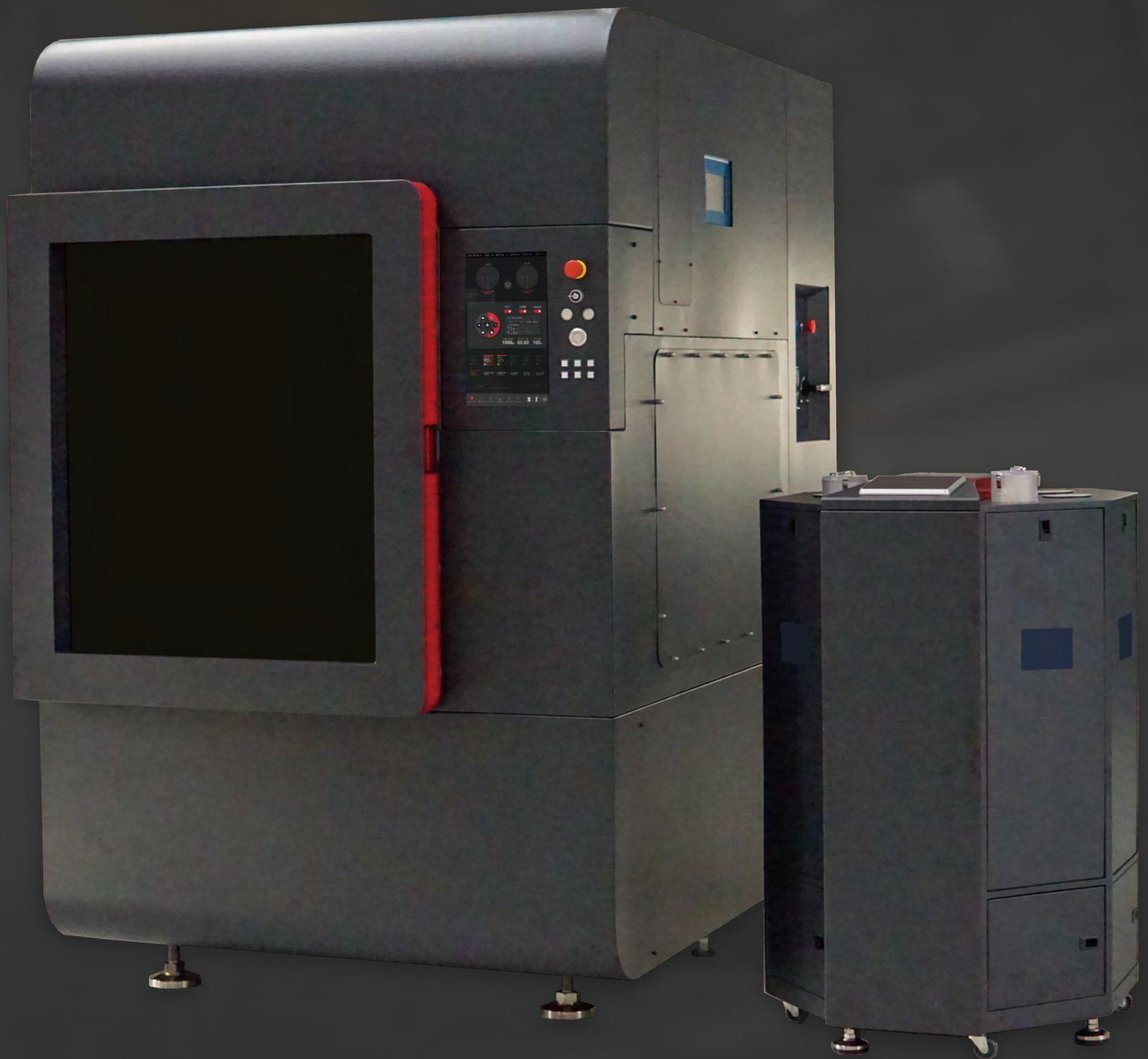


# Technical Data

# MX-Fab



# MX-Fab Series

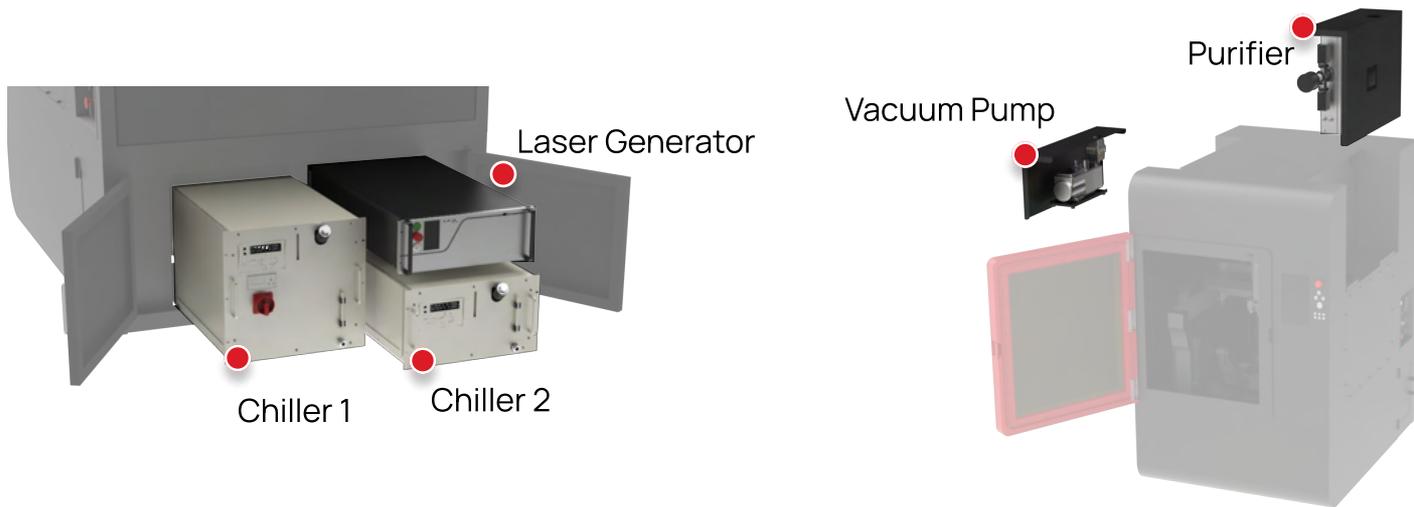
DED Machine with DMT & 5-Axis AM CAM

- Accurate & stable feeder for multi material
- All in one system for fabrication
- Accurate CVM powder feeding system applied
- Easiest installation
- Efficient inert gas control system
- Compact size & efficient build volume



## All in One System for fabrication

( The easiest most powerful machine for fabrication)



