BAISON LASER
LASER CUTTING / WELDING / AUTOMATION

TECHNICAL PROPOSAL

E Series

EL6

Large Format Fiber Laser Cutting Machine

DESCRIPTION

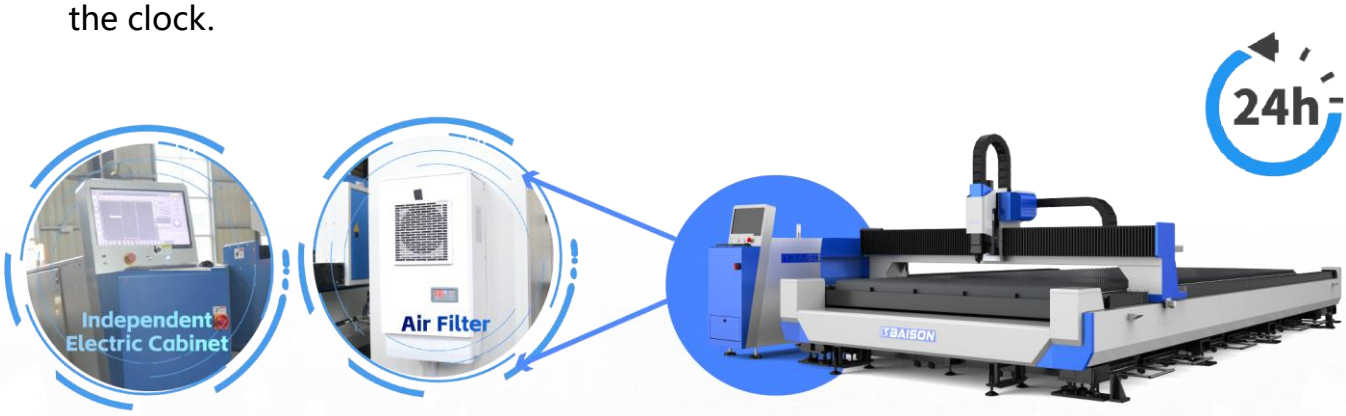
EL6 Large Format Fiber Laser Cutting Machine

The E Series is a Large Format Fiber Laser Cutting Machine independently developed and produced by Baison Laser, suitable for cutting metal sheets such as carbon steel, stainless steel, aluminum alloy, titanium alloy, and galvanized aluminum-zinc.
It meets various cutting needs for medium and thick sheet metals.

PRODUCT ADVANTAGES

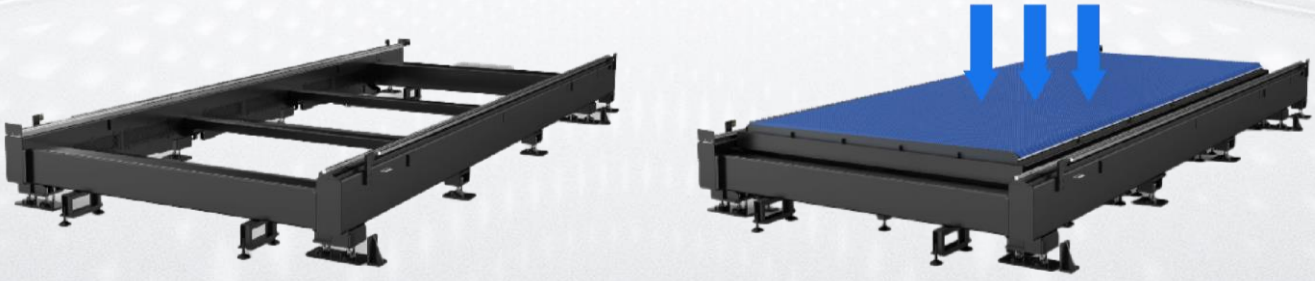
Integrated independent thermostatic electric cabinet

Integrated independent thermostatic electric cabinet ensures that the electrical components operate in a constant humidity and temperature environment around the clock.



The lathe bed and workbench are designed separately

The lathe bed and workbench are separately designed to prevent thermal deformation during cutting and cushion the impact from loading heavy plates, ensuring precision cutting.

