HSG TS Series

HSG Fiber Laser Cutting Machine

TECHNICAL INFORMATION

HSG TS SERIES

FIBER LASER TUBE CUTTER

The TS Series comes standalone or equipped with fully automatic material feeding. The TS comes standard with pneumatic chucks, and an electromagnetic clutch for impact protection. This, coupled with a user-friendly
operation and one-touch functionality ensures an ease of use unprecedented in the industry.

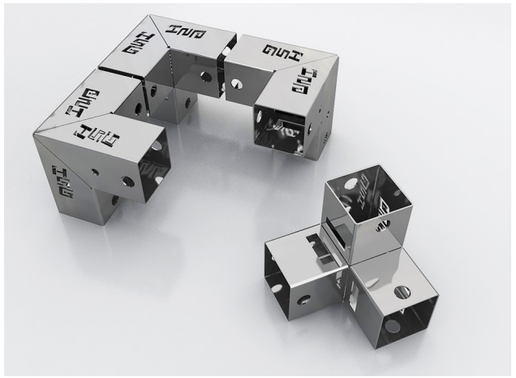
HSG are the global industry leader in Fiber Laser sales, having already sold to over 80 countries worldwide. With precise, reliable cutting at a great price, it's easy to see why.

No machine excels quite like the TS Series when it comes to metal profile processing.

UNDER THE HOOD

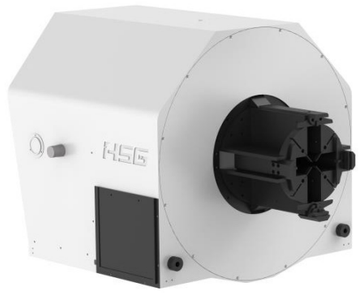
EFFICIENT LOADING SYSTEM

HSGs advanced control automatically calculates the length of tube to be cut, optimises the cutting sequence, and minimises material waste.
The workpiece is supported at key points along the whole length to ensure consistent and accurate cutting.



FULLY ANNEALED FRAME

HSG steel frames are annealed at over 600° to relieve internal stress. This ensures they can withstand **heavy use without distortion.**



HSG KLINGE CUTTING HEAD

HSG's latest cutting head underlines the competence of the machine manufacturer in the laser-optical field. The cutting head (including the capacitance sensors) have been developed in-house to guarantee the best possible interaction with the machine.

The result combines maximum reliability and performance with advanced cutting functionality.

Cutting Capacity	
Circular Tube	12mm - 254mm
Square Tube	12mm - 200mm
Rectangular Tube	12mm - 200mm

FULLY DIGITAL CONTROL PNEUMATIC CHUCK

Fully digitally controlled pneumatic chucks clamp quickly and accurately. High clamping precision provides long service life.

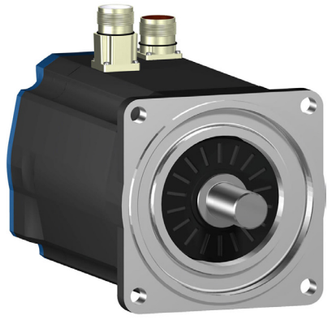
In addition to this, non-destructive tube clamping ensures the tubes will not be deformed by the jaws of the clamp, minimising material waste.

IPG LASER SOURCE

IPG Photonics is the world leader in fiber laser technology. The beam is of the highest quality, allowing constant cutting with extreme precision.

IPG features a compact, water-cooled, modular design, which allows for easy maintenance and relocation as required. IPG also boasts a class-leading wall plug efficiency of 50%, making them the industry standard for good reason.

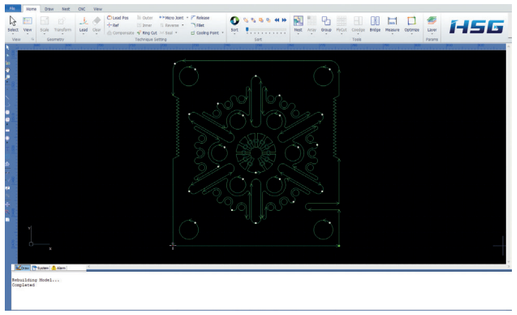
- **The highest quality laser beam in the world**
- **High efficiency**



SANYO DENKI SERVO DRIVES AND MOTORS

The TS series comes equipped with premium Japanese inertia servo motors from Sanyo Denki.

