## Automated, Digitized **Post-Processing Solutions** Enabling Additive Manufacturing at Scale

POSTPROCESS

Automated. Intelligent. Comprehensive.

## IT'S AUTOMATED.

Our automated solutions eliminate time-consuming and expensive piece-by-piece manual cleaning by applying a patent-pending combination of integrated technologies; including software, hardware, and consumables.



## EVERY MARKET IMAGINABLE.

Across every industry, our technology removes the post-print bottleneck with an automated approach. From aerospace to automotive, consumer goods to dental, or defense to medical, we're ready to put our technology to work for you.



#### **IT'S INTELLIGENT.**

Our revolutionary technology thoroughly processes each part, regardless of geometry. Reliable support removal and dependable surface finishing produce 'customer-ready' parts, every time.



## VIRTUALLY ALL 3D PRINT TECHNOLOGIES.

From SLA to DMLS – we've got you covered. From light-cured resins to superalloys – we handle them all. We've designed and tested our solutions to work across a wide variety of materials and print technologies.



#### **IT'S COMPREHENSIVE.**

A full range of solutions support your post-processing requirements. From desktop systems to production-scale systems for support removal, resin removal, and surface finishing, we are continuously innovating for the future.



## END-TO-END EXPERTISE.

Expertise in the three steps of additive – design, build, and postprint – has allowed us to develop machines and engineer precise solutions to drive faster throughput and more consistent results. PostProcess's software-driven technology enables users to produce customer-ready 3D printed parts at scale. As the first in the world to bring an automated and intelligent solution to the third step of additive manufacturing, we're helping the market realize its full potential. Our solutions make post-processing parts easier, more consistent, and more efficient.

SLA, DLP & CLIP **FDM & FFF PolyJet & Material Jetting MJF & SLS Metals** 

Wax

Our comprehensive software, hardware, and chemistry solution reduces SLA and CLIP resin removal steps by 50% or greater. As the **fastest resin removal system on the market**, field-tested on thousands of trays, our solutions are proven to clean multiple full trays in under 10 minutes consistently. Coupled with our surface finishing solutions, PostProcess can streamline your SLA and CLIP post-processing bottleneck.

Providing the fastest cycle times in the industry, PostProcess FDM post-processing solutions reduce processing times by at least 50% compared to traditional submersible tank systems. Controlled by AUTOMAT3D® software, attended technician time is significantly reduced for **both support removal and surface finishing** to enable high-volume production and decrease overall cycle time for your print operation.

Our PolyJet solutions perform thorough support removal with less part warpage and breakage. Software-driven submersible technology has been proven to increase throughput by over 30% compared to traditional manual water blasting, along with a dramatic reduction in attended technician time of over 80%. Pair with our surface finishing solutions for a **complete post-print workflow** to achieve consistent results even for the most delicate geometries.

Delivering replicable, high-quality uniformity for every part, our surface finishing and powder removal solutions incorporate advanced, additive-specific technology for MJF and SLS. Our proprietary software platform provides an unprecedented level of process insight and control, ensuring uniform media and detergent exposure as well as motion control for **predictable**, **consistent surface finishing**.

PostProcess automates **surface finishing** for additive manufactured metal parts with our unique, patent-pending technologies. Ensuring every printed part meets your desired Roughness Average (Ra) while maintaining dimensional consistency and fine feature detail, our data-driven solutions deliver repeatable automation in batches. This technology is developed to align with your print quantities, enabling significantly reduced operator attendance time.

PostProcess automates **support removal** for additive manufactured wax parts with our unique, patent-pending technologies. Due to the fragile nature and high breakage rate of 3D-printed wax parts, 3D printed wax parts are often broken in traditional post-processing. With our comprehensive hardware, software, and chemistry solution, breakage is minimized and processing times can be 30-40 minutes per batch, with technician times less than 5 minutes per batch.

## **RESIN & SUPPORT REMOVAL**



The patented Submersed Vortex Cavitation (SVC) technology works in combination with proprietary detergents and exclusive AU-TOMAT3D® software to automate resin removal and support removal processes, and efficiently scale throughput. Agitation flow from the solution's vortex pumping scheme ensures that 3D printed parts are uniformly, consistently, and reliably exposed to detergent and cavitation as they undergo automated post-processing. This results in a reduced need for manual labor, higher throughputs, improved detergent longevity, and a notable reduction in material waste.