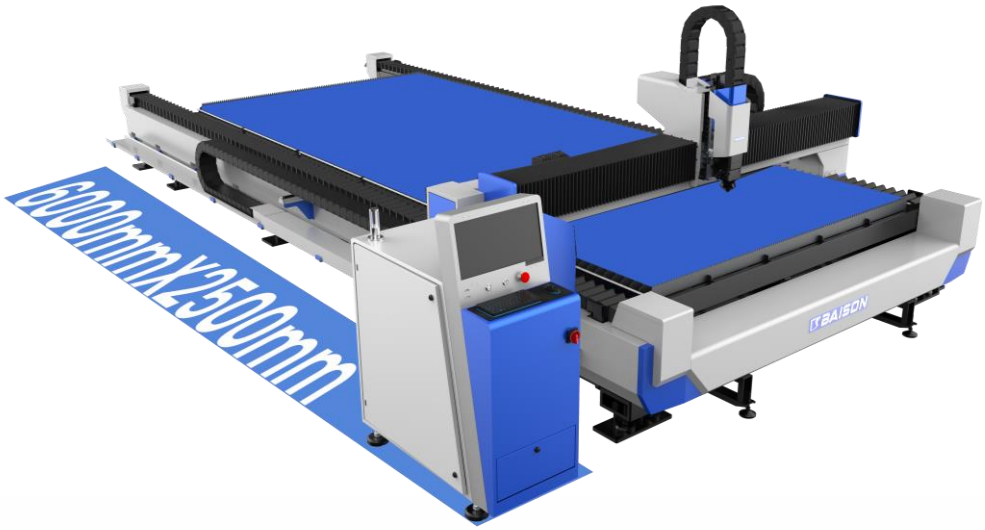


Note: Images are for reference only

PRODUCT ADVANTAGES

Heavy welding machine bed

The platform has a large load-bearing capacity and ultra-large work area,is an excellent laser cutting solution for full panel cutting in large-scale applications.



Modular Workbench Design

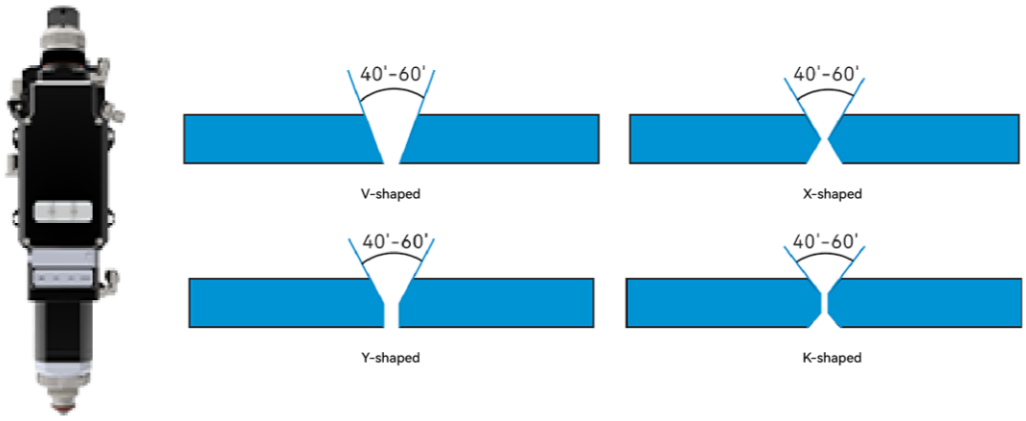
Modular workbenches offer flexible assembly and disassembly, reducing maintenance costs for customers.

Note: Images are for reference only

PRODUCT ADVANTAGES

Once Forming of ±45° Bevel(*Optional)

It can achieve maximum cutting angles of ±45° for various types of bevels, such as X, Y and K, in one step, reducing the need for separate beveling processes and improving efficiency.