Unmatched in durability, these servo motors allow rapid 1.5G acceleration while maintaining incredible precision.

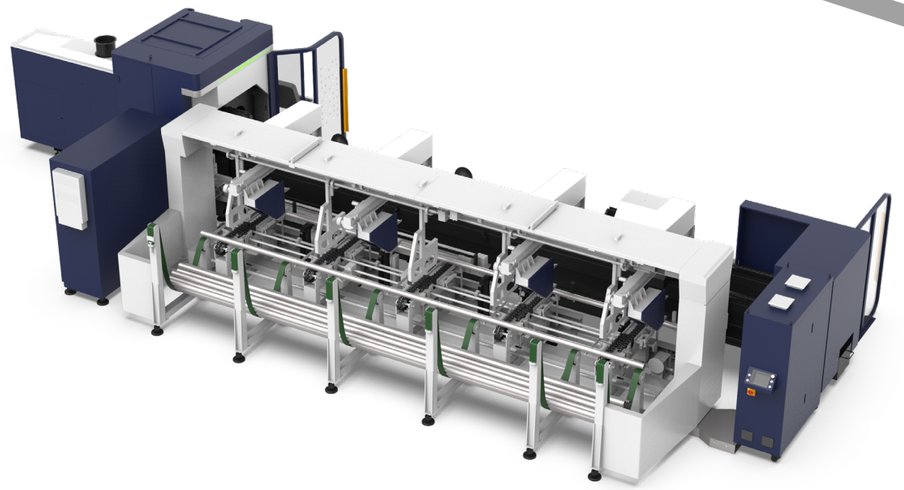


HSGX-9000 WITH SIGMATUBE SOFTWARE NESTING PACKAGE

Program and fully automate all of your jobs straight from the office with easy to use one-button functionality.

Advanced nesting is also included with the offline Sigmatube package.