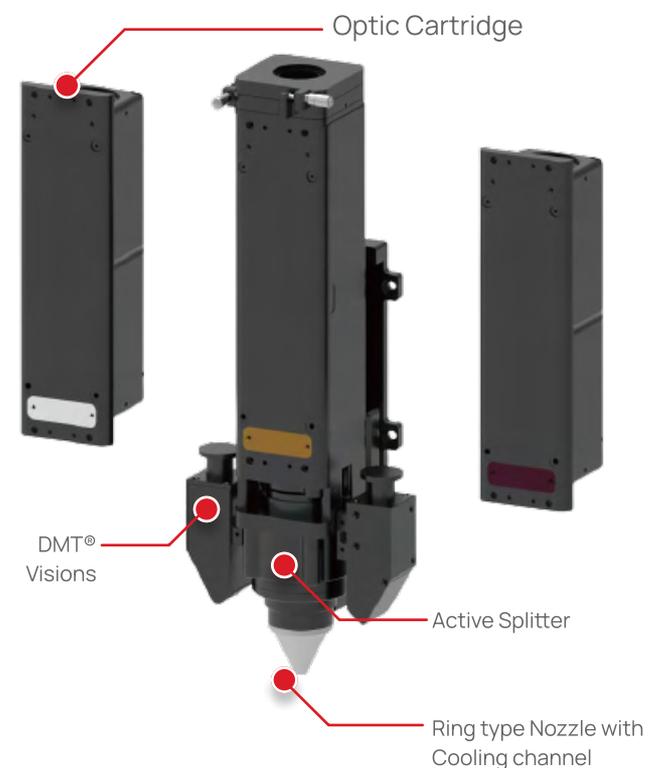
InssTek's newly developed product, the MX-Fab series, is InssTek's representative equipment and can produce various metal outputs in a short time with a wide working range. It was designed with an independent powder feeder to minimize the overall chamber volume. It is an all-in-one system with a laser, chiller, purifier, and vacuum pump all integrated into a single equipment.