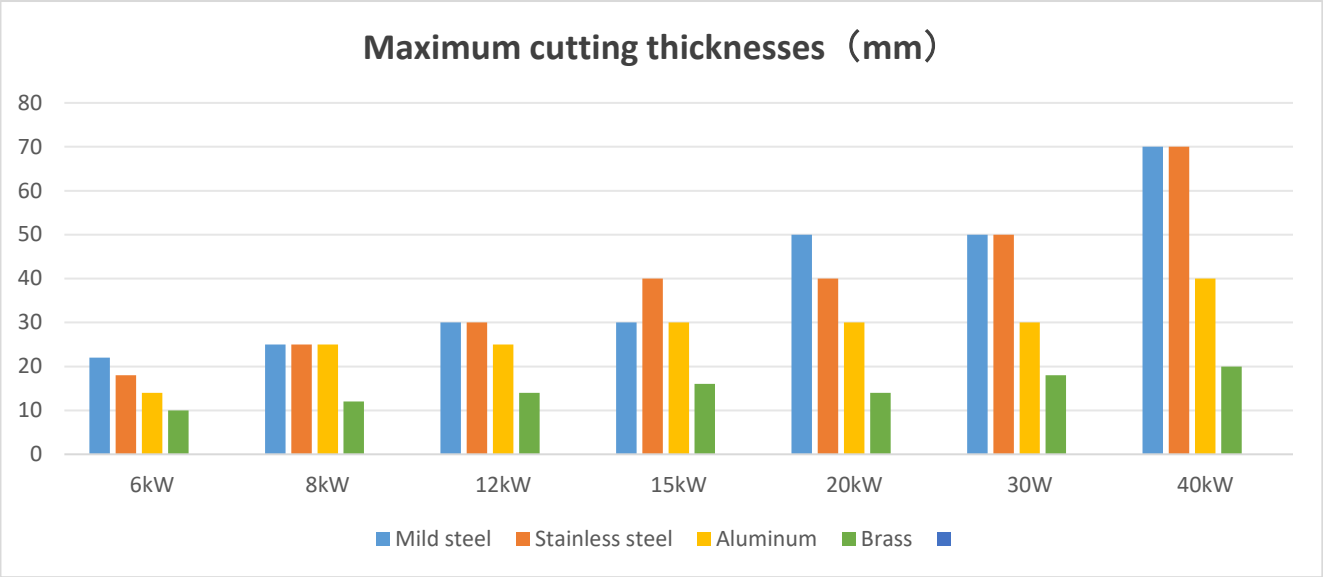


Integrated Independent Thermostatic Electric Cabinet

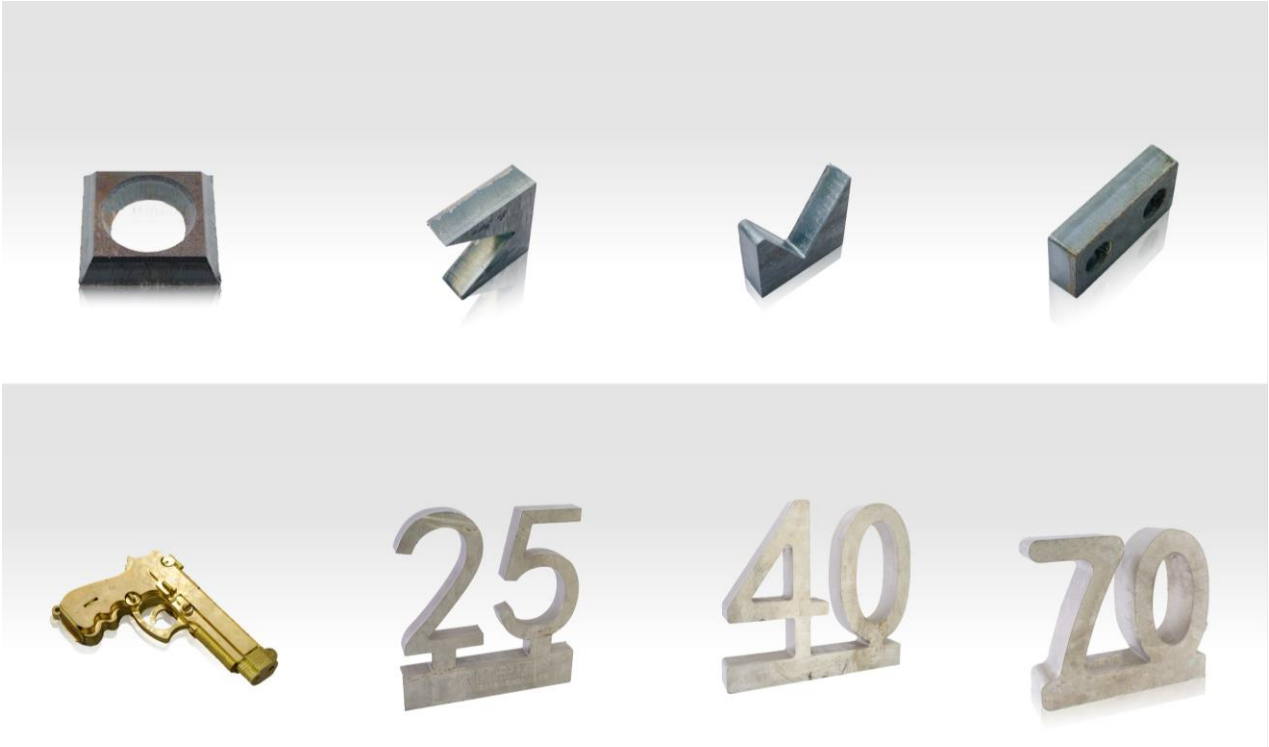
Integrated independent thermostatic electric cabinet ensures that the electrical components operate in a constant humidity and temperature environment around the clock.

