NL Ortodonzia

Case Study: Dental Aligners

The rapidity and reliability of the Roboze One 3D Printer enabled orthodontic laboratory NL Ortodonzia by Nunzio Loizzo to increase production by 25%

NL Ortodonzia

Nunzio Loizzo has taken the first steps in the orthodontic industry in 1995.
In May 2005 he opened his first laboratory: NL ortodonzia. Thanks to his foresight, he was one of the first to approach the digital world in the dental field and is today one of the most popular laboratory in its region.

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Accelerating production time of the dental devices

Five years ago Mr. Nunzio Loizzo approached the digital world, understanding right from the start how rapid prototyping could bring benefits both in terms of quality and in terms of workflow optimization.

“Abandoning traditional methods was a very difficult undertaking. I invested most of my free time and worked to research and study the best solutions for my business: from reverse engineering to real production. The results have paid off this investment. "

The solution: Roboze One

Once he had perfected his skills in reverse engineering and CAD software, Mr. Loizzo was missing just one the last piece of the puzzle: a high precision 3D printing solution that was both affordable and easy to use.

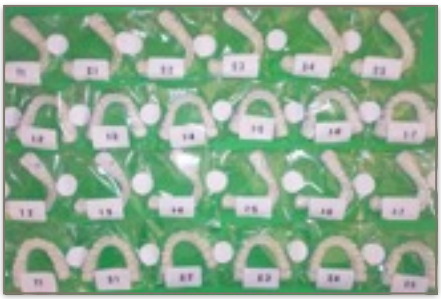
"Having personally tested the accuracy of the Roboze One, which is due to its patented axes movement, as well as the post-purchase rapidity and professionalism of the Roboze support team, I realized that at last my search was over.

My first choice, as is usual in my industry, had initially shifted towards SLA technology but it gave me more worries than benefits. A piece printed on a Roboze One is immediately functional; with my first SLA 3D printer I had to post-treat the piece with liquid substances, most of them toxic, wearing uncomfortable safety devices. In addition, after waiting for the piece to dry, I had to harden it in an oven. All this took me an extra hour of work, while with the Roboze solution all I have to do is remove the piece from the plate."

A useful solution 24/24h

Incorporating the Roboze One has been a synonym of quick deliveries (1 day compared to 3 with the traditional methods), with an increase in productivity of 25% over the previous year.

"Roboze One is a workhorse! - said Mr Loizzo. Today I can exploit the nighttime hours and weekends for production. Even during the closing hours of the lab I can be sure that a reliable partner is working for me. The following morning I find all the completed models on the plate, ready to be delivered in one day. All this with a precision never seen on an FFF 3D printer."



Results

According to the production experience of the clear-aligner bites by Mr. Nunzio Loizzo, the efficiency ratio pf using Roboze's technology is 1: 3 days, if compared compared to traditional methods. This represents a considerable advantage in terms of both rapidity and productivity.

The production phases for 16 models by implementing a digital manufacturing approach is described in the following table:

About Roboze

Roboze develops and produces hardware solutions for professional 3D printing.

The company has patented a printing technology that ensures the production of accurate parts with very precise tolerances and high quality. Its products also include the ability to print functional prototypes in a variety of high performance techno-polymer engineering plastics with excellent mechanical and chemical properties, which are developed and produced tailor-made.

Roboze

Roboze is a brand of Mekatronika srl.

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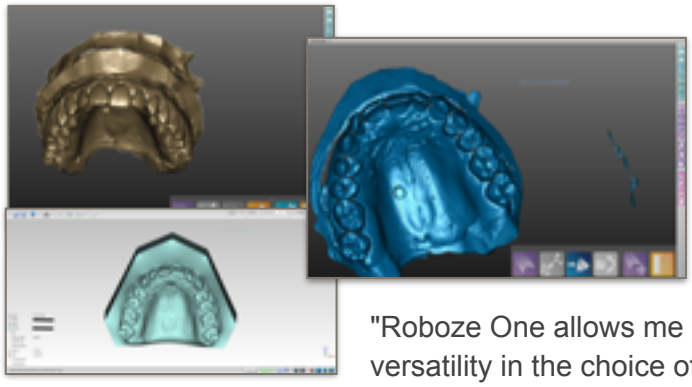
1,30 h	Creation of the plaster model from the patient's footprint
	Scanning of the model
	The scan processing software
	Measurements and set-up with the desired patterns by Scan software
	Export in .stl file
16h	Setting printing parameters by slicing software
	Production (2 prints; total cost € 13.40)



"Roboze One allows me to have versatility in the choice of materials. I don't have to worry about expiration dates and also the loading /unloading of the filament is very simple and intuitive.

Today I use the ULTRA material, which allows me to have high quality models with mechanical properties suitable for my core business. The FLEX, flexible, rubber-based material, is also useful as a support to the work, such as standards of auxiliary molds of specific equipment. "

After introducing Roboze One, the laboratory has seen an increase in demand, improving its reputation for efficiency and rapidity.

"Surely the next step will be to expand the number of in-house Roboze One machines and meet the growing demands of my clients.
I consider Roboze One a reliable employee who gave us access to a previously unexplored space. In three words: efficiency, reliability and speed."

Mr. Nunzio Loizzo - NL Ortodonzia