



# LUMEX Avance-25

## Metal Laser Sintering Hybrid Milling Machine

MC Machinery Systems, Inc. is proud to announce its partnership with Matsuura Machinery Corp. Fukui City, Japan, in introducing the new *LUMEX Avance-25* Metal Laser Sintering Machine to the US marketplace.

The *LUMEX Avance-25* is the only machine in the world that provides a one-machine, one-process means of manufacturing complex molds and piece parts by combining metal laser sintering (3D SLS) technology with high accuracy high speed milling.

### Features

- Create mold die parts in one piece
- Porous sintering for gas vents
- Create 3D conformal cooling pipes
- Create deep ribs with no EDM work
- See a 60% reduction in working hours from design to finish machining

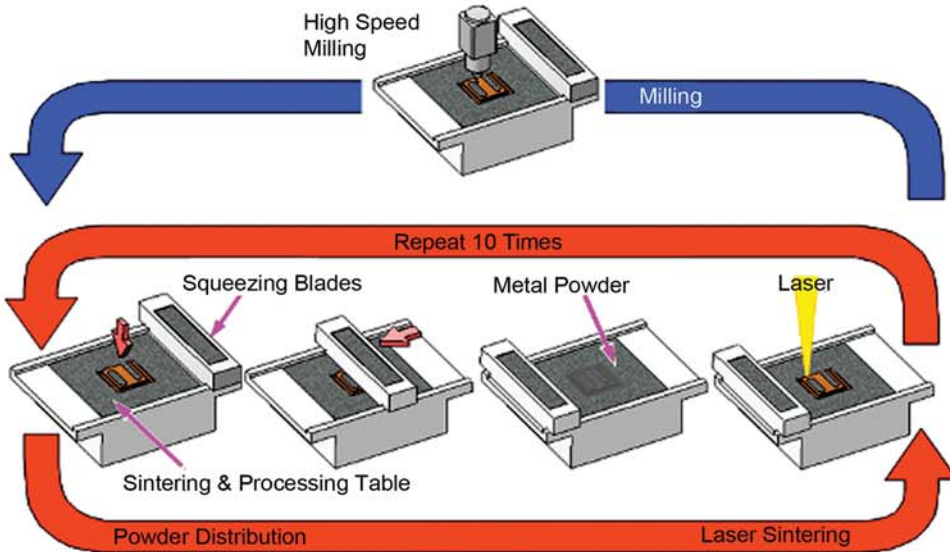


Mold core example laser sintered and finish milled by the LUMEX Avance-25.





## Hybrid Laser Sintering & Milling Process



The LUMEX Avance-25 performs high-speed milling on every 10th layer of sintered modules.



I-Tech Avance Operation Panel with Touch Screen Operation



Run Monitor follows NC and Process Data for Laser Sintering & Milling



Automatic Settings for Squeezing Range Screen

## Main Machine Components and Construction



Yb 400w Fiber Laser uses Matsuura's Galvanometer Mirror to create the sintered profile

Squeezing Unit spreads a .002" layer of metal powder over the base plate

Sintering Table moves down .002" per pass and provides a 10" x 10" x 7.3" build area that holds up to 200 lb.

The X, Y, Z Axes of the high speed mill are linear motor driven for speed and accuracy

The 45,000 RPM mill spindle uses a CCD camera to link with the laser to ensure accuracy

Mold Core / Cavity components as well as metal piece parts can be created by LUMEX



EV Electrical Component Mold

Electric Drill/Driver Component Mold

Mesh Structure Example

Dental Implant Lower Front

Artificial Bone Component

For more information on this product, please contact:  
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