Note: Images are for reference only

PROCESSING CAPABILITY



Note: Maximum thicknesses of the materials to be processed. The values that are achieved depend on the quality of the material being processed, the quality of the cutting gases, the quality of the service and the NC program and the condition of the wearing parts



TECHNICAL DATA

MACHINE MODEL	EL6
Work area	Straight cutting: 6000*2500mm Bevel cutting: 5500*2200mm including 30KW or more bevel stroke: 5400*1700mm
Max. sheet weight	6500kg
Machine Size*	8988*3753*2100mm
Machine Net Weight*	5100Kg
Power Data	63kw/97A
X-axis	2550mm
Y-axis	6100mm
Z-axis	100mm
Positioning Accuracy (X/Y)	±0.03mm/m
Repeated Positioning Accuracy (X/Y)	±0.03mm
Max Speed	120m/min
Max Acceleration	1.2G
Power Parameters	3-Phase AC380V 50Hz/60Hz
Power Protection Level	IP54

Note: Approximate values. The exact parameters are specified in the machine's installation plan.

CONFIGURATION LIST

MACHINE MODEL	EL6
Control System	FSG6000
Motor on X-axis	BOCHU
Motor on Y-axis	BOCHU
Motor on Z-axis	BOCHU
Reducer	TECHMECH
Gear and Rack	JT
Guide rail	SHAC
Water chiller	HANLI
Laser source	RAYTOOLS
Laser head	BOCI BLT442
Electronic Components	SCHNEIDER
Proportional Valve	AVENTICS
Machine Bed Accessories	BAISON

Note: this standard configuration is recommended by our company, custom per customer request is available.

MAIN CONFIGURATION

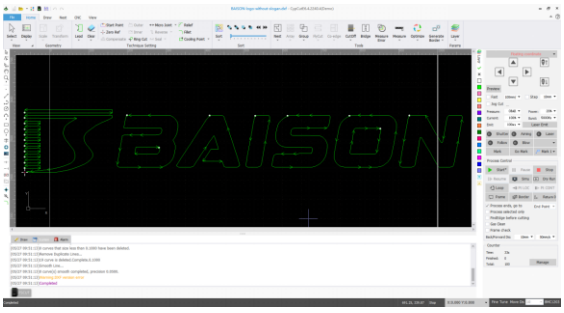
Laser source

- High Efficiency: Raycus lasers offer 30%-40% electro-optical conversion efficiency, significantly reducing energy consumption and operational costs.
- Superior Beam Quality: The single-mode fiber design ensures high beam density, delivering precise and efficient cutting, especially for thin and complex materials.
- Reliable Stability: With modular design and in-house key components, Raycus lasers are highly stable, capable of long-term continuous operation in harsh environments.
- Long Lifespan: Core components are designed for 100,000+ working hours, reducing maintenance frequency and overall cost of ownership.

Cutting head

- Excellent design: Optimized optical configuration and smooth, efficient airflow design significantly improve cutting quality and efficiency.
- Multiple protective lenses: Collimator adds protective lenses, effectively safeguarding the collimation lens.
- Auto-focusing: Auto-focus reduces manual intervention, with an auto-focus range of -12 to +10 mm and a focusing accuracy of 0.05 mm.
- High compatibility: Equipped with multiple fiber interfaces such as QBH and QD, compatible with various mainstream lasers.
- Drawer-type lens holder: Quick and easy replacement of protective lenses.

