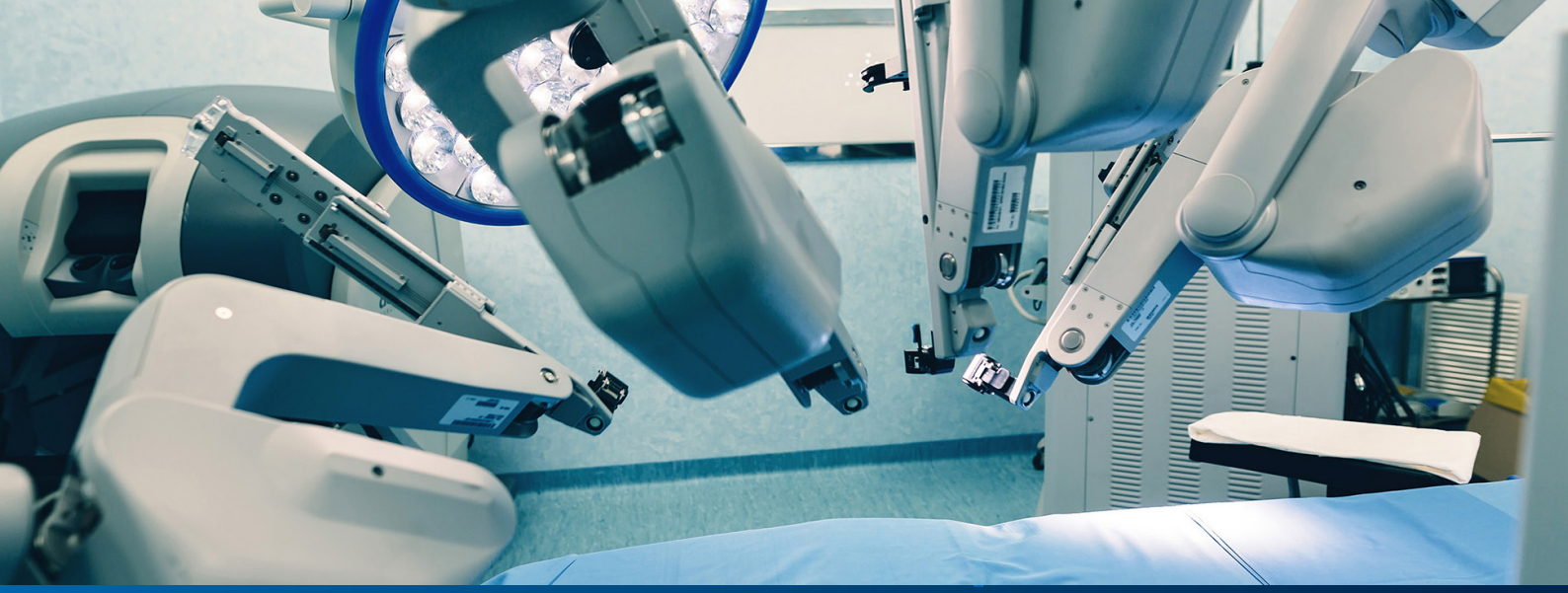


Laser Swiss

Paragon Medical
AMETEK



More component design options with combined Swiss CNC turning and laser cutting



- 2X TSUGAMI S206
- 3X CITIZEN L220

Imagine the Possibilities!

The ability to combine 6-axis Swiss machining and laser cutting in one machine eliminates many manufacturing constraints. It frees your design considerations. You'll have up to 36 tools, plus the laser. Use whatever mix of methods produces the features needed at the fastest times.

Critical Capabilities:

- Fully Integrated Laser cutting System
- Full Swiss Machining Capability
- Maximum machine thru diameter – 20 mm
- Tool Positions – 38
- Laser – 300 w Fiber
- Focal Length – 100 mm
- 6 Ft tube/bar feeder system (1mm - 20 mm)
- Main and Back Spindle synchronization capable
- Multiple assist gas capable
- Laser welding as well as cutting

This capability is available for laser cutting and CNC machining precision tube and rod components from 1mm – 20 mm in diameter. Lengths can vary because the back spindle can bring material out of the main spindle then machining can continue. Practically speaking, we are targeting 24 inches maximum. Unique CNC machined features will require purchase of dedicated tooling. ID work as well as OD work can be done on both ends of the tube/rod component.

