

# Company Overview

**firstcut**<sup>®</sup>  
CNC Machining Service

**protomold**<sup>®</sup>  
Injection Molding Service

**proto labs**<sup>®</sup>  
Real Parts. Really Fast.™

# Who is Proto Labs?

**When you need functional parts for prototyping, testing, or short-run production—and you need them really fast—you need Proto Labs.**

Proto Labs is the world's fastest source for custom CNC machined and injection molded parts.



- Founded in 1999.
- Privately-held corporation headquartered in Maple Plain, Minnesota, USA—just minutes west of Minneapolis.
- Additional sales and manufacturing facilities in Telford, England and Tokyo, Japan.
- ISO-9001:2008 Registered (US and UK).
- Two services provide custom parts in as fast as one business day:
  - Firstcut<sup>®</sup> CNC machining service
  - Protomold<sup>®</sup> injection molding service

# Firstcut CNC Machining Service

## When you need 1 to 10 parts ASAP

Great for functional prototypes in small quantities or custom one-off projects such as jigs or fixtures.



- Pricing starting at \$95 U.S.
- Parts typically ship in 1 to 3 business days
- More than 30 stocked thermoplastic materials; multiple stocked metals
- No non-recurring engineering charges
- Capabilities include:
  - threaded holes
  - 3-axis milling/up to 6 sides
  - part sizes up to 10" x 7" x 3.75"
- Fast, easy online ordering available 24/7 worldwide

# Protomold Injection Molding Service

## When you need more than 10 parts

Great for low- to mid-volume production parts, bridge tooling, and functional testing.



- Mold pricing starting at \$1,495 U.S.
- 15 day standard lead time, quick-turn service available in 1, 3, 5, and 10 business days
- Choose from hundreds of engineering-grade resins
- Capabilities include:
  - complex parts
  - part sizes up to 18.9" x 29.6" and up to 8" deep
  - Advanced aluminum alloys, high-speed CNC machining and selective EDM are used to quickly create injection molds used to manufacture your parts.
- Fast, easy online ordering available 24/7 worldwide

# The Process Overview



1. Simply upload your 3D CAD file at [www.firstcut.com](http://www.firstcut.com) or [www.protomold.com](http://www.protomold.com). Our system accepts design models in the following formats: IGES, STEP, SolidWorks, ProE, Parasolid, ACIS, AutoCAD, Autodesk Inventor
2. Our systems analyze your part and email you a custom interactive quote. Drop-down menus allow you to change materials, finishes and quantities to immediately see the impact on price.
3. When you are ready to order, finalize your selections and place an order request online. When we receive your purchase order or credit card payment, we start making the parts.
4. You get your finished parts fast!

# Your Interactive Quote

You need to experience our interactive quoting system to believe it. ProtoQuote® and FirstQuote® provide fast quotes and valuable design feedback.



- Revise materials, finishes, lead times and quantities—all online
- Immediately see pricing implications in real-time—not a ballpark quote
- Review your part with our built-in 3D viewer and zoom in on potential manufacturability issues
- Approve, submit your order and purchase by credit card online

# How do we do it?

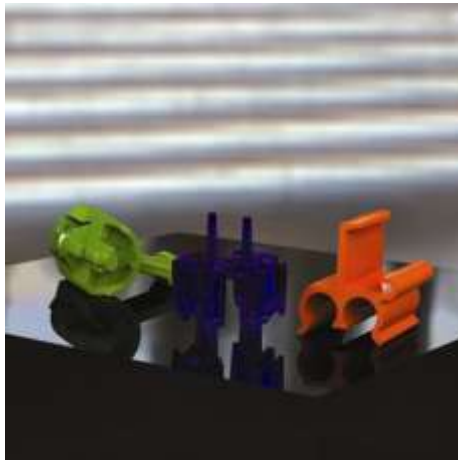
## The answer is simple

Sophisticated software, manufacturing automation and serious computing power.



- Our patented proprietary software analyzes your 3D CAD model and prepares your quote
- After you place your order the software automatically generates the toolpaths to manufacture your mold or part
- Our automated quoting and manufacturing process is supported by multiple compute clusters located in several locations across the globe

# Why Use Proto Labs?



- **Real materials.** Because we manufacture real parts from engineering-grade materials functional testing, prototyping, and even short-run production is now fast and convenient.
- **It's easy.** Simply upload for a quote from either, or both, of our services and get an interactive quote with easy-to-use drop-down menus that allow you to change materials and quantities to immediately see the impact on price.
- **You get your product to market faster.** Upload your CAD model to our website, get a web-based quote with manufacturability analysis within hours, order your parts online and we deliver parts in as fast as one day.
- **Save money.** Depending on the number of parts you order, your cost savings can be substantial when compared to conventional injection molding or rapid prototyping methods.
- **We're here to help.** Automation is a big part of what we do, but that doesn't mean you're on your own. Our Customer Service Engineers are available if you want technical help with your project.



