Aurora Labs®

AL250
3D Metal Printer
Combining Function with Power

auroralabs3d.com

Designed for Industry with advanced research capabilities

The AL250 is an industrial machine that provides advanced research capabilities. The system is equipped with a market-leading 1500W fiber laser (option of single or dual laser) that enables a high level of productivity and the ability to process a wide range of materials.

The 4D scan-head provides independent, real-time adjustment of laser focus and spot magnification, enabling total control of the energy distribution of the laser spot. High laser power parameters enable market leading productivity per laser. The gas re-circulation system and chamber have been designed to optimise gas flow and reduce powder trap points to improve machine cleaning.

Our software offers user-friendly operation for everyday applications, along with advanced parameter control for optimising processes and material development. With temperature control functionality, we enhance thermal stability, resulting in superior part quality.

The AL250 system also enables continuous bi-directional printing, utilising Aurora Labs patented MCP™ technology. This maximises the laser on-time, further increasing the production rate and efficiency of the system.

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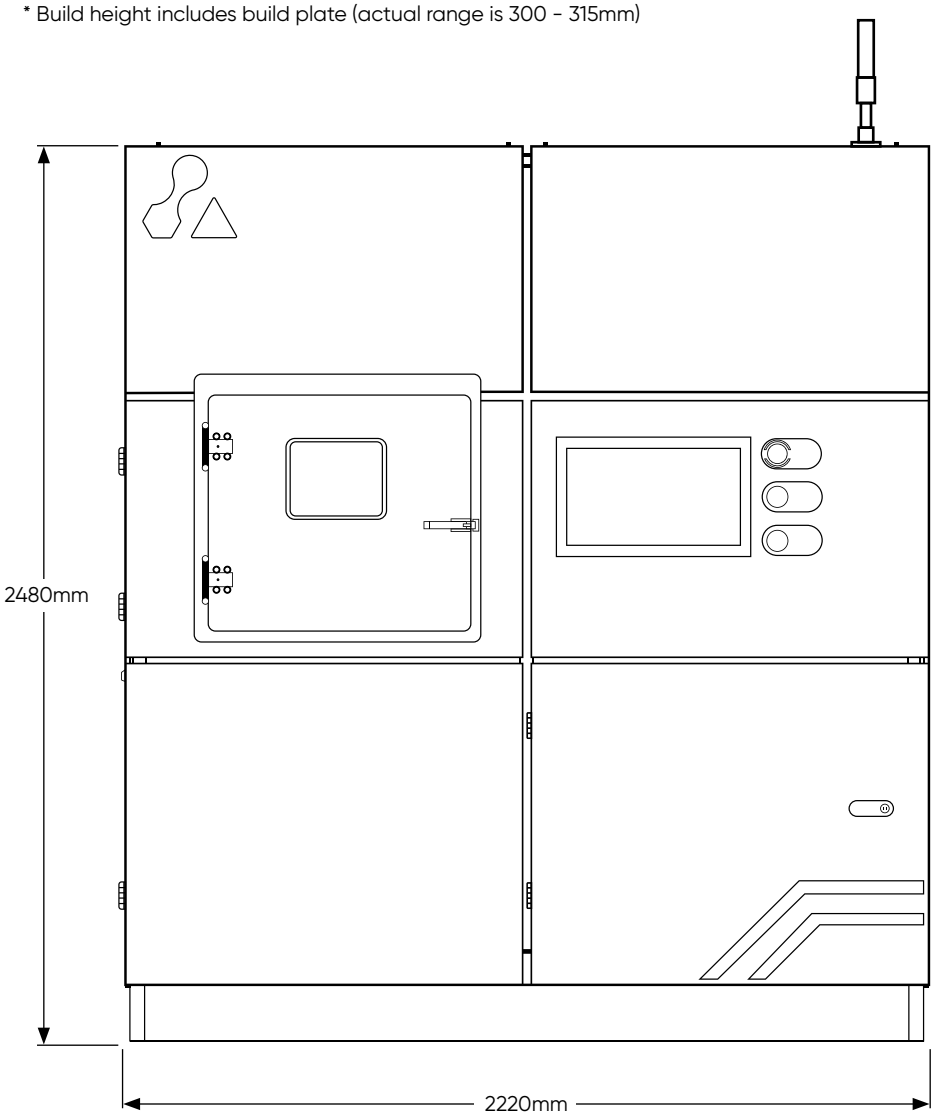
Technical Data

Build Envelope	250 x 250 x 300mm (X,Y,Z)*
Layer Thickness	30 - 150µm
Laser System Options	1 x Fibre laser 1500W (CW) OR 2 x Fibre laser 1500W (CW)
Scanning Speed	Max 20m/s
Spot Diameter	75 - 150µm
Wave Length	1064nm
Bed Pre-Heating	Up to 200°C
Connected Load	Approx power consumption 25A Power supply 3/n/PE AC 400V, 32A
Inert Gas	Ar/N2 (external N2 generator optional)
Inert Gas Consumption	~5L/min
Dimensions	2220 x 1300 X 2480 (W x D x H)
Weight	Approx 1700kg
Operating Conditions	18 - 30°C
Recoating Systems	Variable speed recoating system. Metal, silicone and ceramic recoaters.

* Build height includes build plate (actual range is 300 - 315mm)



Materials

Stainless Steel 316
Stainless Steel 17-4PH
Inconel 625
Inconel 718
AlSi10Mg
AlSi7Mg
Ti6Al4V
CP Ti
Copper

Machine Highlights

- **Efficient build volume** 250 x 250 x 300mm
- **Single or dual 1500W fibre laser system** for fast production
- **Continuous bi-directional printing** powered by MCP™
- **Precision 4D optics** with 75-150µm spot size
- **Process monitoring** using thermal and optical cameras
- **Environmental control** O2, humidity, gas flow and pressure
- **Advanced software** for material development
- **User friendly design** with fast material changes and easy maintenance
- **Unique powder delivery system** allowing for use of irregular shaped powders

Get in touch

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