

Raise3D MetalFuse



New Technology, A Leap in Efficiency

MetalFuse uses the Catalytic Debinding process, which can represent up to 60% less processing time, and an increase in the part's density of up to 97% of that of wrought iron.



High-End Metal Filament by BASF

By using BASF Forward AM's metal filaments, Ultrafuse® 316L and Ultrafuse® 17-4 PH, MetalFuse is capable of providing improved printing repeatability and a greater yield rate.



Adopting a Time-Tested Process

Both the catalytic debinding furnace (D200-E) and the sintering furnace (S200-C) are used to post-process the "Green Parts", in a way to the process that was developed based on BASF's know-how of Metal Injection Molding (MIM).



Specialized Slicing Software

A special edition of ideaMaker offers templates optimized for this kind of printing, while also taking into account the sintering and debinding process that can be paired with MetalFuse. This version of ideaMaker also features a simpler slicing process.



Complete In-house Solution

MetalFuse is a complete end-to-end solution for metal FFF printing. No need to put your IP at risk by using external services, and no waiting times for third-party completion, as everything is done in-house.



Touchscreen

A visual interface that needs only one click to select a template, and stores work history, keeping it available for review.



Environmentally Friendly

Filters that clean exhaust gas, bringing them to safe levels and reducing pollution.

S200-C

Sintering Furnace



Technical Specifications

Printer	Forge1
Machine Size	620 × 626 × 1390 mm/ 24.4 × 24.6 × 54.7 inch
Build Volume	300 × 300 × 300 mm/ 11.8 × 11.8 × 11.8 inch
Print Technology	FFF (Fused Filament Fabrication)
Print Head	Dual-Head with Electronic Lifting System
XYZ Positioning Resolution	0.78125, 0.78125, 0.078125 micron
Print Speed	30-150 mm/s
Max Build Plate Temperature	120°C
Supported Materials	Metal (Ultrafuse® 316L, Ultrafuse® 17-4PH) ^① Support Layer Material: Aluminum Oxide (Ultrafuse® Support Layer) ^②
Filament Diameter	1.75 mm
Max Nozzle Temperature	300°C
Operating Ambient Temperature	15-30°C, 10-90% RH Non-Condensing
Slicing Software	ideaMaker for Metal
Supported File Types	STL/ OBJ/ 3MF/ OLTP
Supported OS	WINDOWS
Machine Type	Debinding Furnace
Machine Size	806 × 905 × 1583 mm/ 31.73 × 35.63 × 62.32 inch
Build Volume	200 × 200 × 200 mm/ 7.87 × 7.87 × 7.87 inch
Trays	Adjustable Multi-Level Tray (7 Positions)
Protection Gas	Argon or Nitrogen
Max Catalyst Storage	2 L/ 122 inch ³
Max Gas Flow	5 L/min
Power Supply Input	220-230 V AC, 50/ 60 Hz, Single Phase, 20 A/ 4.4 KW
Exhaust Treatment	Activated Carbon Adsorption Facilities
Safety Control	Safety interlocks, Front-mounted E-stop
Machine Type	Sintering Furnace
Machine Size	1434 × 1137 × 1974 mm/ 54.46 × 44.76 × 77.72 inch
Build Volume	200 × 200 × 200 mm/ 7.87 × 7.87 × 7.87 inch
Sintering Processing Time	About 20 hours
Trays	Adjustable Multi-Level Tray (6 Positions)
Protection Gas	Argon, Nitrogen
Max Heat Load	14 kW
Peak Internal Temperature	1450°C/ 2642°F
Power Supply Input	380-400 V AC, 50/ 60 Hz, 3 Phase (5 wire), 45 A/ 30 kW Peak Draw
Safety Control	Front-mounted E-stop, Over-temperature protection

① Metal materials are used to print parts and supports.

② The support layer material can't be printed on its own and is only used for layer isolation, allowing for good separation between the support and the prints after sintering.

Authorized Business Partner