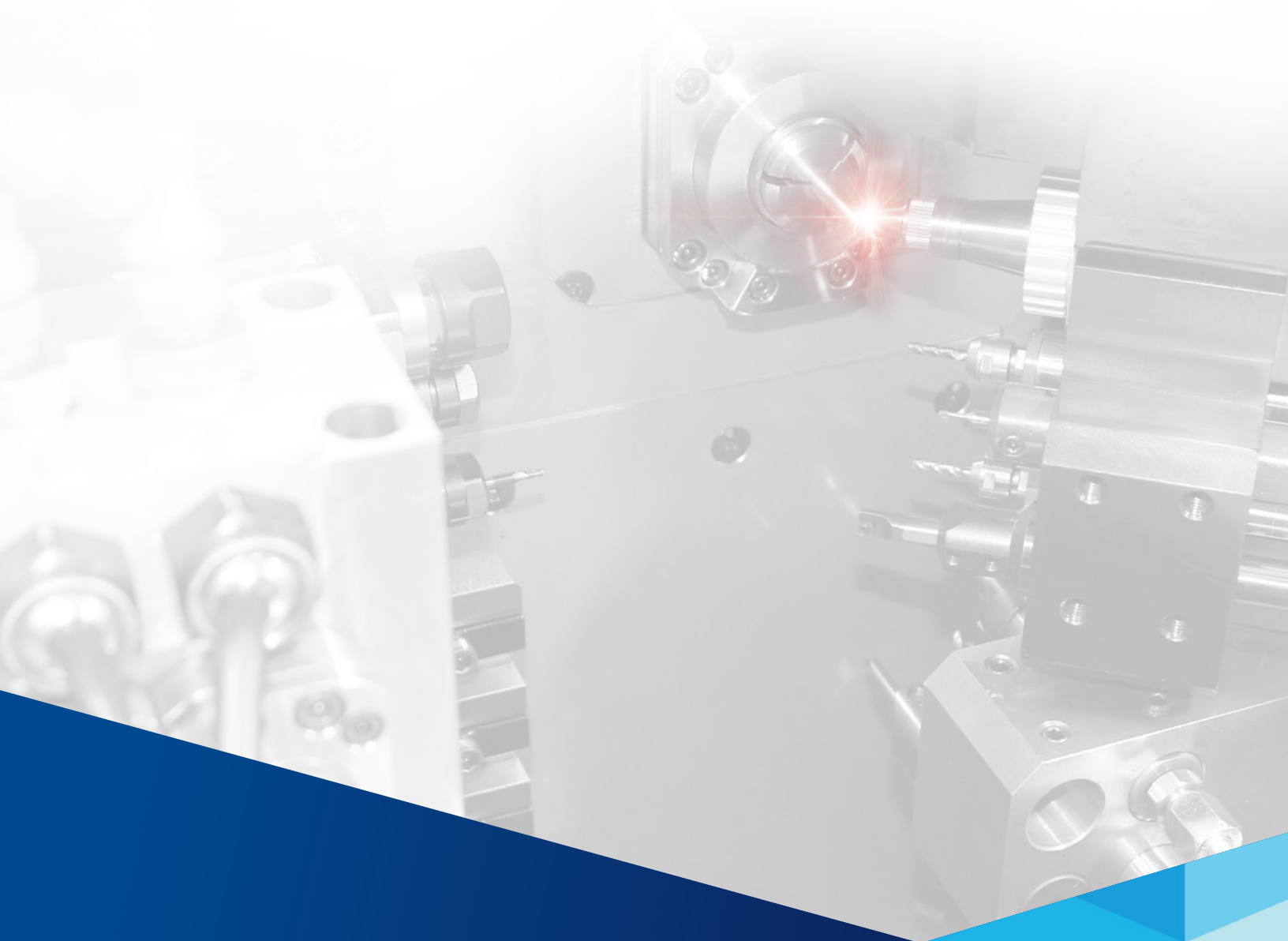




# LaserSwiss Series

Swiss Turning. Laser Cutting. Laser Welding. ONE MACHINE.



