HSG 宏山
LASER 激光

HS-G3015XE

TECHNICAL SCHEME

Beyond(HSG) Laser is a national high-tech enterprise who is dedicated to providing laser intelligent equipment solutions to customers all over the world. We focus on the field of laser intelligent equipment manufacturing with the concept of efficient, intelligent, environmental protection and compatible product development.

Since our establishment in 2006, Beyond(HSG) Laser has developed rapidly with four standardized intelligent equipment manufacturing base covering an area more than 40,000 square meters. In the area of laser robot, multi-axis professional cutting pipe cutting, precision welding automated production lines and the related, We achieve Flexible Manufacturing and Digital Hierarchical Management. Beyond(HSG) laser intelligent equipment work steadily more than 100 countries and regions. And we have a wide range bench-marking paradigm in the area of precision appliance, auto parts, kitchen hardware, electronics， intelligent home industry. With professional, independent core R & D team and perfect systematic after-sales technical department, we truly provide customer-oriented service experience.

As an important enterprise of laser intelligent equipment, Beyond(HSG) Laser has been providing key technology and customized integration solutions for Industy 4.0 and future factories, helping enterprises to carry out intelligent manufacturing, making intelligent manufacturing to change our work within touch.

HSG Value

Laser makes manufacturing easier

Flexible manufacturing.
Information interconnection.
Product full manufacturing process solutions.

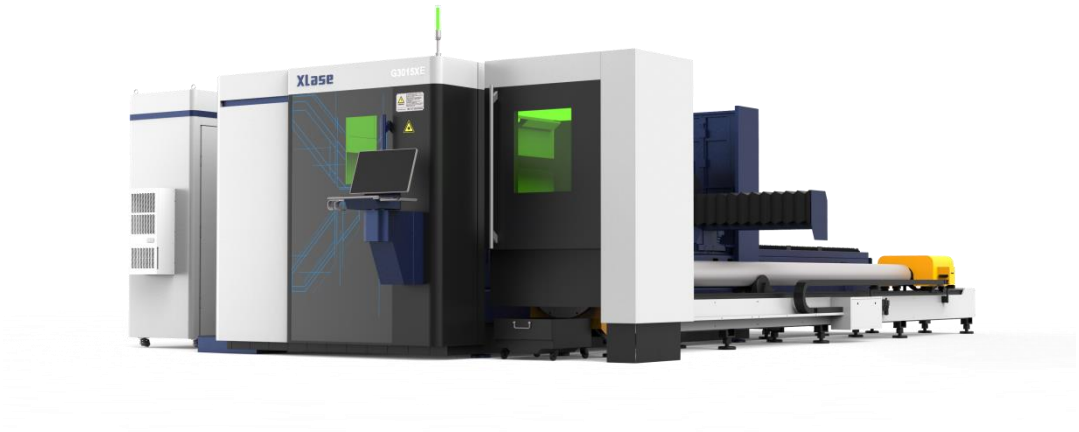
Agile innovation

Prime product strategy.
Leading unit technology.
Insight into industry opportunities.

Extreme experience

Creat value for customers.
Develop with customers.
Become a brand loved by the customers.

G3015XE-22EQ



(All pictures shown are reference only)

MODEL FEATURES

- The mechanical structure adopts gantry type, stable performance and stable operation of the equipment.
- Professional CNC control system, with laser power adjustment function, can guarantee the cutting quality and the operation is simple and convenient;
- This model adopts AC servo motor drive system. The machine movement mechanism adopts gear and rack double drive to ensure high speed, high precision and high reliability of the equipment;
- The gas system adopts integrated control type, advanced design, full import of pneumatic components, and can simultaneously access three different auxiliary gases. The customer selects the auxiliary gas according to the actual situation. High-pressure gas circuit design improves the cutting ability of hard-to-cut materials such as stainless steel.
- High-quality, high-efficiency fiber laser resonator, low processing costs, energy saving and environmental-friendly.