Control System



- User-friendly Operation: The system features an intuitive interface, making it easy to operate. Operators can quickly learn the controls, reducing training time. Its intelligent design also simplifies complex cutting tasks for enhanced productivity.
- Excellent Performance: This system has advanced functions such as "Smooth MicroJoint", "Fast Cutting" and "Circle Center" to meet various processing needs.
- High-precision Cutting: This system delivers precise cutting results, suitable for various metal materials. Its stable performance ensures cutting accuracy and reduces errors, contributing to consistent quality.

*Picture for reference only

MAIN CONFIGURATION

Reducer

- Stable operation
- Low noise
- Large output torque
- High speed ratio

Servo Motor

- Higher Precision
- Higher Efficiency，enhancing processing efficiency
- Simpler Debugging，reduced setup time

Guide

- High precision
- Low Noise
- Good wear resistance
- Automatic centering capability
- High interchangeability

Water chiller

- Dual cooling function
- Real-time alarm
- Machine protection

*Picture for reference only

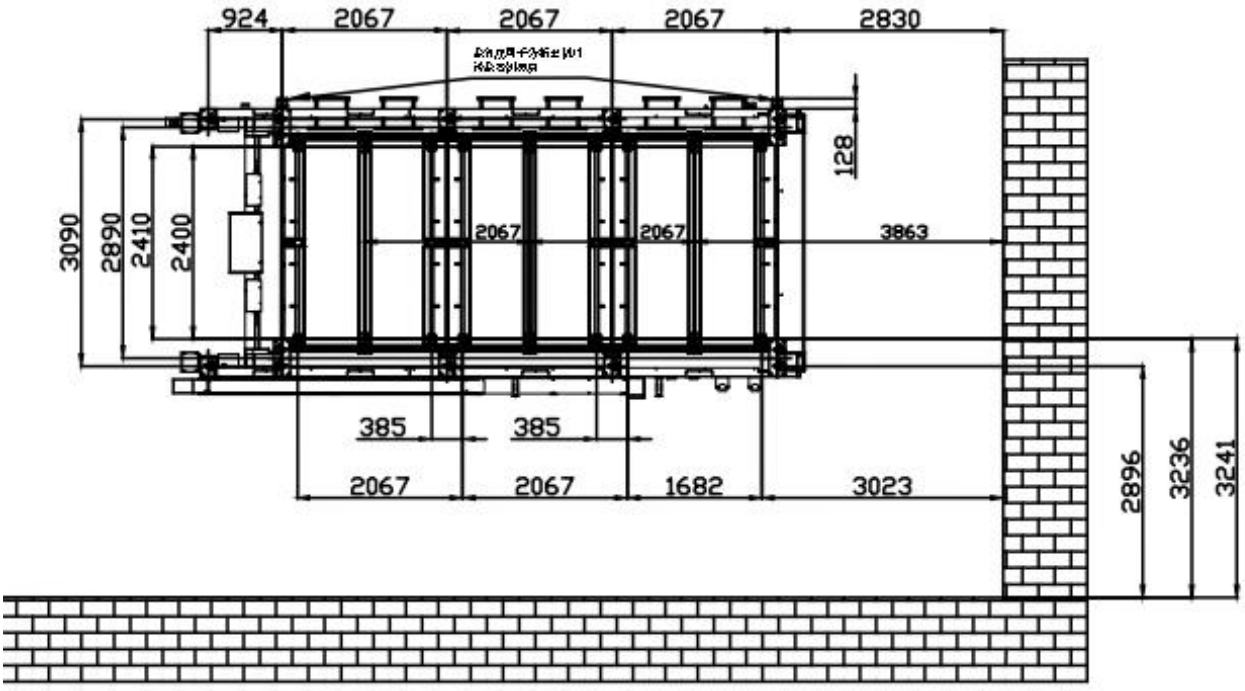
COST ANALYSIS

Items		Air	Oxygen	Nitrogen
Peak Power Consumption (KW)	Laser	36.50	36.50	36.50
	Water Cooling	14.00	14.00	14.00
	Air Compressor	22.00	/	/
	Machine Main Frame	13.00	13.00	13.00
	Dust Removal Equipment	11.00	11.00	11.00
Total Power(KW)		96.50	74.50	74.50
Typical Power Consumption(KW) (*75% Total power)		72.38	55.88	55.88
Power Consumption Cost(0.15USD/kwh)		10.86	8.38	8.38
Consumable Parts (USD/h)		0.2	0.2	0.2
Gas Consumption(USD/h)		0	2.5	6
Total Operating Cost(USD/h)		11.06	11.08	14.58