OPTIONAL LOADING SYSTEM



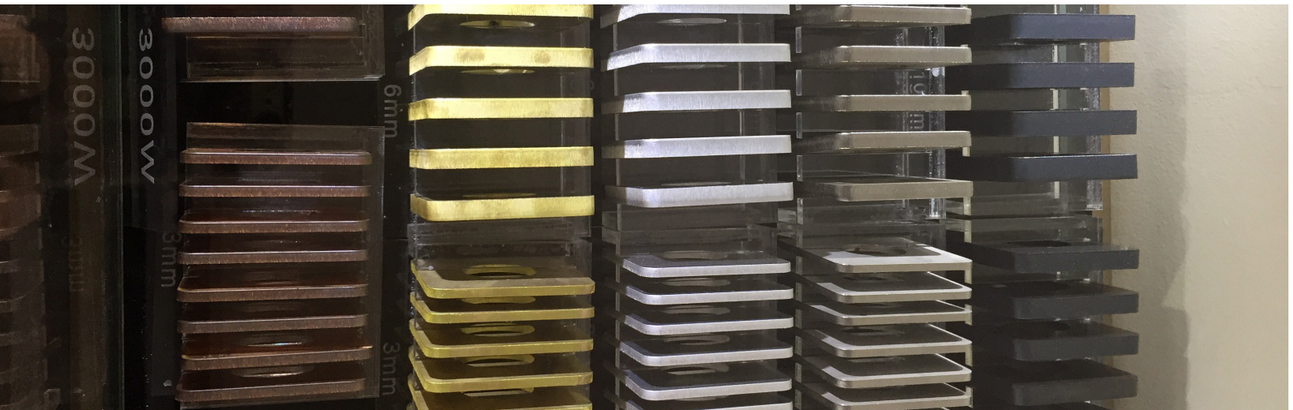
MACHINE SPECIFICATIONS

Name	Model / Specification
Tube Laser Cutting Machine	HSG TS
Fiber Laser Source	IPG 1 / 1.5 / 2 / 3 / 4
Fiber Laser Head	HSG Klinge Head
Precise Rack	YYC
Precise Straight Guide Rail	Hiwin
Speed Reducer	Shimpo
CNC Electrical Controller	Lenovo Industrial Computer (Windows 10) w/ 17” Monitor
AC Servo Motor and Driver	Sanyo Denki
Electric Control	Schneider (France)
Gas Circuit Control	Bosch-Rexroth (German)
Software	Sigmatube Nesting and HSG-X9000
Remote Control	HSG Wireless Controller
Water Chiller	Dual Circuit

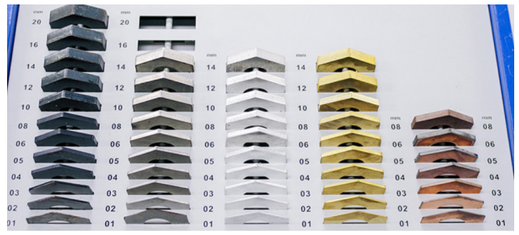
TECHNICAL SPECIFICATIONS

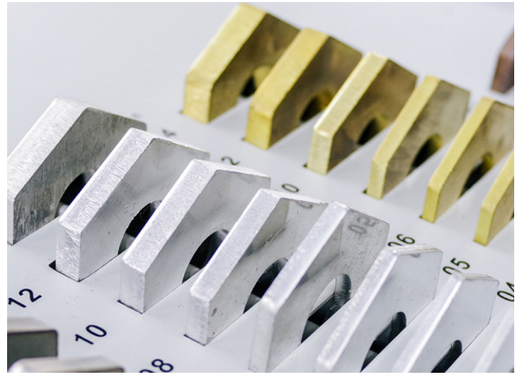
Items	TS
Laser Wavelength	1070mm - 1080mm
Laser Power	1000W - 4000W
Positioning Accuracy	±0.03mm/m
Repositioning Accuracy	±0.03mm/m
Max Moving Speed	120m/min
Max Acceleration Speed	1.2G
Max. Weight of Tubes for Bundle Feeding	4000kg
Max. Single Tube Weight	200kg
Tailing Length	≥130mm
Machine Dimensions (Length*Width*Height)	12000 x 3500 x 2800 (TS60) 13700 x 3500 x 2800 (TS80)
Whole Machine Weight	12000kg (TS60) 14500kg (TS80)

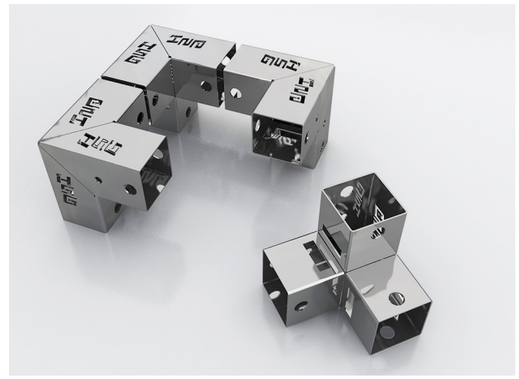
Laser Power	1kW	1.5kW	2kW	3kW
Max. Cutting Thickness (mm)				
Stainless Steel	4	5	6	8
Carbon Steel	6	8	10	10
Aluminium	2	3	6	8
Total Electricity Consumption (kW)	<12	<15	<17	<21