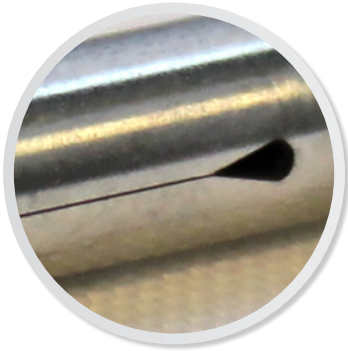
## ■ The World's Leading LaserSwiss

Designed, Built, Integrated in the USA

The seamless integration of laser cutting with traditional Swiss-type machining has applications in many industries to create clean, burr free edges and produce extremely delicate micromachined part features without the need of EDM. Some models feature a second laser head for welding.



The laser integration was designed to maximize flexibility and operator ease of use. All programming functions are driven from the standard machine code. Using the Laser as a cutting tool is as simple as programming an end mill.



*.002 slot width*



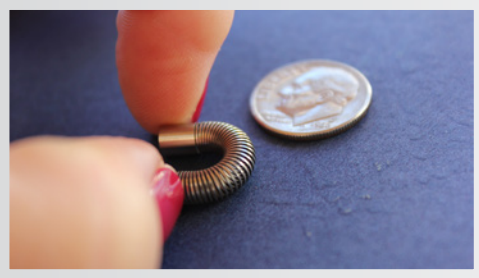
*Laser cut logo in aluminum*



*Laser weld*

LaserSwiss can create burr free slots as narrow as .0006 and spiral and puzzle cuts with kerfs ranging from .0006 to .013 inches. This capability permits the high speed micromachining of medical, hydraulic, connector and other parts from aluminum, titanium, stainless steel and other alloys, eliminating the need for secondary deburring and reducing scrap rates.

- Fully integrated Laser Cutting Systems with 20mm & 32mm capacity
- Available in 200W (air cooled) and 250, 400 and 500W (water cooled) SPI power supplies
- Water soluble flood and high pressure coolant standard
- Available with B-Axis Laser Cutting Head
- Available with a second laser head for welding
- Fully functional Swiss-type lathe with available thread whirling & other modular tooling



## Laser Integration

Reduced Energy. Faster Processing. Greater Reliability.  
Higher Productivity. Small Manufacturing Footprint.

### Laser Fully Integrated with Machine Control

All programming functions are accomplished through the CNC control. Power, frequency, pulse width, gas pressure threshold and lens focus point are on the fly driven from the CNC program.

*Response time is less than 10 milliseconds!*

### SPI Laser

The unit is rated to last 500,000 hours without service.

### FDA Class 1 Laser Enclosure

Safety features on this machine include: laser safety glass, dual safety interlocks, labeled safety details on all machine access points and a laser firing function that turns off any time safety switch is open or estop is activated.

### Laser Control Box

Converts the information for the control panel into laser functions. Driving the lens position, frequency, pulse width and power level to the laser head and SPI power supply.

