

# ToughWare Prosthetics

## Gain 10x Reduction in Cost and Consistent Delivery Schedules

Maker of prosthetic devices uses ExOne additive manufacturing to cost-effectively configure complex part designs.



Courtesy of ToughWare PRX

### Customer Challenge

Compete with investment casting and conventional machining for the production of prosthetic hand components.

### The Solution

Additive manufacturing using ExOne's 3D metal printing technology, in stainless steel/bronze matrix parts.

### ExOne's Competitive Advantage

Faster production time, significant reduction in costs and the ability to configure complex part designs that cannot be cast or conventionally machined.

### About ExOne

ExOne offers digital part materialization using three-dimensional printing to create full-form parts directly from CAD data for a variety of applications. The technology is capable of a geometric complexity unachievable with conventional manufacturing methods.

Components produced by ExOne can reduce weight, integrate multi-piece assemblies, enhance product functionality and significantly reduce lead times for prototype and short-run production.

*ExOne operates facilities across the Americas, Europe and Asia.*

### Specifications

Customer: Invisible Hand, LLC  
(ToughWare Prosthetics)

Part: Terminal End

Batch Size: 8-40 pieces

Part Size: 1-5 inch

### Traditional Method

Investment Cast or  
Conventional Machining

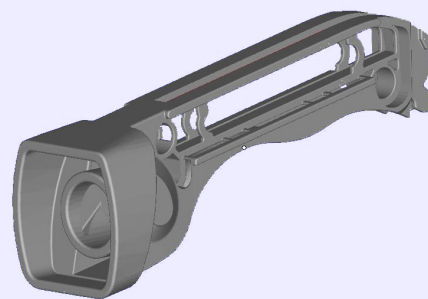
Time: 2 to 8 weeks

Cost: \$250-\$1,500 each

### ExOne® Metal Printing Method

Time: 2-3 weeks

Cost: \$25-\$150 each



CAD Rendering

To learn more, contact: [www.exone.com](http://www.exone.com)