

## ThermoFab

ThermoFab Harnesses Rize 3D Printing to Deliver Industry-Leading Turnaround Times of Higher-Quality Thermoforming

### CHALLENGES

Thermofab wanted to use 3D printing to stay ahead of the competition in delivery time, quality and cost, using their existing staff in their tool shop.

### SUMMARY

Thermofab produces fixtures for setting up production, vs. blocks of CNC machined aluminum, as well as prototypes for form and function testing prior to machining.

### RESULTS

- Eliminates tooling errors, exposing geometry issues before tooling is cut
- Saves 3 weeks in part turn around time & \$2,500 per part
- ThermoFab's engineers operate Rize™ One safely in the tool shop

Since 1976, [ThermoFab](#) has distinguished themselves for delivering unparalleled thermoforming quality, accuracy superior service and an astonishingly fast, four- to-six-week turnaround time for companies seeking custom plastic enclosures in quantities ranging from dozens to thousands.

Focused primarily on the medical, industrial, computer and armed services markets, ThermoFab has an impressive portfolio of clients such as L3, MAKO Surgical, Locus Robotics, Cisco, Stary, TransMedics, BioTek and many more. Says ThermoFab President, Tom King, "we make customer parts look nice, no matter what they're covering."

## Leading The Way With 3D Printing

Tom believes in leading, not following. This innovative philosophy drove his interest in adopting 3D printing at ThermoFab. After observing the 3D printing industry for a year and carefully evaluating Stratasys and Rize 3D printers, he purchased a Rize™ One 3D printer due to its unique ease and speed of support removal without solvents following 3D printing.

ThermoFab uses their Rize 3D printer to produce fixtures for setting up production rather than using blocks of CNC machined aluminum. *“We produce low-volumes of high-end equipment, producing 5-10 or up to 100’s of parts per month and they have to be right,”* Tom explains. *“Producing aluminum blocks took longer than 3D printing.”* ThermoFab’s engineers also use Rize™ One to produce prototypes of small thermoformed parts, such as faceplates, faceplate backings, housings and more for form and function testing before manufacturing the final product.



## Speeding The Process, Reducing Errors, Cuttings Costs

Using Rize One instead of CNC machining to manufacture fixtures is speeding ThermoFab’s process, at lower cost. Moreover, 3D printing saves time by eliminating tooling errors.

Rize 3D printing is also reducing errors before expensive tooling is cut. In one case, for example, a 3D CAD model of a very large part was created from a 2D drawing, scaled-down and 3D printed prior to cutting the tooling. Printing the part exposed a curve in the design that couldn’t previously be detected in the actual part, averting a costly error.

Adds Tom, *“We’re happy with every fixture we’ve made.”*

## The More You Play, The More You Learn

Always innovating, ThermoFab also produces experimental parts on their Rize One 3D printer, testing the possibilities to continue to improve their process and expand their services. For example, they plan to use Rize 3D printing technology to manufacture tooling. According to Tom,

*“The more you play,  
the more you learn,  
and the more you learn,  
the better you get at it.”*