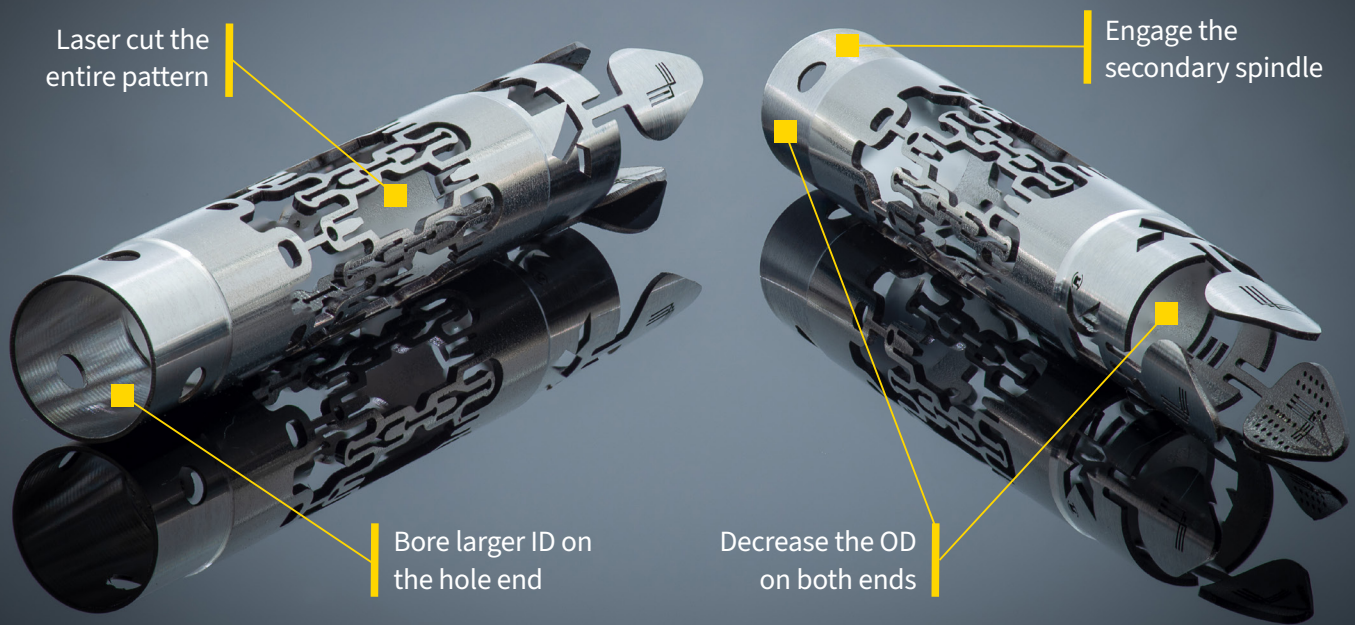


Brass rod precision CNC machined

Capabilities:

- ID Expansion / Increase
- Laser Cut Pattern
- OD Reduction
- CNC drilling

Stainless Tube Sample Operations:



Stainless tubular implant with ID increase & OD reduction. Laser cut precision patterned with cross hole drilling.

Our Target Medical Markets:



