

SMALL IS THE NEW

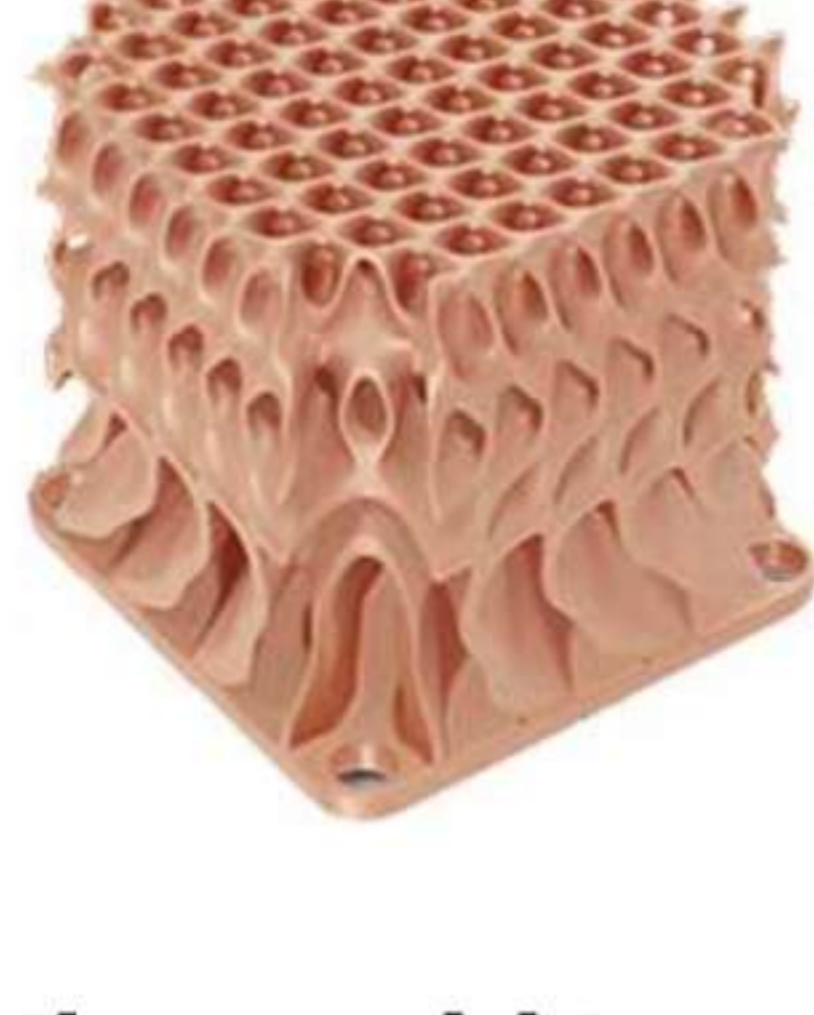
BIG

IN ADDITIVE MANUFACTURING



No 1, 2021

A newsletter from Digital Metal® about the possibilities within high-precision metal binder jetting

**Digital Metal first in the world to commercially print with 99,9 % pure copper.**

Printing with pure copper has long been anticipated by those working within binder jetting. Now, as we add pure copper, DM Cu, to our extensive material offering, we open entirely new possibilities within many industries. The excellent thermal and electrical conductivity properties of pure copper make it ideal for a wide range of applications. Designing for optimal functionality with 99.9% pure copper brings out the best of the material.

[Learn more](#)**A Digital Metal® printer installed at IMVT**

The Institute for Micro Process Engineering (IMVT) is one of the leading academic research institutions in the field of micro process engineering worldwide. IMVT at the Karlsruhe Institute of Technology (KIT) was founded in July 2001 with the objective of enhancing the use of novel microstructures in modern process engineering. An international team of 64 employees specialized in various disciplines focuses on the construction and fabrication of microstructured devices, on fundamental studies of transport processes and chemical reactions in microstructures, and on the use of prototypes in selected thermal and chemical processes. Apart from research projects financed from basic funds under the Helmholtz programs, projects funded by third parties are being executed in cooperation with industry and academic research institutions in Germany and abroad.

“We bought the printer due to its high resolution and possibilities to print fine structures. With the system we want to expand our 3D printing capabilities to our existing LPBF system. We look forward to using this machine for advancing a number of applications in micro process engineering,” says Fabian Grinschek, PhD student at IMVT.

[More information on IMVT and inquiry about projects](#)**Printers installed at leading Japanese companies**

Digital Metal®’s binder jetting technology continues to raise great interest worldwide. Recently, our printers were shipped to several leading companies within automotive and industry in Japan. Due to the ongoing pandemic, they were installed by remote from Sweden in close collaboration with our Japanese team and the customers. One of the printers was installed on the third floor, which was a challenge. The installed base of Digital Metal printers continues to expand as machines now are operational all over the world.

Interested in our printer line? [Read more](#)**Meet Digital Metal® – Karl Glad**

Karl Glad works as a materials development engineer at Digital Metal and is part of a strong team working with material development. A large part of his work is about adapting the process to new raw materials and securing the best possible quality of the resulting components, following the standards in different industries.

“Our latest material addition is pure copper”, says Karl. “Copper is the best conductor for both heat and current, beneficial in applications such as induction heating, heat transfer and electronics. Plus, its color is really beautiful, which makes it perfect for jewelry or any other application where you want to create a visual accent. Printed copper in general has a somewhat lower conductivity when comparing with a wrought copper rod, but in many cases, this can be more than well compensated for by design optimization.”

Karl has been working at Digital Metal since 2015 and finds his work exciting. “You’re faced with new, complex challenges every day and it’s important to balance the different requirements of the binder jetting process against each other”, he concludes.

**Our ever-growing material offering**

Digital Metal offers a wide range of different materials for 3D metal printing. Our current offer consists of stainless steel 316L and 17-4PH, titanium Ti6Al4V, the two superalloys DM 625 (equivalent to Inconel 625) and DM247 (equivalent to MAR M247) and recently added tool steel DM D2. The latest addition to our portfolio is DM Cu, pure copper (99.9%). New materials are being launched continually so keep your eyes open for new opportunities to expand your business.

Read more about our materials on [our website](#)