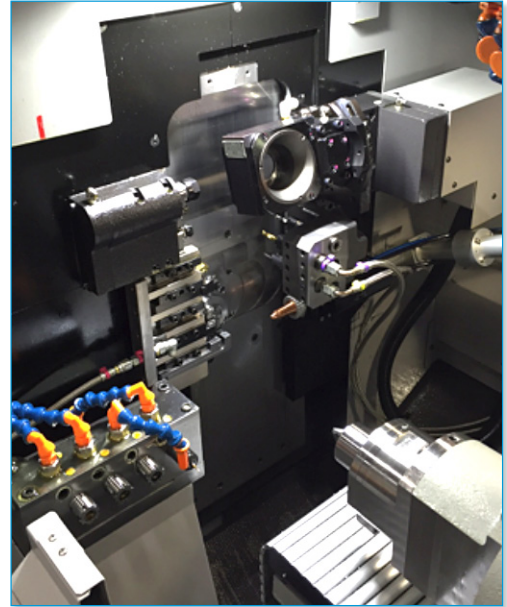


## ■ Thread Whirling

### LaserSwiss with 30° Thread Whirling Head

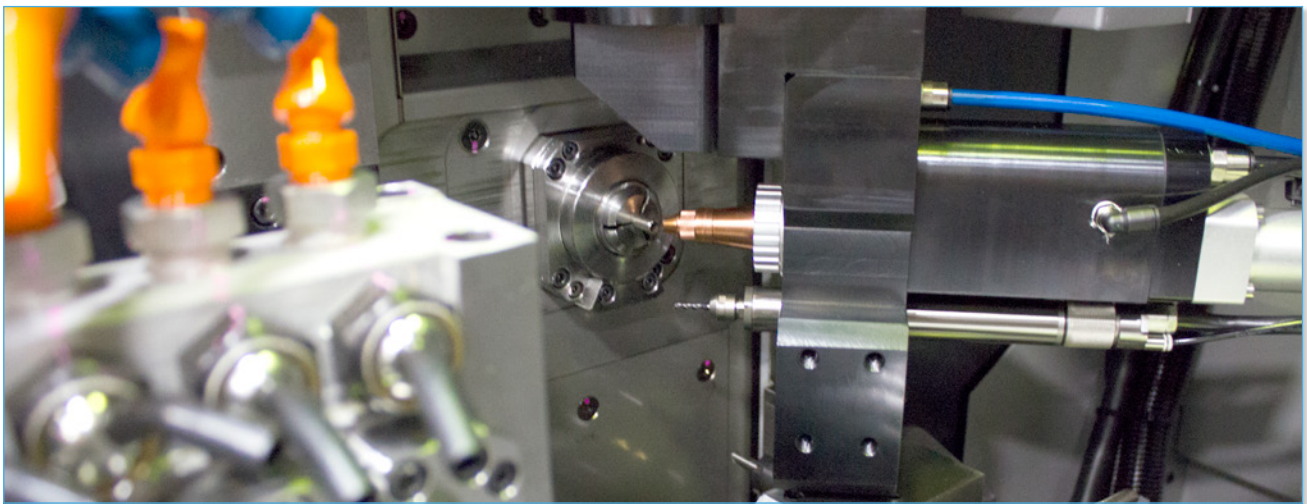
In addition to their game changing laser cutting and laser welding abilities, Tsugami LaserSwiss machines are capable of all the traditional Swiss style machining operations, such as turning, threading, tapping, milling, gun drilling, thread whirling, B-axis angled cutting, etc.

The integration of the compact laser cutting head has been designed to leave the traditional Tsugami tooling almost completely unchanged; only three turning stations are lost.



## ■ B Axis

### B-Axis Equipped SS207 LaserSwiss



## Standard Features

B0203 | B0204 | S205 | S206 | B0325 | B0326 | SS207-5AX | SS327-5AX

### **Compact Laser Head Design**

To enhance laser cutting accuracy, the laser head is precisely mounted very close to the spindle centerline and guide bushing.

