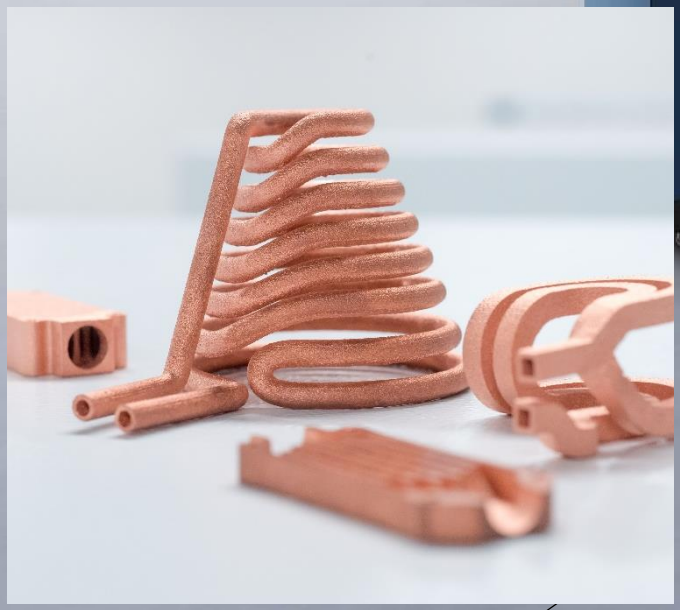
.PREVIEW

TruPrint 1000 +
TruDisk 1020

TruPrint 1000 Green Edition

01

Unique combination of green laser and additive manufacturing system



02

Outstanding thermal properties and electrical conductivities

03

Highest quality and productivity of printed pure copper, copper alloys and precious metals

TRUMPF

Machine Tools / Power Tools
Laser Technology / Electronics

Unique combination

As a technology leader, TRUMPF combines the expertise in additive manufacturing with our industrial beam sources to create this special edition system: TruPrint 1000 Green.

The combination of the two products, TruPrint 1000 and TruDisk 1020, enables stable and highly productive processing of pure copper, copper alloys and precious metals.

01

Unique combination of green laser and additive manufacturing system

The TruPrint 1000 is one of the most compact and productive additive manufacturing systems, which can be used to create components in almost any geometric shape.
Combining the TruPrint 1000 with the TruDisk 1020, one of the first industrial green lasers on the market with a wavelength of 515 nm, can be highly reflective materials are processed. The TruPrint 1000 Green Edition now enables 3D printing of materials such as copper, copper alloys and precious metals, that are difficult or impossible to process with infrared wavelength.

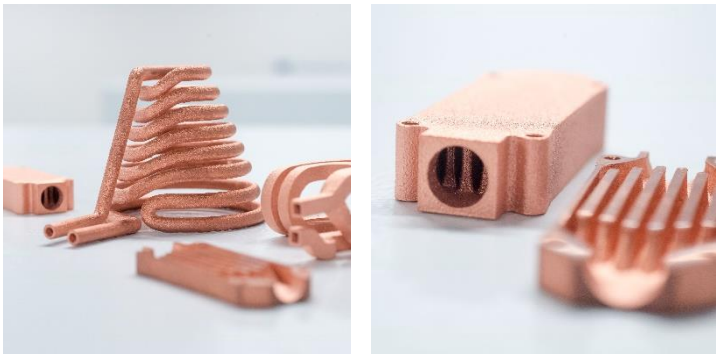
Microsection copper ETP, 100x magnification

02

Outstanding thermal properties and electrical conductivities

A large number of applications benefit from the combination of additive manufacturing technology and the conductivity of copper or copper alloys. It opens new ways to manufacture inductor coils for heating or hardening, and components for demanding cooling applications, such as electronic devices and opto-electronics.

The TruPrint 1000 Green Edition is able to achieve 100% electrical conductivity of IACS and porosity levels well below 0.5% by using highly conductive pure copper ETP (EN CW004A) with a specified Cu content of > 99.9 %.



Sample parts printed with pure copper, like inductors, heat exchangers and electronics

03

Highest quality and productivity of printed pure copper, copper alloys and precious metals

Using the TruPrint 1000 Green Edition, it is possible to manufacture parts with copper alloys such as CuCr1Zr with a bigger process window and a higher productivity compared to infrared laser additive manufacturing systems.
For jewelry applications, the TruPrint 1000 Green Edition is an ideal choice for materials, such as rose gold, achieving density values of higher than 99.9% and pore sizes smaller than 30 µm.

TruPrint 1000 Green Edition		
Build volume (cylinder)	mm x mm	Ø 97 x H 100
Processible materials[1]		Weldable metals in powder form, such as: copper, copper alloys or precious metal alloys
Build rate[2]	cm³/h	Up to 25
Max. laser power at the workpiece (TRUMPF TruDisk laser)	W	500
Beam diameter	µm	200
O_2 concentration	ppm	Down to 100 (0,01%)
Scan speed (powder bed)	m/s	Max. 3
Shielding gas		Nitrogen, Argon
Power supply	V / A / Hz	TruPrint 1000: 230 / 7 / 50/60 TruDisk 1020: 400 / 32 / 50/60
Dimensions	mm	TruPrint 1000: 1445 x 730 x 1680 TruDisk 1020: 1340 x 728 x 1430
Weight	kg	TruPrint 1000: 650 TruDisk 1020: 515

[1] Current material and parameter availability upon request
[2] Actual build rate consisting of exposure and coating. Dependent on system configuration, process parameters, material and degree of filling
Subject to alteration. Only specifications in our offer and order confirmation are binding.

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