

FLIGHT[®] 403P SERIES

The Next Generation of High-speed Plastic Laser Sintering

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FIBER

Equipped with powerful fiber lasers in place of the standard CO₂ lasers, Flight[®] 403P Series is capable of delivering greatly increased power to the powder bed. Due to the more robust and stable nature of a fiber laser system, Flight[®] Technology also provides improved laser longevity which is key when considering ROI for manufacturing applications.

FAST

With robust laser power, improved energy distribution to the material, and smaller laser spot size, Flight[®] Technology is able to achieve the full sintering of powder in a significant short amount of time. With scanning speed of over 20m/s (66 ft/s) as well as the large build volume, Flight[®] 403P Series is able to achieve extreme sintering speeds that pushes the additive manufacturing productivity to a new level.

FINE

Developed with a new set of unique scanning algorithms and a powerful dynamic optical system, Flight[®] Technology is able to achieve a more homogenous energy distribution over the processing surface. This results in improved feature detail compared to other plastic powder-based technologies with feature details as small as 0.3mm (0.012 inch) while still achieving the part property benefits of standard laser sintering.

OPEN PLATFORM

Like all Farsoon systems, FLIGHT[®] 403P Series is offered with fully open machine parameters and unlocked material choices. In addition with its increased power and energy absorption characteristics Flight[®] Technology will be capable of accessing a much different range of process-able materials and operational flexibility as compared to standard laser sintering systems, which allows for increased freedom for future AM material and application development.



FARSOON FLIGHT® 403P Series

SPECIFICATIONS	FLIGHT® SS403P	FLIGHT® HT403P
External Dimensions (L×W×H)	2540×1320×2220 mm (100.0×52.0×87.4 in)	
Build Cylinder Size¹ (L×W×H)	400×400×450 mm (15.7 × 15.7 × 17.7 in) or 400×400×540 mm (15.7 × 15.7 × 21.3 in)	
Net Weight	Approx. 3100 kg (6834.3 lb)	
Laser Type	Fiber Laser, 1×500W	
Scanner	High-precision three-axis digital galvo system	
Layer Thickness	0.06 - 0.3 mm (0.0024-0.0118 in)	
Volume Build Rate²	Up to 6 L/h	
Scanning Speed	Max. 20 m/s (65.6 ft/s)	
Max. Chamber Temperature	190°C (374 °F)	220°C (428 °F)
Thermal Field Control	Eight-zone heater & intelligent temperature control systems	
Temperature Regulation	Continuous real-time build surface temperature monitoring & optimization	
Operating System	64 bit Windows 10	
Comprehensive Software	BuildStar, MakeStar®	
Data File Format	STL	
Key Software Features	Open machine key parameters, real-time build parameter modification, three-dimensional visualization, diagnostic functions	
Inert Gas Protection	Nitrogen	
Power Supply	EUR/China: 400V±10%, 3~/N/PE, 50/60Hz, 32A US: transformer sold with machine	
Operating Ambient Temperature	22 - 28 °C (71.6-82.4 °F)	
Materials	FS4200PA-F, FS3300PA-F, FS3201PA-F, FS3401GB-F, FS6140GF-F, WANFAB-PU95AB, Ultrasint® TPU 88A black, LUVOSINT® TPU X92A-1064 WT, more materials to come	

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

2 Volume build rate depends on the parts/materials.

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PART: Protective Covers of Smart Vector Thrusters for Underwater ROV
MATERIAL: FS3300PA-F
SYSTEM: FLIGHT® HT403P

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