



XH-M160G

Compact and High-performance Printing Solution for Pure Copper and Copper Alloys

Features

✦ Incredible Printing Performance with Copper and Copper Alloys

Green laser enables additive manufacturing of highly reflective materials to print more effectively and efficiently. It delivers a high absorption rate, and generates less spatter during printing. Finer details can be achieved due to the small spot size of green laser. The performance of the printed copper and its alloy parts are enhanced.

Electrical conductivity $\approx 101\%$ IACS⁽¹⁾

Thermal conductivity $\approx 390\text{W}/(\text{m}\cdot\text{K})$ ⁽¹⁾

Density $\geq 99.8\%$ ⁽¹⁾

Min.wall thickness 0.08mm

✦ Fast Printing Speed in Copper and Copper Alloys

10-30cm³/h(green laser) **vs** 1.7mm³/h(infrared laser)⁽²⁾

✦ Reliable and Stable Operation

Equipped with highly customized green optical components

Note: (1) Pure copper heat treated. The test parameter can vary according to factors like printing parameter, material used.
(2) Typical printing speed of 1kw NIR laser

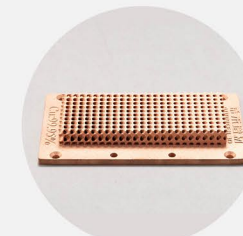
M160G is a compact industrial metal laser printing system, with a small footprint of 160*160*200mm, designed for pure copper and copper alloy printing. M160G combines with a 500W or 700W green fiber laser, one of the first industrial green lasers on the market with a wavelength of 532nm, designed to process high reflective metal powders. It enables 3D printing of materials such as copper, copper alloy and other precious metals, which are difficult or impossible for infrared wavelength. M160G allows complete freedom of machine operation. Machine parameter and powder choice are unlocked for the user. Open to integrate with the upstream and downstream in software systems.

Machine Specifications

Model	XH-M160G
Build Volume ⁽¹⁾	160*160*200mm
Laser Source	Continuous single-mode green fiber laser, wavelength 532nm, optional with 500W, 700W
Focus Diameter	20-40 μm
Focusing System	F-theta lens focusing
Scanning Speed	Up to 8m/s
Printing Speed	10-30cm ³ /h
Layer Thickness	20-120 μm
Machine Dimensions	1280*1200*2000mm
Weight	Approx. 1.2T
Materials	Pure copper, copper alloys, refractory metals, composite materials(Cu-based diamond composite, Cu-based graphene), other common metal materials

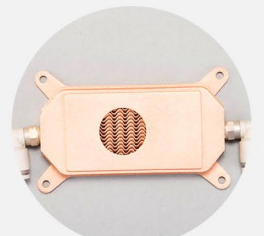
Note : (1)Height of build plate is not included.

Applications



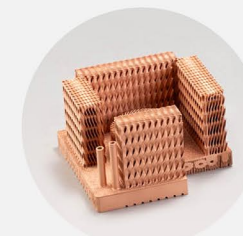
IGBT

Material: Pure copper



Cold Plate

Material: Pure copper



Fin Structure Display

Material: Pure copper
Fin thickness: 0.5mm



Ultra-thin Cooling Fins

Material: CuSn10
Wall thickness 0.08mm



High Frequency Induction Heating Coil

Material: Pure copper

