

FS301M

Productivity + Quality in One Package

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DESIGN FOR HIGH-QUALITY AM PRODUCTION

Featuring an expanded build cylinder of 305×305×400mm, FS301M is well suited for larger-sized application within a single build. Dual-laser scanning strategy and calibration algorithms enhance the build efficiency by precisely controlling dual-laser's operation with full coverage of the build area, achieving intelligent distribution of each laser while building a single large part or multiple smaller parts. Paired with truly open parameters, FS301M offers ultimate control for metal AM production. Advanced 3-axis digital galvo system, powerful build process control & real-time monitoring, excellent air tightness design of FS301M ensure the best quality of the printed part.

ENHANCED USER OPERATION

With an integrated powder-loading dock, FS301M achieves a fully sealed material handling operation under an inert atmosphere for streamlined workflow and improved environmental safety. A shared material container is used during loading, unloading and sieving process, offering convenient powder handling and transportation between the stations. Advanced features such as pre-heated base plate, electric leveling, and vision system ensure more robust process and quality control.

COMPACT MACHINE FOOTPRINT

FS301M features a machine footprint as small as 3.64 sqm with an integrated, long-lasting filtration system of operation time up to 1500 hours. With designated operation access from only the front and the rear, FS301M achieves one of the most compact installation space among similar sized PBF systems on the market. In an additive factory setting, FS301M enables high density layout with minimal side distance to achieve maximum throughput per floor area at economical additive production cost.



WIDE

FARSOON FS301M

| TECHNICAL DATA | FS301M |
|---|--|
| External Dimensions (L×W×H) | 2350×1550×2200 mm (92.5×61.0×86.6 in) |
| Installation Footprint (L×W×H) | 3500×3000×2800 mm (137.8×118.1×110.2 in) |
| Build Cylinder Size¹ (L×W×H) | 305mm×305mm×400 mm (12.0×12.0×15.7 in) (not including build plate thickness) |
| Net Weight | 2800 kg (6172.9 lb) |
| Layer Thickness | 0.02 - 0.1mm (0.0008-0.0039 in) |
| Scanning Speed | Max. 15.2 m/s (49.9 ft/s) |
| Laser Option | Dual fiber laser, 2×500W (dual-laser with full coverage of build area by each laser) or Single fiber laser, 1×500W |
| Scanner | High-precision three-axis digital galvo system |
| Laser Spot Size | Approx. 75μm contour, 75-200μm fill |
| Inert Gas Protection | Argon/Nitrogen |
| Average Inert Gas Consumption in Process | 3 - 5 L/min |
| Operating System | 64 bit Windows 10 |
| Comprehensive Software | BuildStar, MakeStar® |
| Key Software Features | Open machine key parameters, real-time build parameter modification, three-dimensional visualization, diagnostic functions |
| PLC | Siemens |
| Data File Format | STL |
| Power Supply | EUR/China: 380-400V, 50/60Hz, three-phase US: transformer sold with machine |
| Operating Ambient Temperature | 22-28°C (71.6-82.4°F) |
| Materials² | 316L, 17-4PH, 420, HX, HAYNES 230*, IN718, AISi10Mg,TA15, Ti6Al4V, more materials to come |

1 The functional build volume depends on the parts/materials.

2 The materials marked with * are in the build process development.

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PART: AUV CHILLER
SYSTEM: FS301M
MATERIAL: AISi10Mg

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