

A gleaming future: 3D printing takes the dental market by storm

Top quality individual solutions: New Ancorvis is an innovative production and service company in the dental industry that has modernized its work flow with the help of 3D printing. Services provided by New Ancorvis include development, software, manufacturing, design and training.



New Ancorvis Srl

www.newancorvis.eu

Established in the 1940s, New Ancorvis specializes in milling and 3D printing technology using cad-cam technology to produce prosthetic components for the dental industry, including crowns, bridges, screwed-in attachments and surgical structures, from drilling templates to meshes.

| INDUSTRY | NUMBER OF EMPLOYEES | SITE |
|----------|---------------------|--------------------|
| Dental | 90 | Bargellino (Italy) |

TRUMPF PRODUCTS

■ TRUMPF TruPrint 1000

APPLICATIONS

■ Additive manufacturing

Challenges

Emilia-Romagna has more to offer than just fast cars and great food. In recent years, the region in the south of northern Italy has grown into the European hub for education and research in the information and communication, agriculture and food sectors as well as for Industry 4.0 and medical technology. With its headquarters located just a stone's throw from Bologna airport, New Ancorvis is one of the ambitious pioneers in the dental industry. Established in the 1940s, New Ancorvis specializes in milling and 3D printing technology using cad-cam technology to produce prosthetic components for the dental industry, including crowns, bridges, screwed-in attachments and surgical structures, from drilling templates to meshes. Everything that leaves the company's production halls is high-precision and rarely run of the mill: "We've never made it our goal to produce mass goods", explains Fabio Cocchi, Export Manager at New Ancorvis. "Our passion has always lied in jobs that challenge us. Customization is our main focus."

Over the years, the company has developed from its origins as an expert in milling technology for the dental industry into an innovative production company that focuses on innovative, progressive solutions. The next logical step in this evolution was expanding production to include 3D printing technology. "3D printing trumps milling in numerous applications. Particularly in highly customized fields like prosthesis and implants", explains Fabio Cocchi. "We firmly believe that 3D printing has a role to play in the future

of dentistry."



"The setup, start-up and training on the systems by TRUMPF was exemplary."

FABIO COCCHI
EXPORT MANAGER



Solutions

In 2016, New Ancorvis started conducting its first tests on a 3D printing system. This was followed by an intensive test phase, gaining knowledge and establishing new production processes. After this, the investment very quickly paid for itself. New Ancorvis now consistently produces prosthetics made of titanium and CoCr alloys on its eight 3D additive printing systems, three of which are from TRUMPF. The performance and surface quality of parts printed on the TruPrint 1000 as well as the preform option were the reasons that won over New Ancorvis.

Implementation

New Ancorvis uses the preform option for the precise and quick production of screwed-in elements and single abutments. Abutments are the connectors between the replacement root and the visible crown. Traditionally, individual abutments are often milled from blanks or pre-milled blocks. Using the preform option, it's possible to print the customized part made from chrome cobalt alloy or titanium onto base parts with prefabricated implant connection geometry (preforms). The result is an abutment that supports the crown or bridge. New Ancorvis produces preforms and preform adapters conventionally in-house and then prints the patient-specific part onto them using the TruPrint 1000, reducing part costs and production times in the process. New Ancorvis is able to print up to 64 individual single abutments on a build plate within around two hours, thereby reducing production time by 80-90 percent for each abutment. For comparison, milling an abutment would previously take 10-20 minutes. "With preform, we've been able to consistently update our work flow by optimally combining the advantages of each production technology for every application. For example, we start by producing connectors on the lathe. These are then inserted into the TRUMPF build plate, the printer automatically calibrates and then prints the anatomy", explains Fabio Cocchi. "Using this process, we've been able to reduce production times, lower the cost per piece and achieve high surface quality. These advantages flow through to our customers, as we're able to provide quick, competitively-priced services with market leading quality."



Forecast

Investing in machinery and building up knowledge have paid off for New Ancorvis. The company is now a reliable quality provider for 3D printed components in the dental industry. Beyond order manufacturing for individual parts, New Ancorvis also produces preforms and preform adapters for other production centers. The company is currently looking into several options for branching out its 3D printing portfolio to include other medical fields. "We also hope to continue our partnership with TRUMPF and work together to further develop preforms. Preforms are still not widely encountered in the dental industry and we therefore see great potential in this sector. We firmly believe that we can make preforms even more successful in partnership with TRUMPF."

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