Equipment Configuration List

Name	Quantity	Model/ Specifications
Special precision cutting head for fiber	1 set	Klinge
Precise rack (plate cutting part)	3 sets	Alpha
Speed reducer with gear (plate cutting part)	3 sets	Alpha
Precise rack and gear (tube cutting part)	1 set	YYC
Precise speed reducer (tube cutting part)	3 sets	SHIMPO
High speed servo motor and drive (plate cutting part)	4 sets	Panasonic
High speed servo motor and drive (tube cutting part)	3 sets	Panasonic
High precision linear guide rail (tool)	4 sets	HIWIN/PMI
Precision ball screw Numerical control system	1 set	HIWIN/TBI
Numerical control system	1 set	FSCUT
Electric control	1 set	Schneider
Gas circuit control	1 set	SMC/Lanny
Mechanical platform and accessories of tool	1 set	HSG
Water chilling unit	1 set	Standard configuration

Technical Parameters and Specification Description

Performance index	Parameter
Machining area (length×width)	3048mm*1524mm
Positioning precision of X/Y axis	±0.03mm/m
Repetitive positioning precision of X/Y axis	±0.03mm
Maximum speed	60m/min
Maximum accelerated speed	0.5G
Tool weight	8900kg
Maximum load of workbench	800kg
Max. Load of tube	100kg
Machine overall dimensions (length*width*height)	9200*3500*2200

Note: This configuration table is valid before Dec. 30, 2020.

Operation requirement

Content	
Electricity:(Industrial stabilizer is suggested) (1) Voltage: 380V (2) Frequency: 50Hz (3) Voltage stability + 5% (4) Voltage regulation: <2%	Assist gas: Purified dry compressed air and high purity oxygen (O2) and nitrogen (N2) purity not less than 99.9%
Sheet metal: Homogeneous, smooth and clean.	Compressed air supply device (1) Pressure: 14 bar (2) Volume: 1 m³

Cutting range

Tube type	Tube dimensions(mm)	Standard cutting length (mm)
Circular tube Square tube Rectangular tube	Φ20 - Φ210 □20*20 - □150*150 Each side: 20 - 150	6,000

Also note:
1. When cutting a round tube, there is power rotation for both front and back, so tube scratching is not easy to occur when the stainless-steel round tube is cut. At the same time, it can also cut hexagonal tube, waist tube, oval tube and so on.
2 There is no longer a 60:1 slender ratio limit when cutting 6m pipes.
3. The Y direction adopts rack drive, and the speed is faster than that of a conventional balls crew drive.
4 Because of the double W rotation, there is no lag and the cutting quality of the product is guaranteed.
5. Because there is a feeding device underneath when cutting 6m tube, there will be no large swing in the middle of the tube.

(The above parameters are for reference only. Material quality, cutting pressure, cutting graphics, etc. all affect the cutting speed and cutting quality.)

Sample Cutting Display

Installation and Training

1. Installation and Debugging

The numerical control fiber laser cutting machine is installed and operated according to two national standards including GB7247-87 Radiation Safety of Laser Product, Equipment Classification and Requirements and User Guide and GB10320-88 Electrical Safety of Laser Equipment and Facilities.

(1) After the Contract takes effect, we understand the geological position of the plant installation of the demander as soon as possible to determine the specific equipment installation position, and provide the equipment installation guide within seven (7) working days after the Contract takes effect.

(2) Prior to installation and debugging, the demander shall construct the equipment foundation according to the equipment installation guide provided by us to ensure that the installation site allocation complies with the equipment installation requirements.

(3) After the demander completes the equipment installation guide and the cargo is delivered to the delivery site, our personnel will install and debug the equipment with the necessary tools and be responsible for completing the equipment installation, debugging, technical index test, trial cutting, training, acceptance and delivery to the demander within five days. The demander shall provide necessary coordination and assistance for equipment installation and debugging by our engineer.

(4) All expenses relating to installation and debugging and personnel dispatched are borne by us and the demander provides the machine for unloading and personnel's accommodation.

(5) All equipment provided in the Contract is installed and debugged by us. After the equipment is installed and debugged, we will perform self-inspection for it. After various technical indexes comply with the technical requirements of the Contract, the supplier and demander may accept and use the equipment.

2. Personnel training

Before the equipment is shipped, the demander may dispatch 1-2 operator(s) to our factory or exhibition hall for one-week training. The specific time is subject to the confirmation with our Customer Service Department.

Training contents include laser principles, equipment structure, process description, equipment maintenance, laser safety protection, operation procedure and simple troubleshooting, etc. The trainee shall be the mechanical, electrical or optical assistant engineer or engineer, be familiar with the computer operation and AutoCAD drawing, who must pass the assessment of equipment operation, fundamental laser principles, laser safety protection, maintenance, etc. organized by our Company prior to induction.

