



ARTDENTECK®

POSTPROCESS

CASE STUDY

Automating Dental Resin Removal: ARTDENTECK's Path to Improved Safety and Efficiency with PostProcess Technologies™

OVERVIEW

ARTDENTECK is a French dental laboratory specializing in high-quality prostheses with a commitment to craftsmanship, precision, and rapid delivery. With three state-of-the-art facilities, ARTDENTECK ensures the entire manufacturing process, from digital design to finishing, is executed under one roof at its historic Brignais location, which houses advanced milling machines and 3D printers. The laboratory's Lyon branch offers premium services focused on urgent cases and rapid turnaround times. In 2024, ARTDENTECK expanded its footprint with the opening of a new laboratory in Roquebrune Cap Martin. ARTDENTECK champions local production and rapid turnaround times while upholding exceptional quality standards.

Previously relying on IPA (isopropyl alcohol) baths for resin cleaning, the company encountered safety issues and operational inefficiencies in their workflows. To address these issues, ARTDENTECK adopted the PostProcess Technologies™ DEMI 430™ automated resin removal solution.

This case study highlights how the adoption of the PostProcess DEMI 430 helped optimize ARTDENTECK's post-processing operations to maintain the highest standards in dental prosthetics.

FACING THE HURDLES OF MANUAL RESIN REMOVAL

ARTDENTECK utilizes two Prodways LD10 and two Asiga Max 3D printers to produce resin dental models and custom dental impression trays, printing over 100 models per day and consuming approximately 400 kg of resin annually. Previously, the company relied on IPA (isopropyl alcohol) baths to remove excess resin after printing. However, this method posed significant challenges:

Health and Safety: The use of IPA alcohol baths for such high production volumes made it difficult to maintain a safe working environment.

Operational Efficiency: Post-processing with IPA was time-consuming and involved a manual process that disrupted workflows and caused delays.



ARTDENTECK Models



ARTDENTECK Dental Model

Organizational Issues: Transitioning from automated printing to manual labor for cleaning was cumbersome, leading to inefficiencies and organizational challenges.

To maintain high production standards and continue supporting their “Made in France” initiative, ARTDENTECK sought after a solution that would automate the labor-intensive post-processing step in their dental facilities.

CHOOSING AN AUTOMATED SOLUTION TO ENHANCE WORKFLOWS AND SAFETY

ARTDENTECK chose to integrate the PostProcess DEMI 430, an automated resin removal solution, into their post-printing workflow. This full-stack solution combines advanced hardware, proprietary chemistry, and software-controlled technology to provide consistent, repeatable resin removal while preserving the integrity of 3D printed parts.

By automating the post-processing step with DEMI 430, ARTDENTECK aimed to improve cleaning results, optimize workflows and enhance safety operations in their facilities.



ARTDENTECK Workflow Featuring PostProcess Technologies DEMI 430

Additionally, the PostProcess solution aligned with ARTDENTECK's partnership with Prodways, a French manufacturer of 3D printers, further reinforcing their commitment to French innovation and local production.

TRANSFORMING WORKFLOW EFFICIENCY WITH THE POSTPROCESS DEMI 430

Since implementation, the PostProcess DEMI 430 has consistently delivered repeatable, safe, and optimized results for resin removal on ARTDENTECK's 3D printed parts, saving a minimum of one hour per day in processing time!

By replacing IPA with the DEMI 430, ARTDENTECK has successfully enhanced their workflows with:

Time Savings: The automated resin removal process has saved at least one hour of manual labor per day, allowing employees to focus on other tasks.

Improved Safety: By replacing IPA with the DEMI 430, ARTDENTECK has enhanced workplace safety,

eliminating the health risks associated with handling alcohol baths.

Optimized Operations: The DEMI 430 has streamlined post-processing workflows, reducing inefficiencies and disorganization that were previously a challenge in the facility.

Better Cleaning Results: Compared to IPA, the DEMI 430 has consistently delivered superior cleaning results, ensuring that the quality and integrity of the prostheses are maintained.

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“The PostProcess solution should be a **health obligation** for prosthetists.”

- Christophe Keuseyan, Chief Executive Officer, ARTDENTECK

Looking forward, ARTDENTECK plans to upgrade to the PostProcess DEMI X 520™ for Resin Removal, to enhance their 3D printing operations even further.

The adoption of a PostProcess solution in ARTDENTECK's workflow has enhanced the company's operational performance but also supports its commitment to high-quality, French-made dental prosthetics.



ARTDENTECK Dental Laboratory



ARTDENTECK Asiga Max 3D Printers

About ARTDENTECK

ARTDENTECK is a premier dental laboratory based in France, specializing in high-quality prosthetic solutions and advanced dental restorations. Combining cutting-edge technology with expert craftsmanship, ARTDENTECK offers a wide range of personalized dental products designed to meet the needs of dental professionals and their patients. With a commitment to precision, aesthetics, and innovation, ARTDENTECK helps enhance smiles and restore dental function through the use of state-of-the-art materials and techniques. Trusted by dental clinics and practitioners worldwide, ARTDENTECK is dedicated to excellence in every aspect of dental restoration. Learn more at www.prothesiste-artdenteck.com.

About PostProcess Technologies

PostProcess is the leader in automated and intelligent post-printing solutions for 3D printed and additive manufactured parts. Founded in 2014 and headquartered in Buffalo, NY, USA, with international operations in Mougins, France, PostProcess removes the bottleneck in the final stage of the 3D printing workflow, post-processing, through a combination of patent-pending software, hardware, and chemistry technologies. The company's solutions automate industrial 3D printing's most common post-printing processes including support, resin, and powder removal, as well as surface finishing, enabling customer-ready 3D printed parts at scale and complete digitization of additive manufacturing through the workflow for the Industry 4.0 factory floor. The PostProcess portfolio has been proven across all major industrial 3D printing technologies and is in use daily in every imaginable manufacturing sector. Learn more at postprocess.com.