

# FS421M

## Continuous Additive Manufacturing System

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### DESIGNED FOR PRODUCTION

The FS421M additive metal melting system is a true manufacturing systems capable continuous production. With its 425x425x420mm build cylinder the FS421M is capable of producing large metal parts from a wide range of metal powder materials. The large build volume combined with a multi-laser and fully digital optics system enable enhanced production speed while the internal rail system enables the fast exchange of cylinders between builds.

### EFFICIENCY + SAFETY

The FS421M comes equipped with an all new closed looped powder handling system. Powder supply, transport, feeding, and recycling are all integrated into one inert system. The FS421M's powerful and highly efficient air filtration systems allows for the processing of reactive materials while it's high capacity and auto-cleaning capability allows for extended use between filter changes.

### OPEN SYSTEM

The FS421M like all Farsoon systems allows for complete freedom of operation by its users. This means that all machine parameters are unlocked for the user as well as an open material policy allowing for previously-impossible levels of freedom and flexibility when it comes to additive metal melting production. In addition, the in house Farsoon software allows for ease of use with both an advanced user interface as well as a touch screen based production interface for everyday use.

# FARSOON FS421M

TECHNICAL DATA	FS421M	FS421M-2
<b>External Dimensions (L×W×H)</b>	2770×3220×2350 mm (109.1×126.8×92.5 in)	
<b>Build Cylinder Size<sup>1</sup> (L×W×H)</b>	425×425×420 mm (16.7×16.7×16.5 in) (not including build plate thickness)	
<b>Net Weight</b>	Approx. 3450kg (7605.9 lb) (Single-laser) / 3500kg (7716.2 lb) (Dual-laser)	
<b>Layer Thickness</b>	0.02~0.1 mm (0.0008-0.0039 in)	
<b>Scanning Speed</b>	Max. 15.2 m/s (49.9 ft/s)	
<b>Laser Type</b>	Single Laser, 1×500W	Dual Lasers, 2×500W
<b>Scanner</b>	Dynamic focusing system	
<b>Inert Gas Protection</b>	Argon/Nitrogen	
<b>Average Inert Gas Consumption in Process</b>	3-5 L / min	
<b>Operating System</b>	64 bit Windows 10	
<b>Comprehensive Software</b>	BuildStar, MakeStar®	
<b>Key Software Features</b>	Open machine key parameters, real-time build parameter modification, three-dimensional visualization, diagnostic functions	
<b>Data File Format</b>	STL	
<b>Power Supply</b>	EUR/China: 400V±10%, 3~/N/PE, 50Hz, 32A US: transformer sold with machine	
<b>Operating Ambient Temperature</b>	22-28°C (71.6-82.4°F)	
<b>Materials<sup>2</sup></b>	316L, HX, HAYNES 230*, IN718, IN625, AISi10Mg, AIMgScZr, TA15, Ti6Al4V, CuSn10, more materials to come	

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

<sup>2</sup> The materials marked with \* are in the build process development.

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#### PART: TURBINE COOLING TESTBED

SIZE: 365×365×320(H)MM (14.4×14.4×12.6 in)

MATERIAL: Ti6Al4V

SYSTEM: FS421M (DUAL-LASER)

PRINT TIME: 126H

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