Note:

1. The above data is for reference only. Electricity and gas prices vary by country and region.
2. The consumption of assist gas will vary depending on the material and thickness being cut.
3. If the cutting assist gas is compressed air that has been dried, the cost includes the actual electricity consumption of the air compressor, machine power, and consumables.
4. Consumables for the laser cutting machine include all optical lenses, sensors, ceramic rings, cutting nozzles, and all sealing rings.

DIMENSIONS


924
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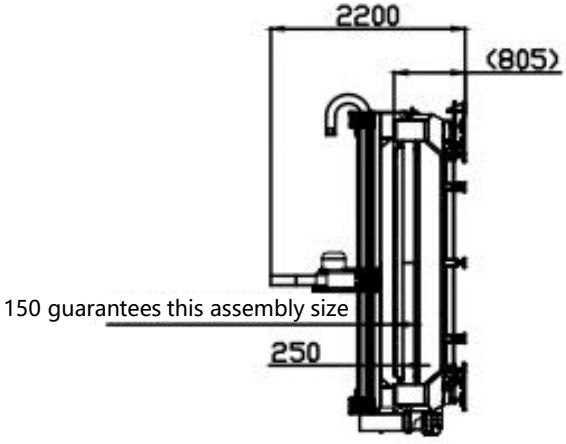
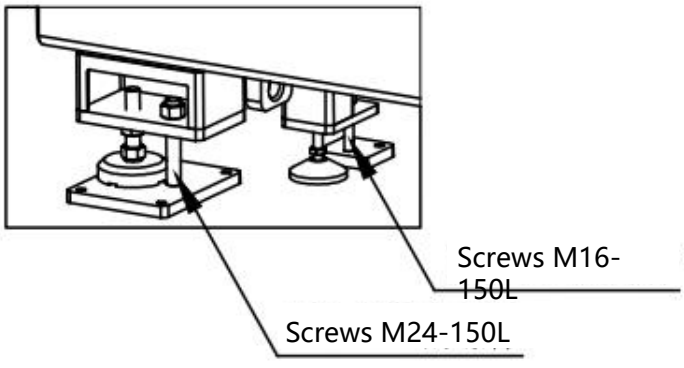

2200
(805)
150 guarantees this assembly size
250


Screws M16-150L
Screws M24-150L

About BAISON LASER

Founded in 2004, Foshan Huibaisheng Laser Technology Co., Ltd. (BAISON LASER) is a global provider of intelligent metal forming solutions, specializing in the research, development, production, and sales of high-power laser cutting, welding, and cleaning equipment.

4 Branches

Branch **Guangzhou**

Branch **Jinan**

Branch **Changzhou**

Branch **Italy**

COMPANY STRENGTH

Baison Laser is rooted in the production and **manufacturing of intelligent laser processing equipment** and has established a nearly 100,000 square meter laser industrial park in Foshan, Guangdong, covering sheet metal processing, screen printing and spraying, turning, milling, planing, washing, precision machining, whole machine assembly, and process debugging workshops.

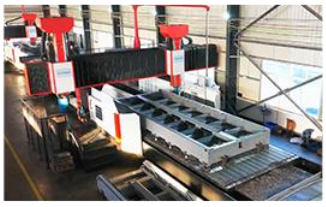
It owns the largest super-heavy gantry milling machine and full-temperature CNC high-temperature annealing furnace processing base in the Chinese market.

Baison has formed an integrated vertical full-industry chain layout of **"new machine research and development - machine frame manufacturing - beam manufacturing - sheet metal forming - whole machine assembly**," establishing a fully traceable professional laser equipment production service quality control system.Through production program control and detection automation, it ensures full-process quality control in the production of laser processing equipment, achieving closed-loop control throughout the production process. It guarantees independent production from every piece of sheet metal to the whole machine, with strict self-inspection and mutual inspection procedures at every step, solid materials, and continuous refinement, winning by "quality."