Surgical & Medical

including robotic surgical instruments



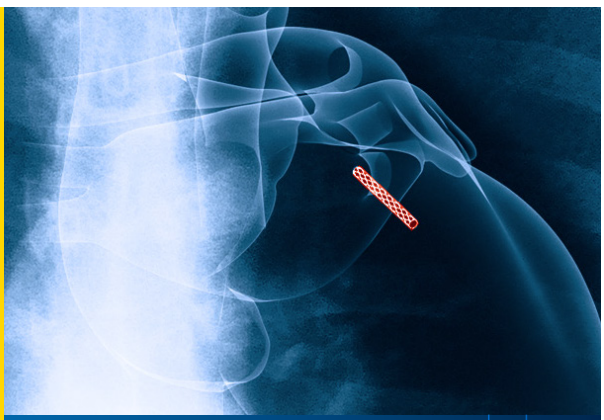
Structural Heart

including delivery systems for heart valve replacement and repair



Orthopedics

including orthopedic surgical tools and implants



Vascular

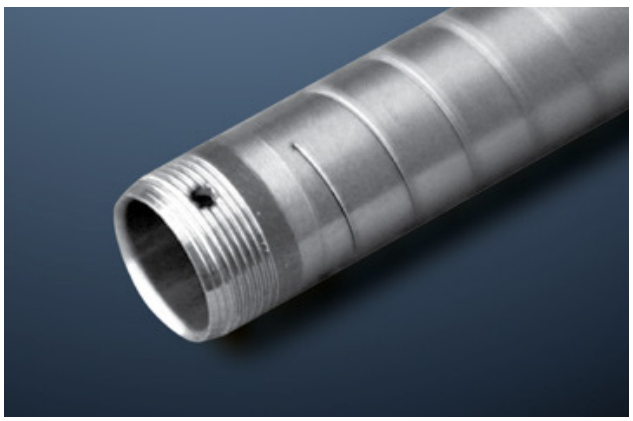
including atherectomy catheters.

Reduced manpower means reduction of cost

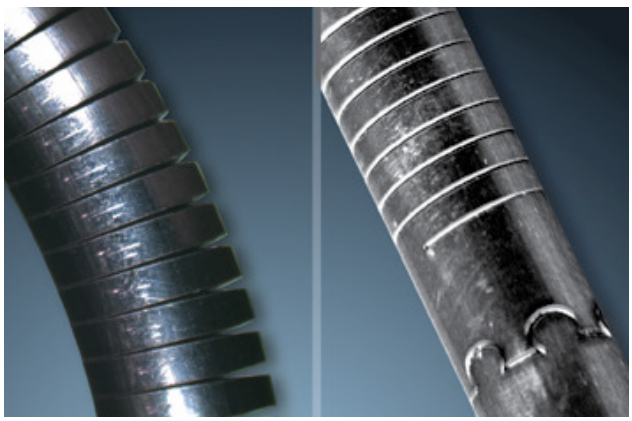
In our laser Swiss machines, there is an automatic bar feeder modified to deliver through-part coolant for the kinds of thin-walled tubing ideal for medical components. You can also automate the handling of finished parts as necessary. We even have a database of proven feeds, speeds, power setting, etc. for commonly used materials to speed time to market.

Free floor space means smart investments and better value proposition

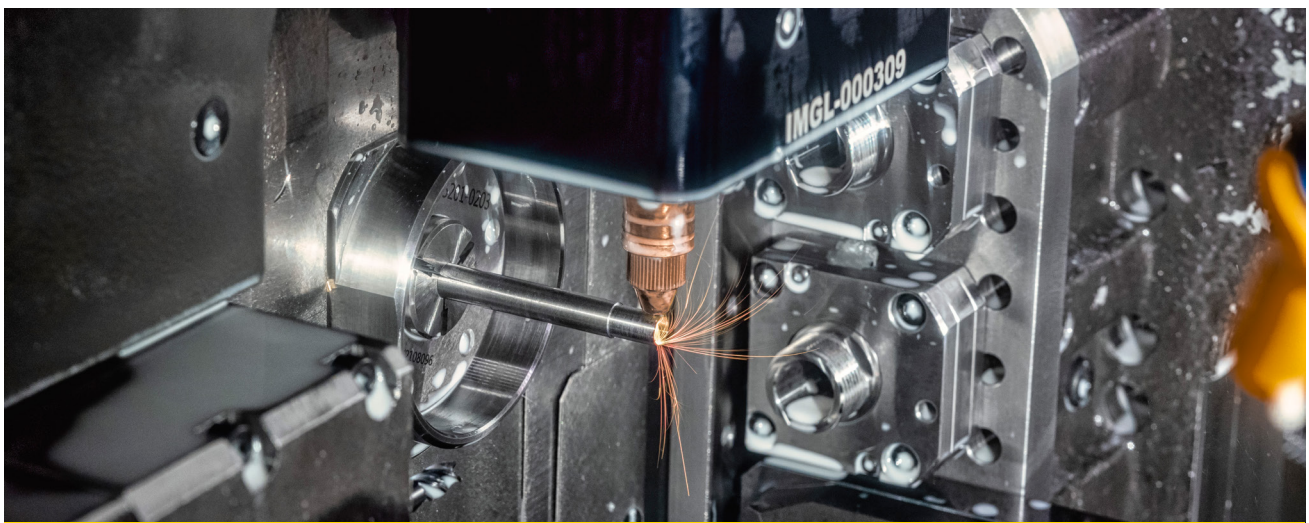
Multitasking capability allows reduction of single purpose machines. It all adds up to higher quality product with better manufacturing value.

