

# Avimetal-MT170

## Selective Laser Melting Equipment

10+ years' material innovation on Advantages

Optimized choice for dentistry

Excellent process solutions

200+ materials forming support

High accuracy/Stable/Cost-efficient

Open source equipment



### High Quality Core Components

Stable and reliable for a long time



### Adjustable Parameters

Built-in parameters adjustable according to needs



### Modular and Compact Design

Easy to assemble and maintain



### Open-source Parameters

The parameters available for editing and directly use for customer



### The Powder Feeding Structure

Accuracy of powder feeding, replacement of different metal powders



### Real-time Monitoring

Real-time recording, output, self-diagnosis



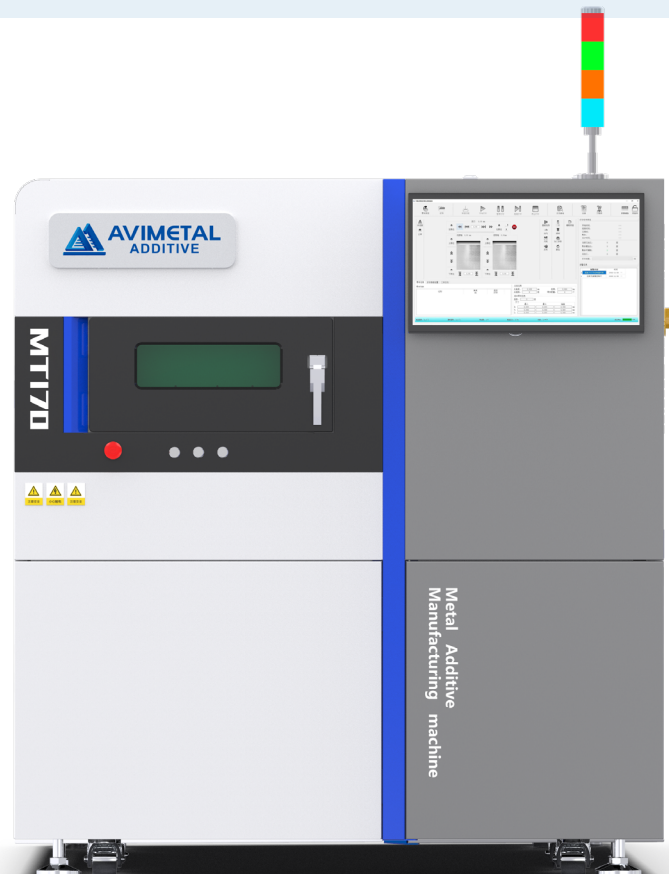
### Multi-scraper Adaptable

Rubber, hairbrush, high-speed steel, ceramic etc.



### Custom Production

Support the special service for customer



## Application

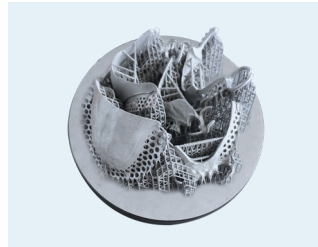
Mass manufacturing of dental products such as frameworks and dental crowns



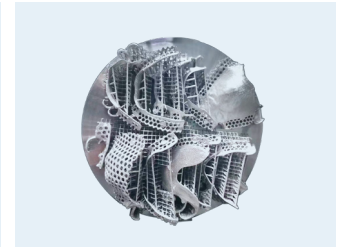
Dental Crowns ( CoCrMoW )



Dental Crowns ( NiCr )



Frameworks ( Ti64 Gr23 )



Frameworks ( CoCrMo )

## Technical Parameter

Materials	CoCr Alloys, Cp Ti and Titanium Alloys, NiCr, etc.
Build Size	φ 170mm×120mm (D×H) Customized: max 140mm~150mm (H)
Laser Type	500W Single/Dual Fiber Laser
Scanning System	High-speed galvanometer
Beam Focus System	F-theta field lens
Beam Quality	$M^2 < 1.1$
Beam Focus Diameter	40~80μm (size adjustable)
Max Scanning Speed	7m/s

Layer Thickness	20~100μm
Powder spreading	One-way variable speed powder spreading
Gas Protection	Ar/N <sub>2</sub>
Oxygen Content	≤ 100ppm
Efficiency	15cm <sup>3</sup> /h (Single laser, related to the shape, size, material and parameters of the part)
	28cm <sup>3</sup> /h (Dual laser, related to the shape, size, material and parameters of the part)
Host Dimension	1400mm×800mm×1600mm ( W×D×H )
Installation Dimension	3200mm×2400mm×2180mm ( W×D×H )
Power Supply	AC220V
Power Consumption	7kW (single laser); 9kW (dual laser)

## Materials

More than 200 kinds of alloys, such as  
MT - Cobalt-chromium alloy/Titanium alloy/High-entropy alloy/Refractory metal/High temperature alloy/Stainless steel/Die steel/Copper alloy

## Process

Design&Modeling, Structure Optimization, Forming Process, Procedure Control, Heat Treatment, Surface Treatment, and Detection&Analysis, etc.