Dimensions subject to change; please download latest spec sheet at postprocess.com/resources



## SLS IMJF ISLA IDLP ICLIP PolyJet / Material Jetting FDM / FFF Wax Meta

Our proven Volumetric Velocity Dispersion (VVD) technology effectively removes support materials from 3D printed polymer parts by implementing a high-volume, low-pressure 360° spray method. Leveraging PostProcess's exclusive detergents and AUTOMAT3D® software, this technology minimizes manual labor and has been patented to keep part geometries consistent while enabling the fastest post-processing times in the additive industry.

## SLS MJF SLA DLP CLIP PolyJet / Material Jetting FDM / FFF Wax Metals

Suitable for basic and complex part geometries alike, automated Suspended Rotational Force (SRF) technology is developed to achieve specific Roughness Average (Ra) values on 3D printed parts of all materials. Equipped with AUTOMAT3D® software intelligence, this technology optimizes mechanical energy to suspend parts in abrasive media, ensuring a uniform finish.

Thermal Atomized Fusillade (TAF) technology employs two perpendicular jet streams of compressed air, detergent, and suspended solids to efficiently surface finish additive metal parts. Providing software-driven targeted blast sequences and optimizing Chemical Rate of Removal, seamlessly caters to varying throughput and finishing requirements.

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# AUTOMAT3D<sup>®</sup>

PostProcess pioneered intelligent post-processing with our patent-pending AUTOMAT3D® software platform. We've taken the guesswork out of post-processing after spending years collecting data from hundreds of thousands of benchmark parts of all 3D print technologies and most materials.

The data collected is at the core of our software design, which incorporates optimized recipes to deliver a precise finish every time. Carefully controlling the system's energy, speed, and direction, the Agitation Algorithm ensures your productivity is boosted by producing consistent end parts with no breakage. Our software varies agitation intensities, temperatures, process time and other process factors to deliver the ideal finished part.

We thoughtfully designed all of our systems and the software for ease. Our machines are enabled by a user-friendly interface powered by industrial controllers, resulting in efficient use of your labor to drive volume production.

# **CONNECT3D**<sup>®</sup>

Complementing our AUTOMAT3D platform in driving our intelligent machine solutions, PostProcess's CONNECT3D® Additive Manufacturing Platform features functionality that accomodates the digital thread for smart manufacturing. In the past, the concept of the digital thread within additive manufacturing ended once a part was printed. With conventional finishing processes relying on tribal knowledge and hand tools, there was no ability to collect or transfer data.

Now, with CONNECT3D, PostProcess has delivered the first solution to the industry that completes the picture through the post-processing step. The CONNECT3D platform is the only software that addresses additive manufacturing end-to-end within the digital thread. It combines all features necessary to generate the direct digital thread while being fully adaptable to the customer's needs.

Starting with the native CAD file or 3D printer sliced file, CONNECT3D defines the requirements and strategies to automatically post-process the additive manufactured part on PostProcess's hardware platform. CONNECT3D ipriovides remote monitoring and notifications, data collection, planning & scheduling, API integration, and more, As the pioneer of the automated post-processing industry, PostProcess Techologies' patent-pending chemistry solutions are unmatched. Our family of detergents and media have been developed for high-performance and safe handling, delivering fast-er throughput and more consistent results.

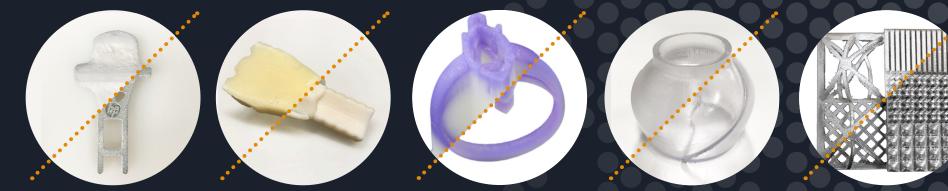


PostProcess's pre-mixed detergents optimize the removal of excess resin, FDM, PolyJet, & Wax supports while leaving the build material in perfect condition. Our chemistry line, along with our thoughtfully designed systems, is formulated to achieve the customer's desired cycle time and product characteristics.

### OUR CHEMISTRY & MEDIA FOR SURFACE FINISHING

Our surface finishing media, available in different density and grit, ensures the desired finish and end product surface roughness ( $R_a$ ) for all print materials. With abrasive and polishing options, our solutions are designed to work with the media to accurately deliver the correct amount of energy to produce the desired end result.







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