### **Temperature Controlled System**

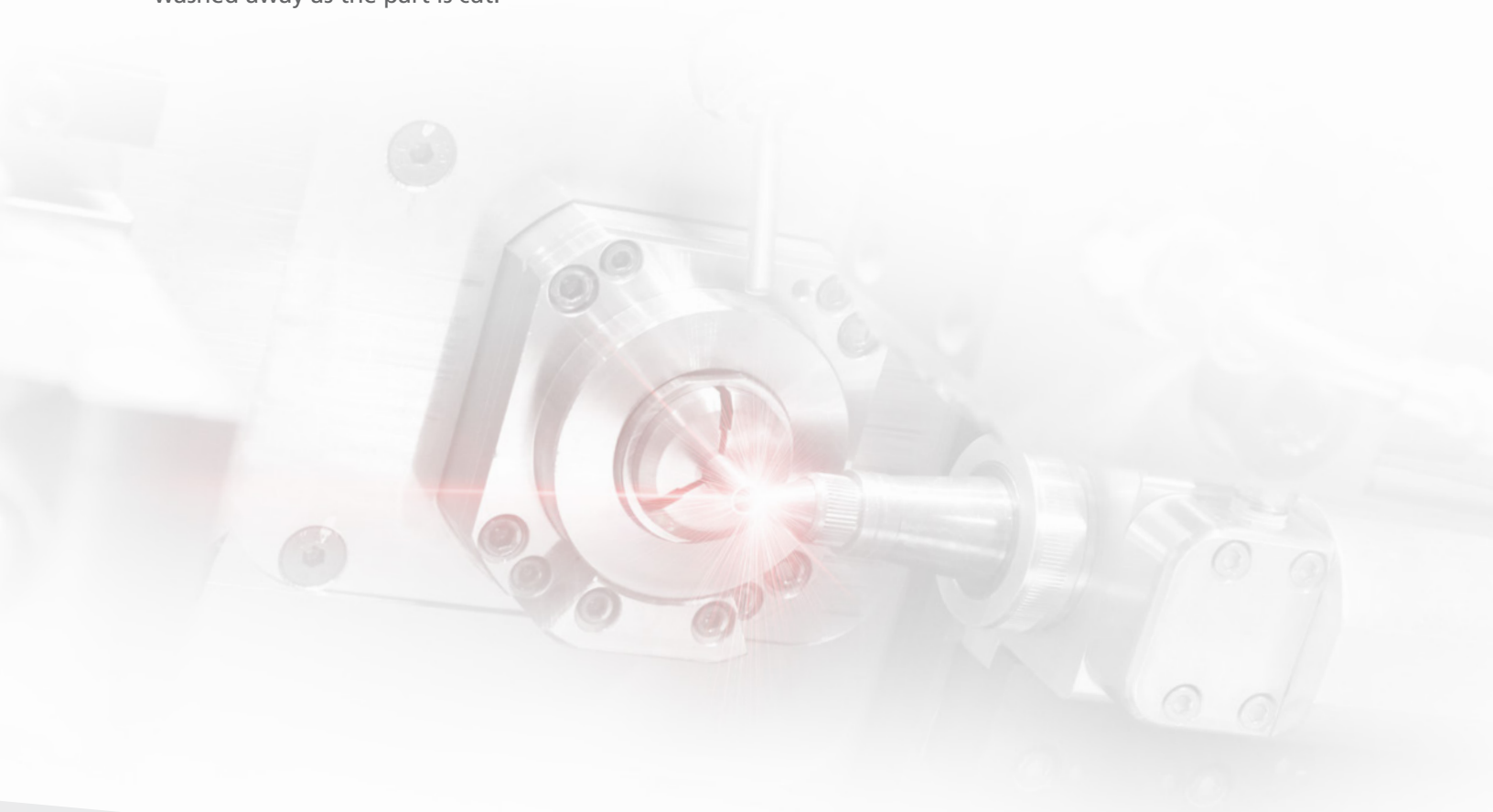
The Laser amplifier and related hosing are fully water cooled to allow for longer production running with no adverse affects from heat.

### **Through Coolant Capability**

Reduces dross and the heat affected zone in the material. Molten metal is washed away as the part is cut.

### **Part Programming**

Partmaker and Esprit programming systems can be used to generate LaserSwiss programs.



## Key Features - Compare Models

B0203 | B0204 | S205 | S206 | B0325 | B0326 | SS207-5AX | SS327-5AX

	B0203/B0204	S205	S206	B0325	B0326	SS207-5AX	SS327-5AX
Spindle Capacity	20 mm	20 mm	20 mm	32 mm	32 mm	20 mm	32 mm
Standard Laser Axis	Y1	Y1	Y1	Y1	Y1	B (0° - 110°)	Y1
Y2 Axis	N/A	N/A	Y	N/A	Y	Y	Y
Fiber Laser Supply Options	200/250/400/500	200/250/400/500	200/250/400/500	200/250/400/500	200/250/400/500	200/250/400	200/250/400
30° Thread Whirling & Other Modular Driven Tools	N/A	Y	Y	N/A	Y	N/A	N/A
Safety	All Models - Class 1 Laser Enclosure						



"There are other ways to run parts, but they're not as fast or accurate. The Tsugami is very responsive."

**DAVE SCHELL**  
CNC Machining Manager, Pulse Systems

"LaserSwiss provides our customers with new product design possibilities in a way that yields the lowest total cost. That's a 'win-win' for everyone involved."

**ALAN CONNOR**  
CEO, Cadence, Inc.

"We looked at other machines that combine Swiss turning and laser cutting, but there just wasn't really any comparison. They've integrated the laser so well and the support we get is unbeatable."

**JOHN FRANCHI**  
Principal, Northeast Laser & Electropolish

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