Reduce Labor for Customized Components

Custom bicycle frame builder saved weeks in labor with ExOne® metal 3D printing.

Customer Challenge
Personalized bicycles require extensive manual labor, as each design is unique and dedicated tooling is expensive.

The Solution
ExOne utilized Binder Jetting technology to directly manufacture the complex parts for a more reasonable price in less time.

The ExOne® Competitive Advantage
Creating the metal parts directly from 3D models allowed the customer to focus on the creative aspect of design without traditional manufacturing constraints. Manufacturing without tooling makes the process quick and cost-effective for customized parts.

About ExOne
ExOne offers industrial 3D printing systems and services using Binder Jetting technology to create functional components directly from CAD data for a variety of prototype and production applications.

The ExOne® DREAM center provides a physical and virtual site for customer collaboration, to explore and incorporate the benefits of ExOne® technology along with advanced modeling and analysis software for unique solutions to manufacturing challenges. The center serves as a catalyst for the 3D production of parts without the limitations of traditional manufacturing.

Completed 3D Printed Metal Bicycle Parts

Specifications
Customer: ideas2cycles
Parts: Bicycle lugs, brackets, dropouts, fork crowns
Part Size: Varied from 1 in. to 6 in.
Weight: Varied from 0.81 oz. to 6.42 oz.
Material: 420 Stainless Steel/Bronze Matrix

Traditional Method
Production Time: 3 to 4 weeks
Cost: $1,000 USD per assembly (including labor)

ExOne® Metal Printing Method
Production Time: 4 days
Cost: $425 USD per assembly

ExOne operates facilities across the Americas, Europe and Asia.