



Stratasys Neo800 produces prototype parts for **BAC Mono R supercar**

Stratasys and prototyping specialists Malcolm Nicholls Limited (MNL) produced 3D printed parts for British supercar manufacturer Briggs Automotive Company (BAC)'s Mono R supercar.



Prototyping

Producing large, lightweight prototype parts, quickly

BAC launched the next generation of its world-renowned Mono single-seater at the Goodwood Festival of Speed in July 2019. BAC partnered with DSM to co-develop 3D printing applications used in the manufacturing of the Mono, to create a cutting-edge, more organic and lighter design. 3D printing offered BAC significant advantages that included freedom to produce prototype parts with sinuous, organic designs, and considerable weight savings that could not be achieved with traditional methods of manufacturing.

BAC needed large 3D printed parts for the Mono R prototype. The Stratasys Neo800, one of the largest 3D printing stereolithography systems available, was chosen to produce the prototype parts.



Technology

Printing large, complex, lightweight parts with the Neo800

The Neo800 SL 3D printer was selected to produce the prototype parts because of its large platform and reputation for producing parts with outstanding surface quality.

The Neo could produce large prototype parts for the Mono R with organic shapes and hollow internal structures, radically reducing weight while maintaining strength. This, coupled with its ability to produce detailed parts with outstanding sidewall quality meant MNL could reduce post-processing, achieving further time savings and cost reductions.

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Keeping the Mono R as light as possible was of paramount importance in its development, and by using 3D printing we not only keep the kilograms down, but also keep sustainability and safety on the up. 3D printing was crucial for keeping design-to-manufacture times down and allowing us to meet tight deadlines with ample creative freedom – while the quality of the finished result is testament to the work of the Neo800.”

Ian Briggs

BAC Design Director

Results

The Neo800 and Somos® WaterShed XC 11122 produce parts with outstanding sidewall quality, reducing post-processing time, saving costs

The Neo800's 31.50 × 31.50 × 23.62 in. (800 × 800 × 600mm) platform and Somos® WaterShed XC 11122 resin produced the large rear-wheel arches, each measuring 36.02 × 12.99 × 3.02 in. (915 × 330 × 500mm). The Neo800's platform size allowed each wheel arch to be produced in one build, without cutting parts into smaller pieces.

Larger parts, including the wide rear wing, spine, wing mirror stays, front light bezels and rear light clusters were also printed on the Neo800. Expert finishing by the MNL team resulted in production-quality parts, including a polished lens, showcasing great optical quality. The smooth finish of each part produced on the Neo800 also meant no post-processing and greatly reduced finishing times for paint, meaning parts could be turned around quickly.

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BAC is showing classic British innovation and engineering excellence which is truly exemplified in the Mono R supercar development. We are thrilled that the Neo800 was behind the printed parts used on the car, and thankful to be involved in such an amazing project.”

David Storey

Stratasys Director of Operations - Neo



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The superb smoothness of the parts from this machine is a significant improvement over our previous ones. We can now achieve our high finish standards more rapidly. Coupled with the extremely large build volume, we are able to complete projects in even shorter timeframes.”

Ross Nicholls

**Technical Director of
Malcolm Nicholls Limited**

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