CUTTING SAMPLES



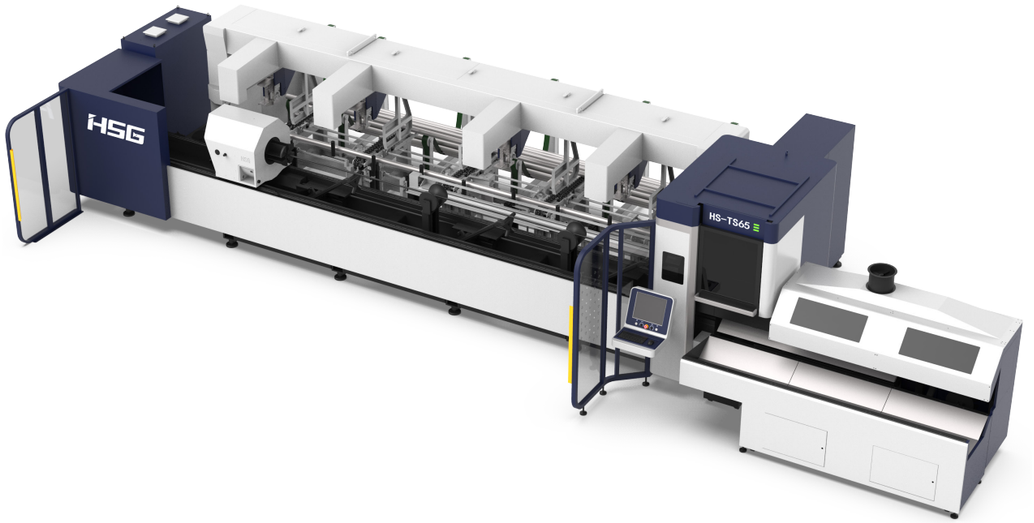




HIGH QUALITY EDGE FINISH FOR ALL THICKNESSES

HSG COMPANY BACKGROUND

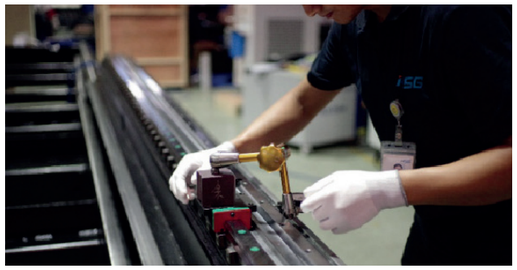
HSG Laser leads the world in manufacturing high-tech industrial laser solutions. We dedicate ourselves to providing intelligent laser equipment solutions, whilst enabling our customers a competitive edge on the international stage. With more than 20,000 laser cutting systems in the market and a rapidly increasing global base of over 80 countries, HSG is in a favourable position to serve its international customer base, whilst guaranteeing short response times and the highest quality.



We pride ourselves on innovation, continuous improvement and rapid development in the fiber laser cutting industry. We aim to provide key technologies and customised integration by helping manufacturers make perfect use of the many solutions we offer. Our goal is to produce highly sustainable and environmentally friendly industrial machines, and we achieve this goal by focusing on efficiency, flexibility and minimisation of wastage.

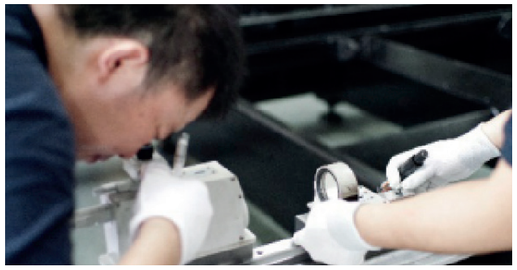
COMMITMENT TO QUALITY

HSG assemble their machines to the strictest quality standards utilising precise tools and methods to ensure excellence throughout the manufacturing process.



The use of an interferometer records the machines x and y axis movement during cutting to ensure accuracy.

A Marble Test is performed to measure the x and y axis, calculating any necessary adjustments to ensure perfect level and alignment along the length of the machine.



A collimator is run along the full length of the guide rail, testing for straightness. As required, micro-adjustments are made to ensure linear accuracy is achieved before shipment.

WARRANTY & SUPPORT

HSG machines come with a one year free-of-charge warranty for the entire machine. Machinery consumables are held locally in stock for immediate dispatch as required.

Any issues will be handled quickly and effectively by the local support team.

After the warranty period, spare parts will be provided by HSG at below market prices.