

SYSTEM DESCRIPTION

STW-F80 LASER WELDING MACHINE

Edition: ST171103

1. SYSTEM IMAGE



2. SYSTEM DESCRIPTION

STW-F80 laser welding system uses Nd3 +: YAG solid-state laser. After beam expander and reflection (or optical fiber transmission), the pulsed laser focused on the object. Work pieces can be hand-held or fixed by fixture, then the laser is triggered and fall on the work piece. Also, we can connect it with an external control system for automatic welding. Frequency, pulse width, worktable speed and the moving direction of the welding would be controlled by computer. By adjusting the frequency and pulse width of laser power, we can control the laser pulse energy.

3. TECHNICAL SPECIFICATIONS

Model	STW-F80
Laser wave length	1064nm
Max. laser output power	80W
Max. laser pulse power	50J
Quantity of fiber transmission path	Max. 4 paths, support 4 different worktables with different time and energy
Pulse width	≤15ms
Laser frequency	≤50Hz
Power consumption	4KW
Electrical requirement	AC 220V±15%/ 50/60 Hz/air-break/
Control system	PFCS laser power real-time feed-back control system
Closed-loop feed-back control system	Laser power feed-back
Cooling method	Embedded water cooling
Preview position	Red light indication (CCD and monitor are optional)
Dimension	1080mm*500mm*800mm

4. FEATURE

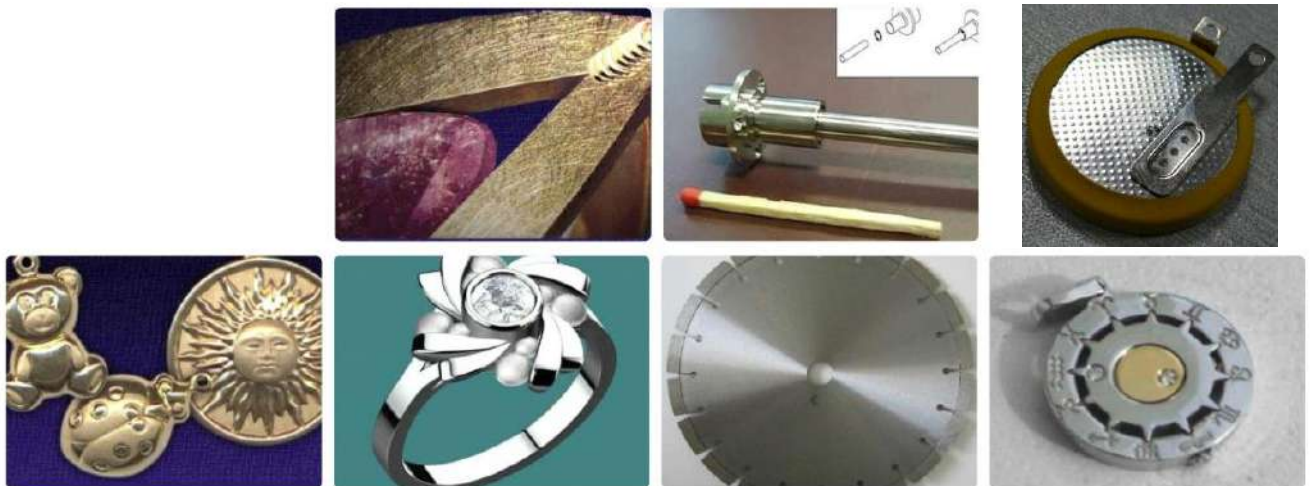
- With a high ratio of welding depth and width, weld width is small, small heat-affected zone, small deformation, and high welding speed.
- Smooth and beautiful, no need to process after the welding.
- High welding qualities, no pores, and can reduce and optimize the original impurities; it can be refined after welding. Weld strength and toughness are at least equal to or even stronger than the original metal.
- Precise controls, small focused spot, high-precision positioning, easy for automation.
- Able to weld some dissimilar material.
- Able to process spot welding, butt welding and seal welding.
- Compact size with embedded water chiller.

5. APPLICATION AREA

STW-F80 can weld the materials like titanium, nickel, tin, copper, aluminum, chromium, niobium, gold, silver, steel and their alloys. And it also can weld compound materials like copper-nickel, nickel-titanium, titanium-molybdenum, brass-copper and low carbon steel-copper.

It is widely applied in the industries of mobile phone batteries, sensors, clocks, watches, jewelry, electronic components, eyeglasses, crafts, precision instruments, medical apparatus, etc.

6. SAMPLE



Suntec Laser Technology Co., Ltd.

Suntec Laser Technology Co., Ltd. is located in the China Silicon Valley — Shenzhen. With a powerful R&D team and dedicated sales personnel, we are committed to provide solutions of global industrial laser processing. Suntec has a wide range of laser & photonics products, including but not limited to laser marking machine series, laser welding machine series, laser cutting machine series, optical components and relevant accessories of laser spare parts. We also provide OEM customized service for customers. Our main products involved in electronic circuits, integrated circuits, instrumentation, computer manufacturing, mobile communications, auto parts, precision machinery, building materials, clothing apparel, city lights, gold and silver jewelry, crafts gifts, and other industries.

Based on Shenzhen Suntec headquarter, our own Brazil subsidiary Suntec Laser Tecnologia LTDA and Suntec International (HK) Co., Limited are also providing laser solutions for local customers.

Suntec has been working with famous companies like Flextronics, Foxconn, WEG, Salcomp, ADATA, etc. Our rich experience in laser industry will help every future customer find the most efficient way to finish the projects.

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