Whole Industry Chain Layout

Machine frame manufacturing






Beam manufacturing & Sheet Metal Forming




Machine Assembly



7×24 Hours Online

We guarantee a response within 2 hours. Our skilled after-sales engineers provide global technical support via the internet and telephone.

On-Site Service

In urgent cases, professional engineers will arrive at the customer site within 24 hours to offer technical assistance.

Pre-Sale Service

1.We provide tailored technical guidance, equipment solutions, and information services based on your requirements.
2.You're welcome to visit our company and equipment exhibition hall for demonstrations by our expert engineers. If a visit isn't possible, we offer live broadcasts to showcase our factory and machines.
3.Free proofing services are available upon request.

Selling Service

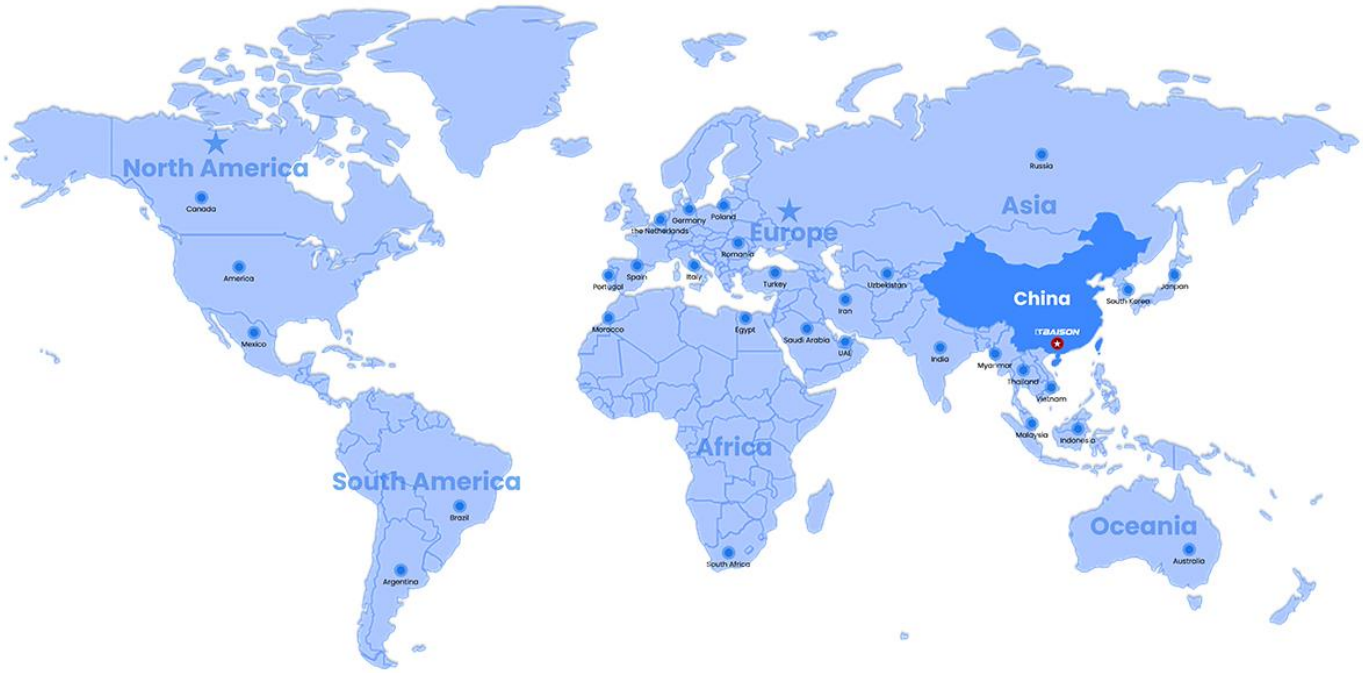
1.Our technicians will handle on-site installation, debugging, and training at your facility.
2.We ensure timely delivery of all equipment.
3.Customer operators are trained rigorously on equipment operation, maintenance, and safety protocols to ensure proficient use.

After-Sale Service

Guided by the principle "All for customers, for all customers," we are dedicated to providing professional and customer-centered after-sales support.

Baison Global After-Sales Service

GLOBAL LAYOUT



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60+
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