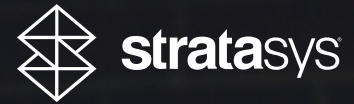




POSTPROCESS



CASE STUDY

Automated FDM Support Removal Drives Faster Turnaround at CIDEAS Inc.

OVERVIEW

CHALLENGE:

As a high-volume additive manufacturing service bureau operating 15 industrial FDM® printers, CIDEAS Inc. needed a faster, more efficient way to remove soluble supports from a wide variety of complex part geometries.

SOLUTION:

CIDEAS Inc. implemented the PostProcess® BASE™ spray-based system to automate FDM support removal. The enclosed solution consistently removes soluble supports in minutes, without fully submerging parts, eliminating days of soaking and drying while accelerating the entire production workflow.

RESULTS:

With the PostProcess BASE solution, they were able to cut the process time from days to minutes, enabling same-day shipment for urgent customer orders. With the faster turnaround time it also allowed them to identify problems faster and provide a cleaner post-processing workspace.

THE CHALLENGE: THE NEED TO ACCELERATE THEIR AM WORKFLOW TO KEEP PACE WITH CUSTOMER DEMAND

For **CIDEAS Inc.** (buildparts.com), speed is everything. Customers expect rapid turnaround while demanding increasingly complex geometries and high-quality finished parts. As a leading additive manufacturing service provider, efficient post-processing has become just as critical as the printing process itself.

As part of their expansive additive manufacturing operation, they run nine Stratasys Fortus 900mc™ FDM printers and six Fortus 400mc™ FDM printers alongside multiple other technologies. CIDEAS Inc. produces parts for aerospace, medical, consumer products, entertainment, industrial equipment, and countless other applications. Because nearly every project is unique, the company requires a post-processing solution capable of handling a wide variety of part sizes, wall thicknesses, support structures, and geometries.

After years of relying on large, open-air dunk tanks for soluble support removal, the team implemented the PostProcess® BASE™ automated spray-based FDM support removal solution. More than three years later, the system has transformed their production workflow.

THE SOLUTION: FROM DAYS TO MINUTES WITH THE POSTPROCESS BASE

Before implementing the PostProcess® BASE™ solution, soluble support removal was a production bottleneck. Complex FDM parts could require days of soaking in an ultrasonic dunk tank to fully remove the support material. After extended immersion in the tank, the detergent soaked parts could take another several days of drying time before the part would be ready for next steps.

The PostProcess BASE system uses a targeted spray technology with high pressure nozzles on top and bottom and additional flexible nozzles for hard-to-reach places such as internal channels. This proprietary approach to FDM support removal produces **high-quality, consistent results with limited manual labor and dramatically faster cycle times.**

The dramatic reduction in post-processing time enables the company to fulfill same-day customer requests that simply weren't possible before. The accelerated workflow also allows parts to move into inspection and finishing much sooner, enabling the team to identify print or design issues earlier in the process. Rather than discovering problems after several days of soaking and drying. Operators can quickly evaluate parts, make adjustments if needed, and keep projects on schedule.



CIDEAS FDM Part Being Processed in the PostProcess BASE

Unlike manufacturers that produce the same components repeatedly, CIDEAS Inc. processes an extensive variety of customer parts every day. Each project presents **unique geometries, wall thicknesses, and support structures**, making a flexible and reliable automated support removal solution essential to maintaining production efficiency.

This flexibility has made the BASE particularly valuable, consistently removing soluble FDM supports across a wide range of applications without requiring operators to constantly adjust their workflow.

SUPPORTING HIGH-END FINISHING

Many of the FDM parts produced by CIDEAS Inc. require extensive secondary finishing, including sanding, priming, painting, and automotive-grade cosmetic finishing. By removing supports in less than 30 minutes instead of waiting days, parts reach the finishing department significantly sooner.

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“Speed is everything in this business. What once took days in an ultrasonic dunk tank can now be completed in just 20 to 30 minutes, helping us meet tight customer deadlines and keep production on schedule.”

— **Chip Johnson**

Operations Manager, CIDEAS Inc.

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“Our finishers gain at least an extra day to work with the parts. That gives us higher quality, faster turnaround, and allows us to identify problems earlier than we could before.”

— **Mike Littrell**

President, CIDEAS Inc.

THE RESULTS: FASTER DELIVERY, CONSISTENT RESULTS AND A CLEANER WORKPLACE

Before implementing the PostProcess® BASE™, CIDEAS Inc. relied on multiple ultrasonic tanks for FDM support removal, creating a labor-intensive process that slowed production and required significant operator involvement. By automating support removal, the company

streamlined its workflow, replacing nearly all ultrasonic processing with a single, enclosed system that automatically manages the wash cycle from start to finish.

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The upfront investment is higher than traditional methods, but for the volume and type of production work we handle, the speed, consistency, and labor savings make the investment absolutely worth it.”

— **Mike Littrell**
President, CIDEAS Inc.

efficient workflow that supports faster turnaround times, improved shop organization, and greater overall productivity.



Before: FDM Part Before Support Removal



After: FDM Part After Support Removal in the BASE

Having relied on the BASE system continuously for more than three years, CIDEAS Inc. considers automated support removal an essential part of its production operation. As a successful business owner, Littrell carefully evaluates every capital investment. But after more than three years of running the PostProcess BASE system, he says the productivity gains have more than justified the investment.

About CIDEAS Inc.

Founded in 1998, CIDEAS Inc. (buildparts.com) is a full-service additive manufacturing center providing rapid prototyping, production parts, engineering support, and finishing services across multiple additive manufacturing technologies. Serving industries including aerospace, medical, consumer products, industrial equipment, and entertainment, the company specializes in delivering complex, high-quality components with rapid turnaround times.

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 software, hardware, and chemistry technologies. The company's solutions automate industrial 3D printing's most common post-printing processes including support removal, resin cleaning, and surface finishing, enabling customer-ready 3D printed parts at scale. 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.

About Stratasys

Stratasys is leading the global shift to additive manufacturing with innovative 3D printing solutions for industries including aerospace, automotive, consumer products, and healthcare. Through smart and connected 3D printers, polymer materials, a software ecosystem, and parts on demand, Stratasys solutions deliver competitive advantages at every stage of the product value chain. The world's leading organizations turn to Stratasys to transform product design, bring agility to manufacturing and supply chains, and improve patient care.