



CASE STUDY

Customer Insights: Revolutionizing Post-Processing with Automated FDM Support Removal

POSTPROCESS

OVERVIEW

Bendix Commercial Vehicle Systems, a member of Knorr-Bremse, develops and supplies leading-edge active safety technologies, energy management solutions, and air brake charging and control systems and components under the Bendix® brand name for medium- and heavy-duty trucks, tractors, trailers, buses, and other commercial vehicles throughout North America.

Bendix utilizes cutting-edge 3D printing technologies to create pre-production parts, test pieces, and customer samples. Their previous post-processing methods didn't meet their efficiency standards, leading them to seek a superior solution. After careful evaluation, they selected the VORSA 500™ from the PostProcess® Volumetric Velocity Dispersion (VVD) family of automated support removal solutions due to its **hands-off approach, efficiency, and responsive customer support.**

Since implementation, VORSA 500 has streamlined their process, saving significant time, reducing costs, and ensuring nearly drip-free parts.

Q&A WITH BENDIX COMMERCIAL VEHICLE SYSTEMS

Q: What 3D printers and technologies do you currently use?

A: We employ a range of 3D printing technologies, including Fused Deposition Modeling (FDM) and Stereolithography (SLA). Specifically, our printers include Stratasys 450mc and F370, Formlabs Form3, as well as Bambu Carbon X1 models.

Q: How are you currently using your 3D-printed parts?

A: We are currently using our 3D-printed parts for pre-production, test parts, customer samples, proof of fitment, and meeting enhancements.

Q: What were the previous post-processing methods used by your company before implementing an automated solution?

A: We used a generic submerged wash for our parts.

Q: How has your PostProcess solution helped since implementation?

A: We chose the PostProcess® VORSA 500™ for an automated FDM support removal process. The VORSA 500 truly is a “place part inside, press start, and remove when the cycle is complete” solution for our business. We typically change the detergent solution after approximately 20 cycles (with large parts). Doing so is **precise and hassle-free**; it’s as easy as pressing a button to empty, and then pressing another button to refill the metered solution.

There is limited preventive maintenance required, but the work can typically be completed in about 30 minutes on alternating solution changes. Previous wash stations could take up to four hours to clean and always left a mess after. In terms of customer service, the PostProcess technical help is outstanding and prompt. PostProcess not only ensured the product was performing in an optimal manner, but also worked with us to implement enhancements that made the process even better.



FDM printed Bendix part before and after processing in the PostProcess VORSA 500

The bottom line is that the machine **saves weeks of work each year** while also streamlining the process, leaving us with nearly drip-free parts (a huge positive).

Q: Is there anything else you’d like to share with us?

A: There are many solutions out there for removing support material. **Efficiency, effectiveness, and safe operation** are important to us. We have been very pleased with the collaboration, cooperation, and the amount of time and attention that the PostProcess team has given. We have been impressed with the professionalism and attention to detail.

CONCLUSION

Bendix’s collaboration with PostProcess with their automated FDM support removal solution has not only enhanced their 3D printing process but also transformed their approach to post-processing. The efficiency, precision, and hassle-free operation of the VORSA 500™ has significantly impacted Bendix’s productivity, saving them weeks of work annually. With a focus on innovation, effectiveness, and safety, Bendix found in PostProcess a partner dedicated to their success.