



Press Release

IDS trade show: TRUMPF presents solution for more efficient abutment printing

IDS 2021 highlight: TRUMPF 3D printer uses preforms to boost efficiency in production of dental implant components // New solution can be retrofitted to current series of TruPrint 1000 3D printers

Ditzingen, September 22, 2021 – At this year’s IDS dental show, high-technology company TRUMPF unveiled a new processing solution that makes the production of customized, implant-supported dental prostheses more efficient. The new process focuses on the manufacturing of “abutments”, the connecting elements that join the dental implant to the visible crown. The TRUMPF TruPrint 1000 3D printer, which is specially designed for the dental industry, can print up to 64 implant abutments in a single print job – and thanks to the use of preforms it gets the whole job done in less than three hours! A preform is a special kind of base or substrate with a prefabricated implant connection geometry and a flat platform on which an individual component can be printed from a chromium-cobalt alloy or titanium using a 3D printer. This processing solution is used to create the abutments that are ultimately used to support the dental crown. Abutment manufacturing has traditionally relied on milling, bonded hybrid Abutments, or complex casting methods. But the new TRUMPF preform solution makes the whole fabrication process more efficient while using fewer materials. “Implant-supported dental prostheses are the world’s fastest-growing dental industry segment,” says Reinhard Sroka, dental industry manager at TRUMPF. “That’s why dental laboratories need to act fast to tap into this lucrative and pioneering field – harnessing the power of high-productivity 3D printers is the best way to tackle growing cost and competitive pressures.”

TRUMPF has developed a special adapter plate for its preform processing solution; this can be loaded with preforms prior to printing and inserted into the TruPrint 1000 3D printer, where it is calibrated fully automatically. The printer, which comes with a choice of one or two lasers, uses the laser metal fusion technique to melt the metal powder layer by layer and fabricate individual abutments in the powder bed.

Press Release

A versatile choice for implant prosthetics

As well as boosting productivity, additive manufacturing also offers key benefits when it comes to tackling complex abutment geometries. Users have almost unlimited freedom to choose where to position the screw channels, and even the most complex structures can be fabricated with ease.

The new TRUMPF preform processing solution adds an extra dimension to the TruPrint 1000, making it the perfect all-in-one machine for implant prosthetics manufacturing. What's more, the Multiplate option enables the system to produce parts without manual intervention on up to four build platforms, paving the way for overnight and weekend work. The system automatically switches to the next platform after each production job and stores them directly within the machine. The Multiplate function cannot currently be used in tandem with the new preform processing solution. Additive manufacturing of custom abutments is now available for all new TruPrint 1000 machines. This function can also be retrofitted to the latest series of machines.

Digital photographs in print-ready resolution are available to illustrate this press release. They may only be used for editorial purposes. Use is free of charge when credit is given as "Photo: TRUMPF". Graphic editing – except for cropping the main subject – is prohibited. Additional photos can be accessed at the [TRUMPF Media Pool](#).



TruPrint 1000

The TruPrint 1000, which is specially designed for the dental industry, can print up to 64 implant abutments in a single print job – and thanks to the use of preforms it gets the whole job done in less than three hours.



Laser Metal Fusion

The new TRUMPF preform solution makes the whole fabrication process more efficient while using fewer materials.



Press Release



Adapter plate

TRUMPF has developed a special adapter plate for its preform processing solution; this can be loaded with preforms prior to printing and inserted into the TruPrint 1000 3D printer, where it is calibrated fully automatically.



Preform

Preform adapter (left) and individually printed preform (right).



About TRUMPF

TRUMPF is a high-tech company offering manufacturing solutions in the fields of machine tools and laser technology. The Company drives digital connectivity in the manufacturing through consulting, platform products and software. TRUMPF is a technology and market leader in highly versatile machine tools for sheet metal processing and in the field of industrial lasers.

In 2020/21, the company employed some 14,800 people and generated sales of about 3.5 billion euros (preliminary figures). With over 80 subsidiaries, the TRUMPF Group is represented in nearly every European country as well as in North America, South America and Asia. The company has production facilities in Germany, France, the United Kingdom, Italy, Austria, Switzerland, Poland, the Czech Republic, the United States, Mexico and China.

Find out more about TRUMPF at www.trumpf.com

Press contact:

Athanassios Kaliudis
Spokesperson Laser Technology, Group Communications
+49 7156 303-31559
Athanassios.Kaliudis@trumpf.com

TRUMPF GmbH + Co. KG, Johann-Maus-Straße 2, 71254 Ditzingen, Germany