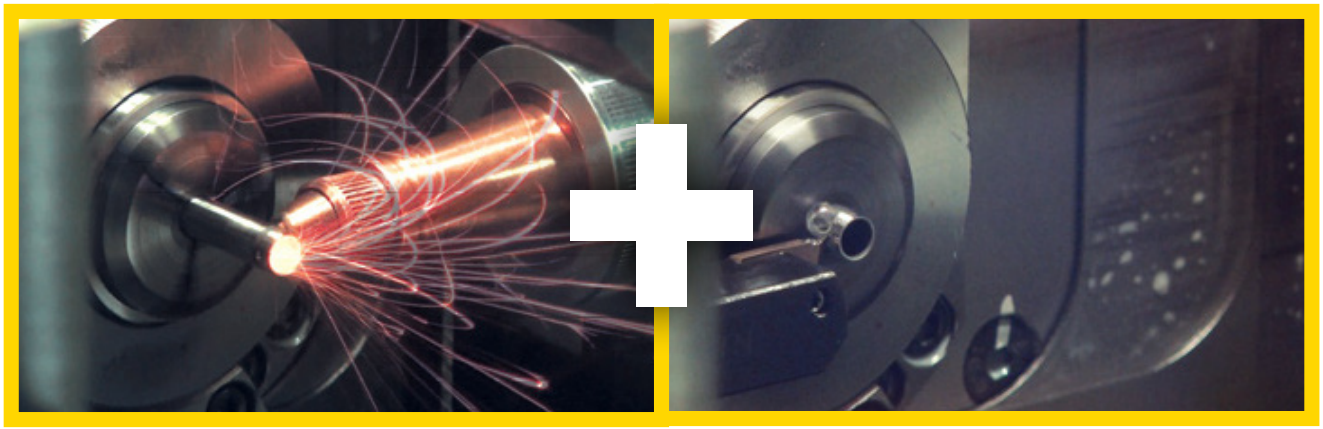


Creating these part features requires threading, chamfering, and laser cutting, all of which were accomplished in under fifteen seconds.



Laser cut flex patterns with other attachment forms for laser welded assemblies.





Combine CNC Laser Cutting and Traditional Swiss Machining in Seconds

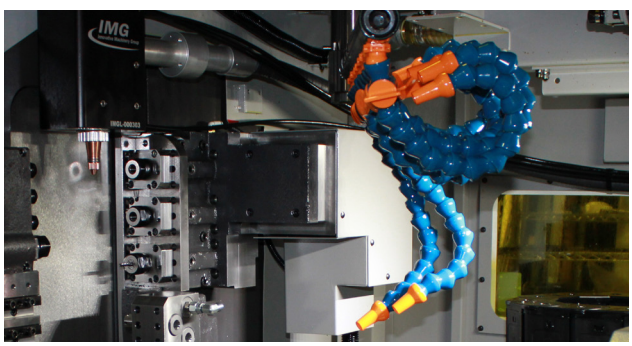
What does combining laser cutting & Swiss Machining on one machine do for our customers?

World's First and a Dream Come True

CNC Swiss machining is astonishingly productive. But the delicacy of some parts makes it difficult to apply traditional metal cutting techniques. And some features simply can't be cut effectively with a mill or a turning tool, no matter how small. For those challenges, you'd typically move the part to a laser cutting machine, or you'd live with inferior cuts, poor cycle times, and lots of post-processing. No more. Paragon Medical has combined Swiss turning machine with a complete precision laser cutting system. We've dreamt of this possibility for years and now it's here.

Triple Your Throughput - Or More

We've seen cases in which laser swiss is FIVE times more productive than the current approach. Naturally every situation is different, but productivity by eliminating multiple setups and deburring operations is our goal.









Ready To Get Started?

Provide a design for a free manufacturing estimate.

PARAGON MEDICAL AT A GLANCE

For more than 40 years, Paragon Medical has partnered with medical device companies to develop and manufacture complex products and components.

Our expertise spans product design and development, precision engineering, pre-production through commercial manufacturing, supply chain management, and quality assurance. Specialized capabilities include cable assemblies and custom interconnects, laser-processed polymers, catheter assemblies and subcomponents, laser-processed metals including nitinol (NiTi), and metal post-processing.

Paragon Medical is a business of AMETEK, Inc., a leading global provider of industrial technology solutions serving a diverse set of niche markets.

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