costs.

Our Dual configurations feature our signature vacuum chamber with industry-leading O<sub>2</sub> handling and an intuitive user interface with guided print cycles. Additionally, the DMP Factory 350 Dual integrates powder management into the printer.



## LOW TOTAL COST OF OPERATION (TCO) FOR AFFORDABLE PER PART COSTS

- Automated processes
- High powder recyclability
- Low usage of consumables
- Small footprint

	DMP Flex 350 Series	DMP Factory 350 Series
<b>SPECIFICATIONS</b>		
Laser power type	DMP Flex 350: 500W Fiber laser <sup>1</sup> DMP Flex 350 Dual: 2 x 500W Fiber laser	DMP Factory 350: 500W Fiber laser <sup>1</sup> DMP Factory 350 Dual: 2 x 500W Fiber laser
Build volume (X x Y x Z) Height inclusive of build plate	275 x 275 x 420 mm (10.82 x 10.82 x 16.54 in)	275 x 275 x 420 mm (10.82 x 10.82 x 16.54 in)
Layer thickness	Adjustable, min. 5 µm, typical: 30, 60, 90 µm	Adjustable, min. 5 µm, typical: 30, 60, 90 µm
Repeatability	Δx (3σ) = 60µm, Δy (3σ) = 60µm, Δz (3σ) = 60µm	Δx (3σ) = 60µm, Δy (3σ) = 60µm, Δz (3σ) = 60µm
Minimum feature size	200 µm	200 µm
Typical accuracy	± 0.1-0.2% with ± 100 µm minimum	± 0.1-0.2% with ± 100 µm minimum
<b>QUALITY CONTROL</b>		
DMP Monitoring	Optional	Optional
<b>CONTROL SYSTEM AND SOFTWARE SUITE</b>		
Software tool	3DXpert all-in-one software for metal AM	3DXpert all-in-one software for Metal AM
Control Software	DMP software suite	DMP software suite
<b>POWDER MANAGEMENT</b>		
Powder management	Optional external	Integrated
DMP Flex/Factory 350 LaserForm metal alloy choices with developed print parameters:	LaserForm Ti Gr1 (A) <sup>2</sup> LaserForm Ti Gr5 (A) <sup>2</sup> LaserForm Ti Gr23 (A) <sup>2</sup> LaserForm AlSi10Mg (A) <sup>3</sup> LaserForm AlSi7Mg0.6 (A) <sup>3</sup> LaserForm Ni625 (A) <sup>3</sup> LaserForm Ni718 (A) <sup>3</sup> LaserForm 17-4PH (A) <sup>3</sup> LaserForm 316L (A) <sup>3</sup> LaserForm Maraging Steel (A) <sup>3</sup> LaserForm CoCrF75 (A) <sup>3</sup> Certified Scalmalloy <sup>3</sup> Certified M789 <sup>3</sup>	LaserForm Ti Gr1 (A) <sup>2</sup> LaserForm Ti Gr5 (A) <sup>2</sup> LaserForm Ti Gr23 (A) <sup>2</sup> LaserForm AlSi10Mg (A) <sup>3</sup> LaserForm AlSi7Mg0.6 (A) <sup>3</sup> LaserForm Ni625 (A) <sup>3</sup> LaserForm Ni718 (A) <sup>3</sup> LaserForm 316L (A) <sup>3</sup> Certified Scalmalloy <sup>3</sup> Certified M789 <sup>3</sup>
Other materials available upon request		
DMP Flex/Factory 350 Dual Metal alloy options for dual laser configurations:	LaserForm Ti Gr5 (A) <sup>2</sup> LaserForm Ti Gr23 (A) <sup>2</sup> LaserForm AlSi10Mg (A) <sup>3</sup> LaserForm AlSi7Mg0.6 (A) <sup>3</sup>	LaserForm Ti Gr5 (A) <sup>2</sup> LaserForm Ti Gr23 (A) <sup>2</sup> LaserForm AlSi10Mg (A) <sup>3</sup> LaserForm AlSi7Mg0.6 (A) <sup>3</sup>

<sup>1</sup>Maximum laser power at powder layer is typical 450W for 500W lasers <sup>2</sup>Set up A <sup>3</sup>Set up B



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