3. Training process

4. Packaging, transportation and equipment acceptance

(1) Standard packaging for long-distance motor transportation, dampproof, anti-rust and vibration resistance, suitable for overall hoisting and the hoisting gravity and position are indicated.

(2) Transportation mode: Motor transportation. We are fully responsible for it, including freight and insurance.

(3) A detailed packing list, certificate of quality, equipment specification and all other documents and materials are put into the packaging box. The packing list is attached outside the packaging box and the certificate of quality is put into the packaging box.

After completing the equipment installation, debugging and self-inspection, we accept it on the demander's site, including:

1. Inspection and acceptance of the quantity, model, specification, function, technical indexes, etc. of all goods.
2. Perform laser cutting and machining for the typical specimen approved by both parties.
3. Both parties record the acceptance information and evaluate the acceptance result. The performance may be assessed after signature and approval by both parties.

Notes:

1. Provided that the fault of the auxiliary facility on site (power source, peripheral environment, etc.) and environment do not comply with the requirements of normal equipment operation, which results in the interruption of the test or acceptance, the demander shall immediately recover it, so as to ensure the normal operation conditions of the equipment.

2. Provided that the equipment is in shortage, damaged or does not comply with the Contract terms and quality standard during acceptance, we will be responsible for supplementing or replacing it and all expenses caused thereby are borne by us.

5.List of accompanying documents

Certificate of quality of tool	One copy
Packing list of tool	One copy
Spare parts	One copy

After-sales Services

The warranty period of this complete equipment (excluding such vulnerable parts and consumable as optical device, lens, etc.) is one year after the equipment is accepted. We will help the demander coordinate the after-sales services of the auxiliary equipment. Our after-sales service engineer will provide the corresponding call support and necessary on-site service according to the problems reported by the customer. The call and network response time is within 2h and then we will provide services (except man-made damage or force majeure).

Within the warranty period of the equipment, for the fault caused by the quality of the equipment component, we will maintain or replace the component free of charge and provide free service at the same time (except optical device, vulnerable parts and damage caused by the user's mis operation).

For replacement of the optical devices (including optical device and vulnerable parts), no matter whether they are within the warranty period, they shall be purchased from us to ensure your normal equipment use. Meanwhile, we will be responsible for maintaining them. We will terminate the free warranty service in case of any damage and fault caused by fittings which are not purchased from us and the warranty period will be terminated.

Within the warranty period, we will not provide warranty for the following articles: Nozzle, ceramic article, support bar for cutting, filter element and component, protective lens, O-ring, all lubricating oil, transmission fiber, collimating lens, focus lens, other optical lenses, SMA line and reducing valve.

The professional trained engineer provides users all over the world with technical support and services via the network, who mainly intuitively identifies the faults quickly online from a long distance with such social software as QQ, WeChat, Teamviewer, etc. and timely deals with them, so as to ensure that the user may better use the equipment.

With the unified fault reporting system via 400 hotline, email/WeChat/Skype, we provide users with fault reporting services and consulting services in terms of the technology, parts, warranty extension, maintenance, etc. Through national unified fault reporting, a particular person is responsible for accepting the fault information reported to avoid mutual forwarding for several times, and thus delaying the maintenance time. Therefore, we may adjust the service team members and mode of service according to the actual situation in different areas.

After-sales email: hsgservice@hsglaser.cn

The professional, careful and improved pre-sales, on-sales and after- sales service systems provide guarantee for the user's continuous machining. There is installation guide, maintenance guide, unloading guide, training guide, etc. The most improved and largest sales and after- sales service branches in the industry are located in South China, East China, Shandong, North China, Central China, and Southeast China to provide the after-sales service without distance

STRATEGIC PARTNERS

CERTIFICATE OF HONOR

PATENT CERTIFICATE

CONTACT AQUA MACHINERY

Adres: Calzada de las Armas 577, Colonia Providencia, Delegación Azcapotzalco, CDMX, CP: 02440

Phone:55-6389-0074, 55-3888-8500

Website: http://www.aquamachinery.com.mx

E-mail: direccion@aquamachinery.com.mx

INTELLIGENTLY MADE IN CHINA
LOVED BY THE WORLD