



VC -500 AM

ADDITIVE MANUFACTURING

Mazak

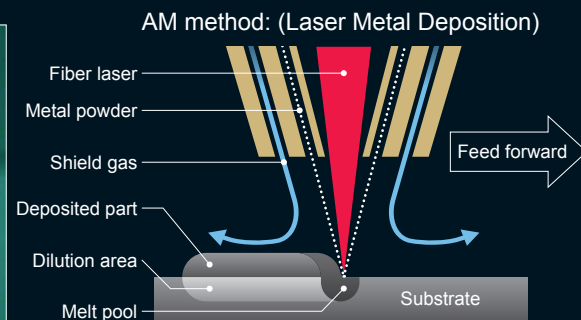
# The integration of Additive Manufacturing with Multi-tasking machining

Hybrid Multi-tasking machine – A fusion of next-generation technology with Mazak's extensive Multi-tasking experience

## VC-500 AM ADDITIVE MANUFACTURING

### 5-Axis Additive Manufacturing (AM) capability

Metal powder is fed from the nozzle tip and melted by a laser to form a coating or feature.



### Joining dissimilar materials

High density build-up of one material on another.

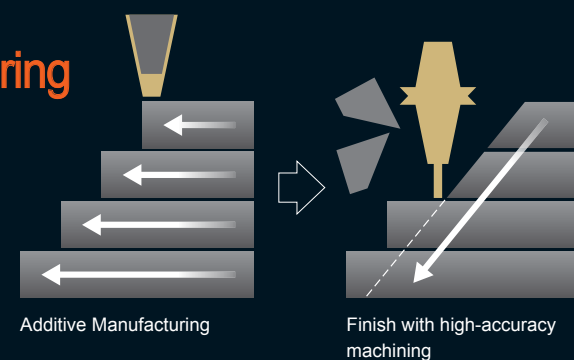
Micrograph cross-section view of Inconel 718 deposition onto a Stainless Steel 316 substrate.

Deposited material (Inconel 718)  
Dilution and heat-affected zone  
Substrate (Stainless steel 316)



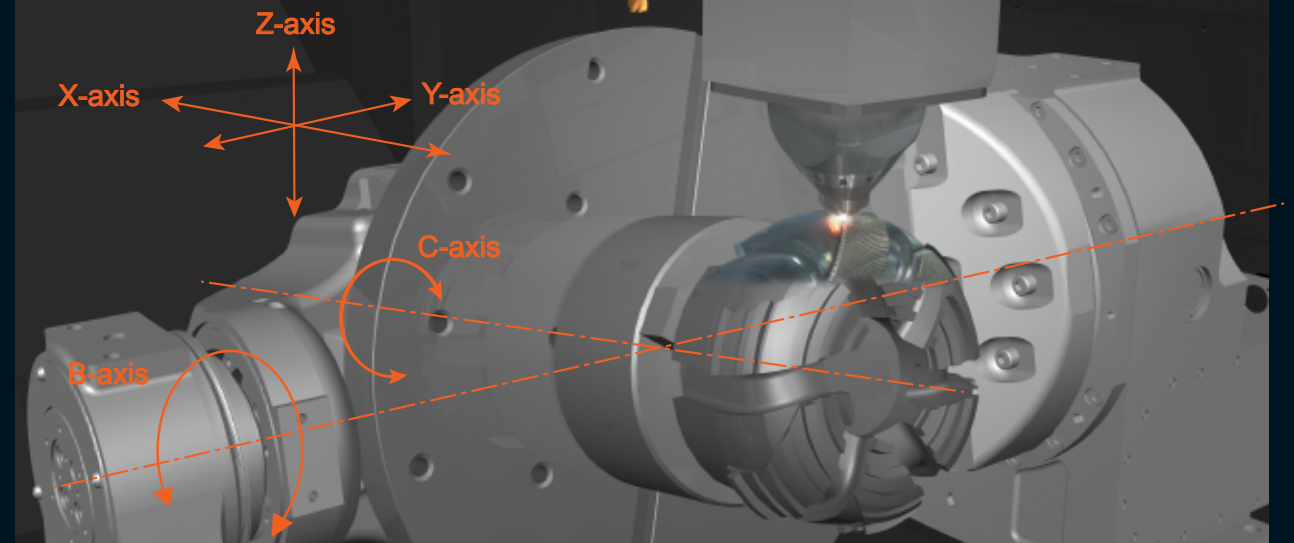
### Near net shape by Additive Manufacturing and machining with high accuracy

After building up, parts can be machined to required tolerances in the same setup by using Mazak Multi-tasking technology.



### Headstock with machining spindle and Additive Manufacturing head

Additive Manufacturing head is isolated during machining by protective cover. Can perform simultaneous 5-axis machining.



Process from Additive Manufacturing to high-accuracy machining



Additive Manufacturing

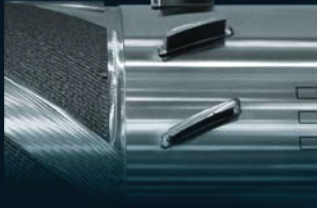


Finish with high accuracy machining



VC-500 AM  
with optional equipments.

Additive Manufacturing applications are found in  
a wide variety of industries



Shaft work  
- 316 Stainless Steel substrate  
- Inconel 718 deposition material



Turbo impeller  
- Inconel 713 substrate  
- Inconel 718 deposition material



Drill Bit  
- Steel substrate  
- Inconel 718 deposition material



# Mazak

[www.MazakUSA.com](http://www.MazakUSA.com)

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- This product is subject to all applicable export control laws and regulations.  
The accuracy data and other data presented in this catalogue were obtained under specific conditions.
- They may not be duplicated under different conditions.  
(room temperature, workpiece materials, tool material, cutting conditions, etc.)

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