

CONMED

Rize 3D Printing Helps CONMED Deliver World-Class Products That Save Lives

CHALLENGES

CONMED sought to cut part delivery time on multiple iterations for product designs.

SUMMARY

Rize's minimal post-processing enables CONMED to deliver functional parts, including molds, for end-use products, in one day, with ink marking for part identification.

RESULTS

- Cut part turnaround in half
- Superior surface quality and low-surface-energy enable CONMED to produce end-use silicon products
- CONMED is diverting jobs from their PolyJet printer to Rize One

Empowering healthcare providers worldwide to deliver exceptional outcomes for patients. What could be more important? That's the mission of global medical technology company, CONMED. The company develops and sells world-recognized surgical products and services to doctors and healthcare facilities in the Orthopedic Sports Med, Laparoscopic, and Gastroenterology specialties so they can deliver the highest quality care and best possible outcomes for their patients.

Not surprisingly, the company's additive manufacturing strategy centers on research and development. David Perron, CONMED's Group Manager, R&D, manages the company's Model Shop. His team of five Model Makers supports CONMED's Largo Sports Medicine and Power Groups, Utica, New York headquarters, Denver, Colorado Design Center for Electro Surgery and the Westborough, Massachusetts Imaging Facility.

All CAD experts migrating to SOLIDWORKS, David's Model Shop team works on priority product design and development. In collaboration with doctors, engineers and marketing, all part of the company's Design Groups, the Model Shop team develops product concepts. They continually iterate designs, 3D printing parts and evaluating the designs at every stage of iteration. This is done until the product is ready for pre-production builds, as required

to launch a new product. This can take months or even years.

3D Printing Speeds Time to Market

3D printing is used for researching ideas and iterating designs for nearly every product developed at CONMED. Traditional machined prototypes can take days or weeks vs. overnight delivery for a 3D printed part. This time savings realized by using 3D printing is significant considering the number of iterations per project and the number of active projects at any given time.

“Timing is critical; everything is urgent,” says David.



That's why CONMED operates their 3D printers 24/7 to produce parts for implants, tooling, prototypes, functional handles for instrumentation, implants and molds.

David's team works with the Design Team engineers and doctors to test and evaluate prototypes in CONMED's world-class Education Center cadaver lab to determine how the prototype devices function in clinical situations. Designs are finalized upon successful evaluation and testing.

Rize One Provides New Capabilities

CONMED's plastic-based 3D printers, including Rize™ One, are typically used for parts requiring strength - functional testing, for example. David purchased a Rize One 3D printer from Rize Authorized Reseller, EMS Inc., a leading full-service provider of commercial 3D printing and 3D scanning solutions to customers across a range of industries, including aerospace, automotive, military, consumer goods and more.

After evaluating Rize One and an expensive FDM printer, David observed that Rize One provides better part surface quality, part strength and the ability to 3D print part and version numbers directly on and in parts. In addition, parts produced on a Rize™ One 3D printer require minimal, dry post-processing that takes just seconds or minutes compared to hours sitting in a chemical solvent bath. A reliable, easy-to-use, industrial-class system, David purchased Rize One to be his team's **“workhorse.”**

CONMED uses their Rize One 3D printer primarily for functional prototyping of handles for medical instrumentation and other parts of assemblies in the company's cadaver labs, as well as parts for ergonomic testing and surgical planning. They have also seen great results using Rize to print molds for end-use silicon and low-temperature parts.

Looking Ahead

CONMED's tagline, *Imagine what we could do together*, encapsulates what is possible using Rize technology at the company. David sees an ideal application for Rize 3D printing in CONMED's Tool Shop to produce functional tooling and replacement parts used in production. And, given Rize's clean and safe process, he can also envision placing Rize 3D printers in the product groups' engineering offices. The opportunity to strategically use Rize 3D printers at scale across the value chain at CONMED are virtually unlimited.