

# Technical Data MX-Fab



# MX-Fab

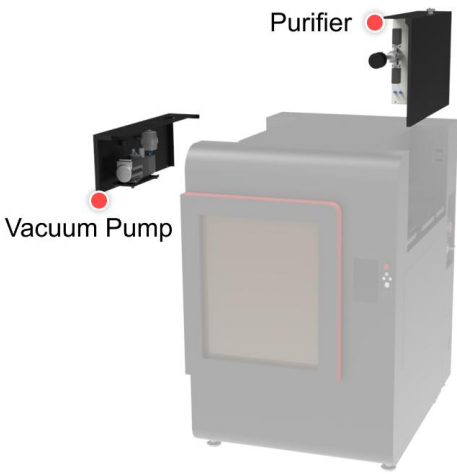
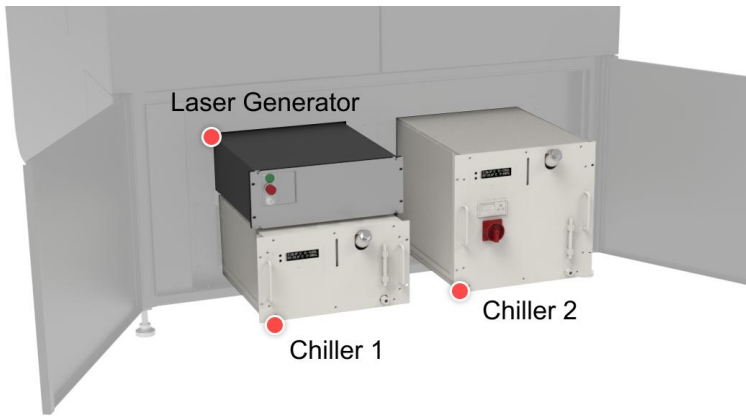
DED system with DMT & 5-Axis system

- 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)

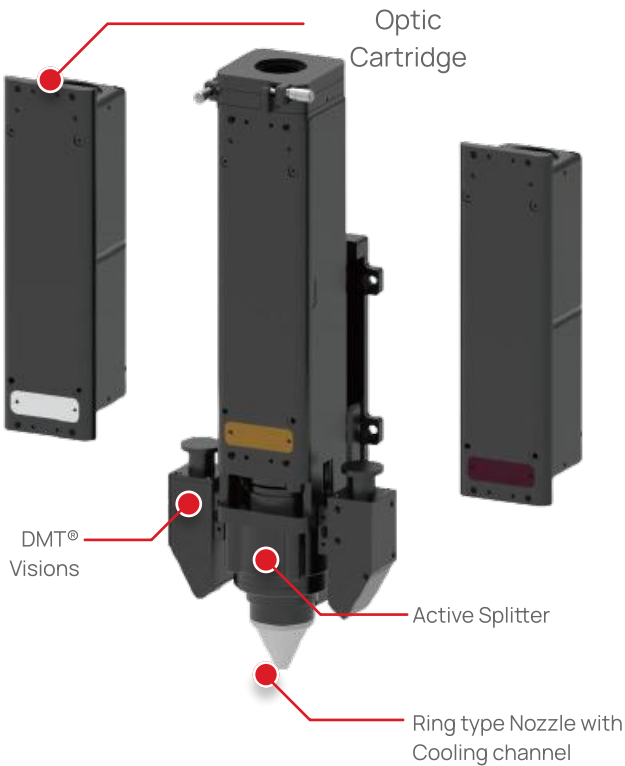


InssTek’s newly developed product, the MX-Fab, is representative system that can produce various field products in a short time with a wide working range. As it is called an all-in-one system, a laser, chiller, purifier, and vacuum pump are equipped in the system. And it is designed with an independent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

# AM-Module

Compact optic and size-changeable beam

Type		SDM800	SDM1200	SDM1600	SDM2400
Beam Size	( $\mu\text{m}$ )	800	1200	1600	2400
Build Speed	( $\text{cm}^3/\text{h}$ )	5.8	16.4	27.4	66.6
Layer Height	( $\mu\text{m}$ )	250	450	600	900

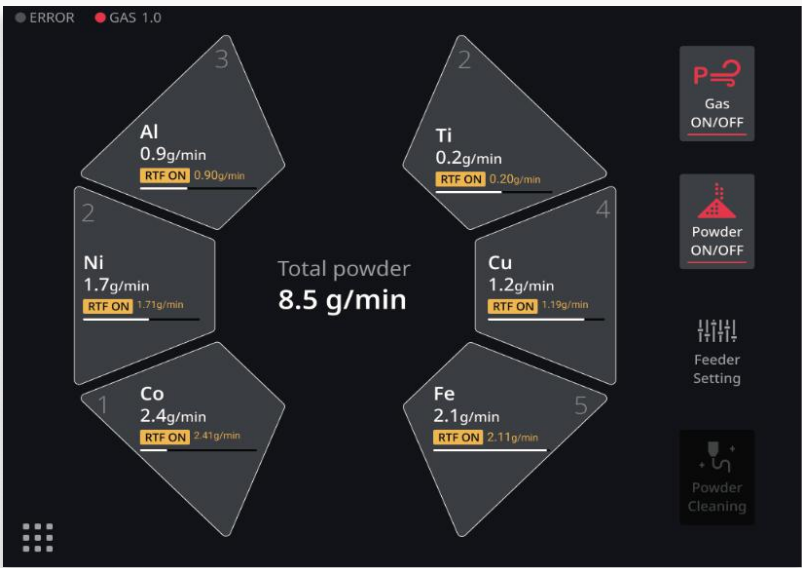


# PCM-Multi

## 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.

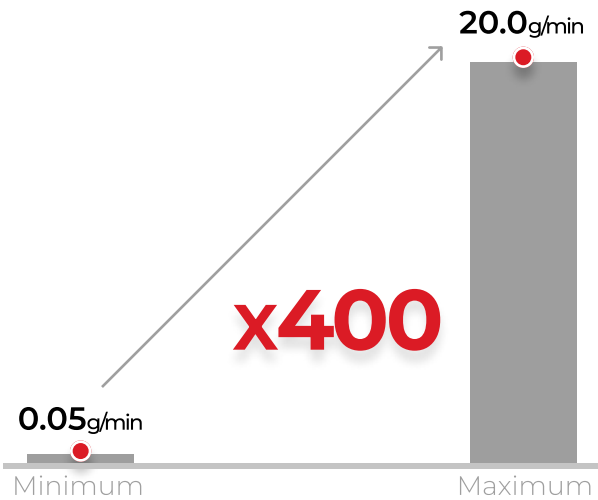


## Newly Developed Feeding System

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)		



# Technical Data

## MX-Fab Specification

MX-Fab			MX-Fab Customized	
Laser				
Type		Ytterbium Fiber Laser (Rack Mount Type)	Available	
*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	Ø	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		
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 <sub>2</sub> Level ≤ 50		

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