# How We Compare with R.P. Processes?



- **Rapid Prototyping** is a generic term for the additive manufacturing processes. These processes have limited material choices and generally can't be used for mechanical or clinical testing.
  - Stereolithography (SLA)
  - Selective Laser Sintering (SLS)
  - Fused Deposition Modeling (FDM)
  - Three Dimensional Printing (3DP)
  - Poly-Jet (PJET)
- **Real Prototyping** is the use of accelerated conventional processes. These processes have wider real material options, including medical grades, and can be used for testing and limited production.
  - CNC Machining (CNC)
  - Rapid Injection Molding (RIM)



# Mini Case Study

## Tensys Medical, Inc.

Cardio Device: T-Line Tensymeter™ real-time arterial blood pressure monitor



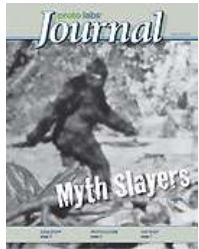
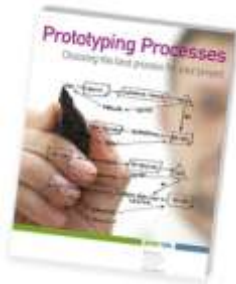
**Challenge:** Complex part with difficult geometry that caused delays in production and tooling.

**Solution:** Protomold was asked to step in when a new design proved challenging to rapid prototype and produce in production tooling. Parts were shipped in under a week, providing Tensys engineers with time to fine-tune the design. Once the design was stable, Protomold provided parts until the production tooling was online, and then helped consult the production molder, on Tensys Medical's behalf, with tips on how to mold the parts.

### What the part does:

Continuously measures blood pressure during surgery on a beat-by-beat basis. It was designed to replace traditional cuff-based systems that report pressure every 3–5 minutes.

# Free Design Resources



- **Design Cube:** injection molded part sample with ribs, bosses, knit lines, surface finishes and more.
- **Torus:** complex part sample with text on ribs, spring clips, bump-off features and more.
- **Quarterly Proto Labs Journal:** free publication that presents readers with intriguing, thought-provoking content on innovations and design.
- **Resin Puzzle:** Nine of the most popular resins used by customers.
- **Demo Mold:** demonstration mold containing a simulated part.
- **Designing for Moldability:** quick-reference user guide for designers and engineers.
- **Prototyping Processes White Paper:** helps you choose the best prototyping process for your project.
- **Cosmetics White Paper:** discusses design consideration for the injection molding process.
- **Monthly Design Tips:** delivering helpful advice and suggestions for efficiently and cost-effectively designing parts.
- **Quarterly Machining Tips:** tips focus on specific topics that relate to the CNC Machining process.

# People are Talking about Proto Labs

- "The parts turned out really nice. They are exactly what I was looking for and they are working out great." — *Jason Woods, Tyco Electronics*
- "You guys are cool! No wonder our engineers like to work with you." — *Kait Morrell, Newell Rubbermaid Decor*
- "We just received our parts; very impressive! How you produce parts in that short of a time frame is beyond me." — *Steve Moore, Eastman Kodak*
- "Your Firstcut service is a real life saver. We needed parts in order to ship a product to Africa. The parts and service are excellent." — *Greg Lannan, Playworld Systems*
- "We really appreciated the quick delivery on our parts. Please pass this along to the Protomold Team!" — *Norm Desmarais, Bayer*
- "The service, timing and cost were excellent. Our account rep did an excellent job and we will use your services again." — *Rick Eberts, Energizer Battery*
- "Thank you for my speedy and accurate parts!" — *Kenneth Vachon, Thermo Fisher Scientific*
- "I just received the parts and they look great! Very impressed with the quality and short delivery time." — *Arthur Lin, Guidant Corp.*
- "The quality of the end product was excellent and fulfilled all our expectations."  
— *Paul Birthistle, Hewlett Packard*

# For more information...



- Visit us online
  - [www.protomold.com](http://www.protomold.com)
  - [www.firstcut.com](http://www.firstcut.com)
- Email us
  - [customerservice@protolabs.com](mailto:customerservice@protolabs.com)
- Give us a call
  - 877.479.3680
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Thank You!

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