

Technical Data

MX-Fab



MX-Fab

DED system with DMT & 5-Axis system

- All-in-one fabrication system
- 5-Axis system & DMT technology
- Accurate & stable powder feeding supply
- Efficient inert gas environment creation
- Easy installation
- Compact system & superior build volume



All-In-One Fabrication System

(Easy install and powerful fabrication system)

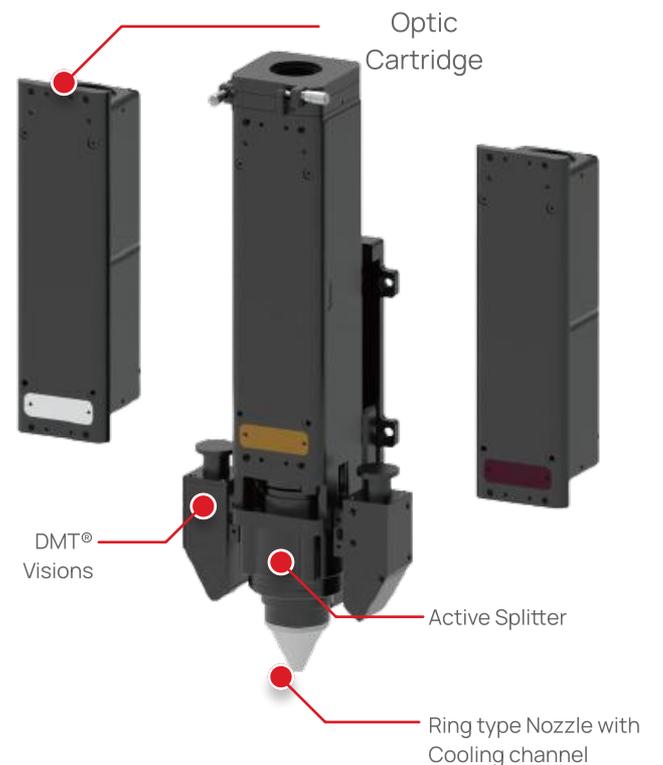


InssTek's newly developed product, the MX-Fab, is representative system that can produce various field products in a short time with a wide working range. As it is called an all-in-one system, a laser, chiller, purifier, and vacuum pump are equipped in the system. And it is designed with an independent powder feeder to improve user convenience.

AM-Module

Compact optic and size-changeable beam

Type	SDM800	SDM1200	SDM1600	SDM2400
Beam Size (μm)	800	1200	1600	2400
Build Speed (cm ³ /h)	5.8	16.4	27.4	66.6
Layer Height (μm)	250	450	600	900



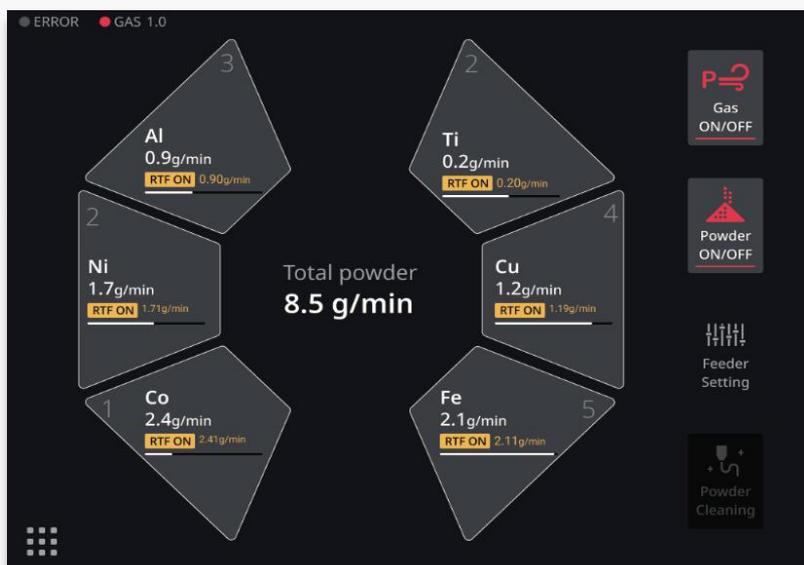
PCM-Multi

Stand-alone and integrated system

- Hexa-powder feeding system
- Real-time feedback control
- Feeding rate range 0.05~20g/min (based on Ti-6Al-4V)
- Multi material fabrication
- Minimum quantity control



CVM (Clogged Vibration Method) is a new type of powder feeding technology. It has impressively stable powder feeding rate, semi-permanent lifetime and broad feeding rate range. Also, this system is applicable with gravity powder supply method and direct powder supply method with gas in the DED process.



Newly Developed Feeding System

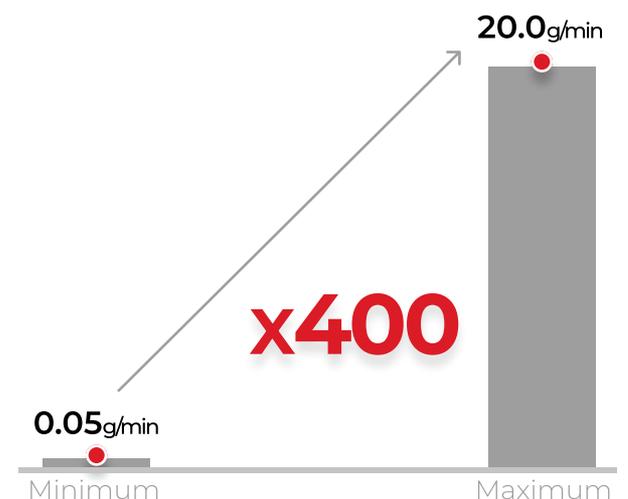
It can supply powder stably and accurately with its Real Time Feedback Control.

PCM-Multi Specification

Mechanical Specification

Powder Feeding rate (based on Ti-6AL-4V)	g/min	0.05~20
Powder hopper volume	liter	1
Number of feeding modules	Set	Standard 2 Feeders (*Max 6)
Feedback		Sampling
Dimension	mm	800 x 800 x 1200
Machine weight	Kg	250 (With 6 Feeders)

(*Optional Item)



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MX-Fab Specification

		MX-Fab	MX-Fab Customized	
Laser				
Type		Ytterbium Fiber Laser (Rack Mount Type)		
*Laser Power	W	1,000 (*Max. 2,000)		
Stage				
X, Y, Z Stroke	mm	800 x 1,000 x 700		
A, C Stroke	deg.	-100 ~ +100 / 360		
Worktable Size	∅	500		
Module				
*Optical Module		SDM 800 / 1,200 / 1,600 / 2,400		
Beam Diameter	μm	800 / 1,200 / 1,600 / 2,400		
Feeding System				
Powder Feeding Rate (for Ti-6Al-4V)	g/min	0.05~20	Available	
Powder Hopper Volume	liter	Approx. 1.0		
*Number of Feeding Modules	set	Standard 2 Feeders (*Max. 6)		
Software				
Operating System		Window 7 or higher		
HMI Program		MX-OS		
*CAM Software		MiXO Pro		
Feedback System		DMT® Closed-Loop Control		
Mechanical Specification				
Machine Dimensions (without accessories)	mm	1,740 x 2,550 x 2,655		
Machine Weight	ton	Approx. 6 ton		
Atmosphere Control System (Option)				
* Inert Gas Chamber (elec. power will be changed)				
Gas	%	Argon (>99.999)		
Purification System	ppm	Min O ₂ Level ≤ 50		

■ Each specification (such as machine size, weight and etc.) of MX-Fab can be modified for machine developing procedure. (*Optional Item)