## Adaptive Optic AM Module

Cartridge Type Optic System

InssTek optic modules enable various beam sizes up to 3x by replacing cartridge type module (2nd Gen) or with the automatic zoom system (3rd Gen).

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



# CVM Powder Feeding System

## Stand-Alone And Integrated System

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



CVM(Clogged Vibration Method) powder feeder is new type of powder feeding system. It has impressively stable powder feed rate, perfect lifetime and broad feeding rate range, from 0.05g/min to 20g/min for single CVM Feeder block based on titanium. Applicable for gravity powder supply method and direct powder supply method with gas.



## USER FRIENDLY INTERFACE

The newly developed feeder powder can supply powder stably and accurately with its real time feedback control.

## CVM Feeder Specification

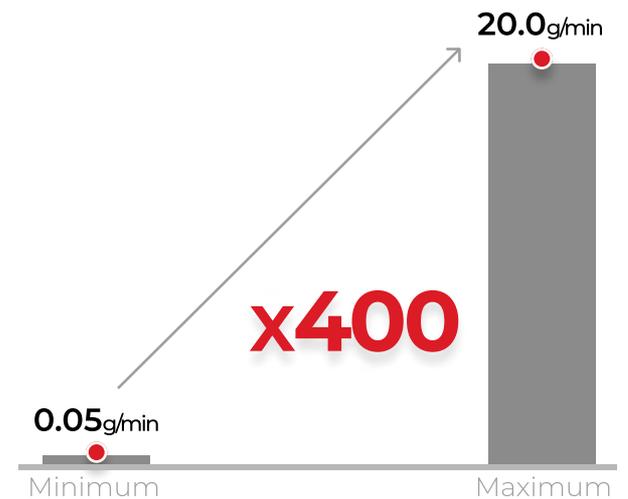
### CVM Powder Feeder

|                          |       |                    |
|--------------------------|-------|--------------------|
| Feeding rate             | g/min | 0.05~20            |
| Powder hopper volume     |       | 1                  |
| *Standard Feeding System | Set   | 2 Feeders (*Max 6) |

### Mechanical Specification

|                |    |                      |
|----------------|----|----------------------|
| Feedback       |    | Sampling             |
| Dimension      | mm | 800 x 920 x 1370     |
| Machine weight | Kg | 250 (With 6 Feeders) |

(\*Optional Item)



# Technical Data

## MX-Fab Series Specification

| Laser  |       | MX-Fab1                                    | MX-Fab3               |
|--|-------|--|-----------------------|
| Type   |       | Ytterbium Fiber Laser<br>(Rack Mount Type) |                       |
| *Laser Power   | W     | 1,000 (*Max. 2,000)                        | 2,000                 |
| Stage  |       |  |                       |
| X, Y, Z Stroke   | mm    | 500 x 600 x 385                            | 800 x 1,000 x 700     |
| A, C Stroke  | deg.  | -100 ~ +100 / 360                          |                       |
| Worktable Size   | ∅     | 300  | 500                   |
| Module   |       |  |                       |
| *Optical Module  |       | LFM Series                                 |                       |
| 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 Powder Feeder and Hopper                                | set   | 2 Set (*Max. 6 Feeder)                     |                       |
| Software   |       |  |                       |
| Operating System   |       | Window 10                                  |                       |
| HMI Program  |       | MX-OS                                      |                       |
| *CAM Software  |       | MiXO Pro                                   |                       |
| Feedback System  |       | DMT® Closed-Loop Control                   |                       |
| Mechanical Specification   |       |  |                       |
| Machine Dimensions (without accessories)                           | mm    | 1,540 x 2,090 x 2,325                      | 1,760 x 2,570 x 2,680 |
| Machine Weight   | ton   | Approx. 3.0                                | Approx. 6.5           |
| Atmosphere Control System (Option)                                 |       |  |                       |
| * Inert Gas Chamber (machine size and 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)

