nexa3D

CASE STUDY

FLYER

Uses the NXE400 to Quickly Prototype New E-Bikes

BACKGROUND

The Swiss company FLYER develops and manufactures premium Swiss quality FLYER e-bikes, which have been on the market since 1995. Development at FLYER is based on innovation, a love of detail, painstaking care, and an eye for design. This e-bike pioneer offers e-bikes for every need: from classic low step-through frames, to city bikes and sporty e-mountain bikes. In a pioneering role, FLYER has amassed a wealth of solid experience, and has had a considerable impact on and contributed to the success of E-Bikes in Europe. This know-how is integrated into their products and services every single day.

CHALLENGE

As a specialized bike manufacturer, integrating 3D components into their product designs

Customer

FLYER

Industry

Consumer E-Bikes

Applications

Prototyping

Research & Development

Short Production Runs

Product

3D Printer NXE 400

Advantages

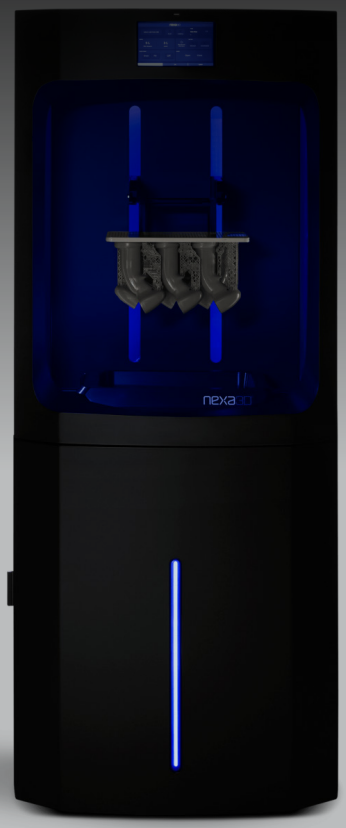
- Design and production time decreased by 48%.
- Accurate prints with better surface resolution
- Accelerated time to market
- Faster design iterations

Learn More

www.flyer-bikes.com/de-de

Our e-bike components have a lot of structural complexities to them. We needed a 3D printer that could reliably meet tight tolerances and help streamline our design process.

– Berthold Jonientz
Berthold Jonientz, FLYER



gives FLYER a lot of flexibility and design freedom. Their innovation team utilizes two in-house Fused Deposition Modeling (FDM) 3D printers for prototyping, research and development, and short- production runs of parts that go into pre-production bikes for beta testing.

As the company continues to grow, FLYER must innovate quickly and release new products in order to keep pace. They were ready to take the next step in order to keep up with market demand and to gain a competitive advantage among other e-bike manufacturers.

In order to support this growth, they saw a need to upgrade to an industrial stereolithography (SLA) style printer that could yield more parts, with a smooth, detailed surface finish, at faster speeds.

SOLUTION

FLYER's innovation team set out to find a new 3D printer to bring in-house. They took one of their detailed e-bike component designs to DiscDirect, a major Germany-based distributor that focuses on production-ready industrial 3D printing markets, to have them help source a new solution. DiscDirect was able to evaluate the design and quickly recommend the NXE400. The highly reliable Lubricant Sublayer Photo-curing (LSPc) technology was the best fit for what they were looking to accomplish. They also identified the 3843-xABS Black as the ideal resin that would give them the best accuracy, functionality, and mechanical properties not only for the prototype parts used to develop the product but also could print components that have been installed in the bikes as part of the pre production test run.

DiscDirect invited FLYER to their facilities for a live demonstration of their specific design. Within minutes, FLYER had a fully functional isotropic part that closely mimicked their end use e-bike part. Their FDM printers would have taken hours for the same design. "We were floored by the detailed finish and the speed in which we were able to print a functional part. The time saved gave us a clear advantage in product design and accelerated our time to market," says Jonientz.

FLYER chose to implement the NXE400 based on their requirements for speed, better surface quality, and reliability. After the initial installation, the innovation team immediately saw the benefits of using the NXE400. Design and production time decreased by 48%. FLYER was also able to cost-effectively achieve faster design iterations and bring their innovative designs to market sooner.

Upgrade Additive Manufacturing

NXE 400

See what the World's Fastest Industrial 3D Printer can Do For Your Business.

With an unprecedented 16L build volume measuring 10.8 in x 6.3 in x 15.7 in (27.5 cm x 16 cm x 40 cm), intelligent optimization, and Nexa3D's revolutionary patented LSPc technology, the NXE 400 is the perfect printer for any application.

Learn more at www.nexa3d.com.

www.nexa3d.com