BAISON LASER
LASER CUTTING / WELDING / AUTOMATION

COTEAR
MÁQUINAS HERRAMIENTA

TECHNICAL PROPOSAL

E Series

EC3

Single Platform Fiber Laser Cutting Machine

DESCRIPTION

EC3 Single Platform Fiber Laser Cutting Machine

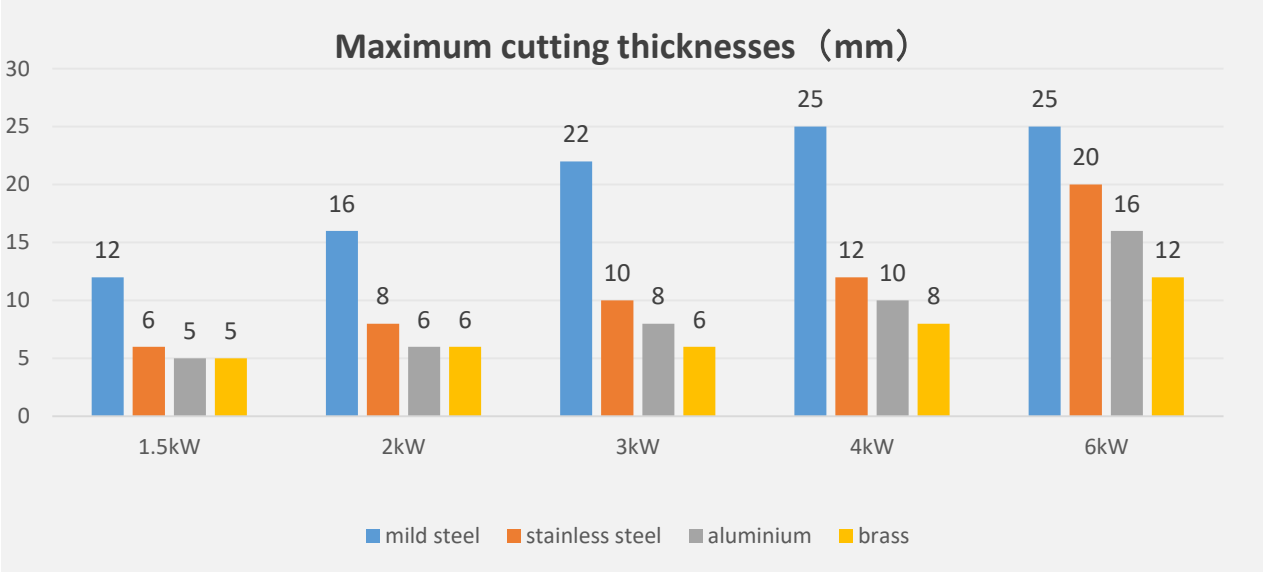
The EC series is an economical single-platform laser cutting machine independently developed and produced by Baison Laser, suitable for cutting metal sheets such as carbon steel, stainless steel, aluminum alloy, and brass.
It meets various cutting needs for medium and thin sheet metals.

Note: Images are for reference only

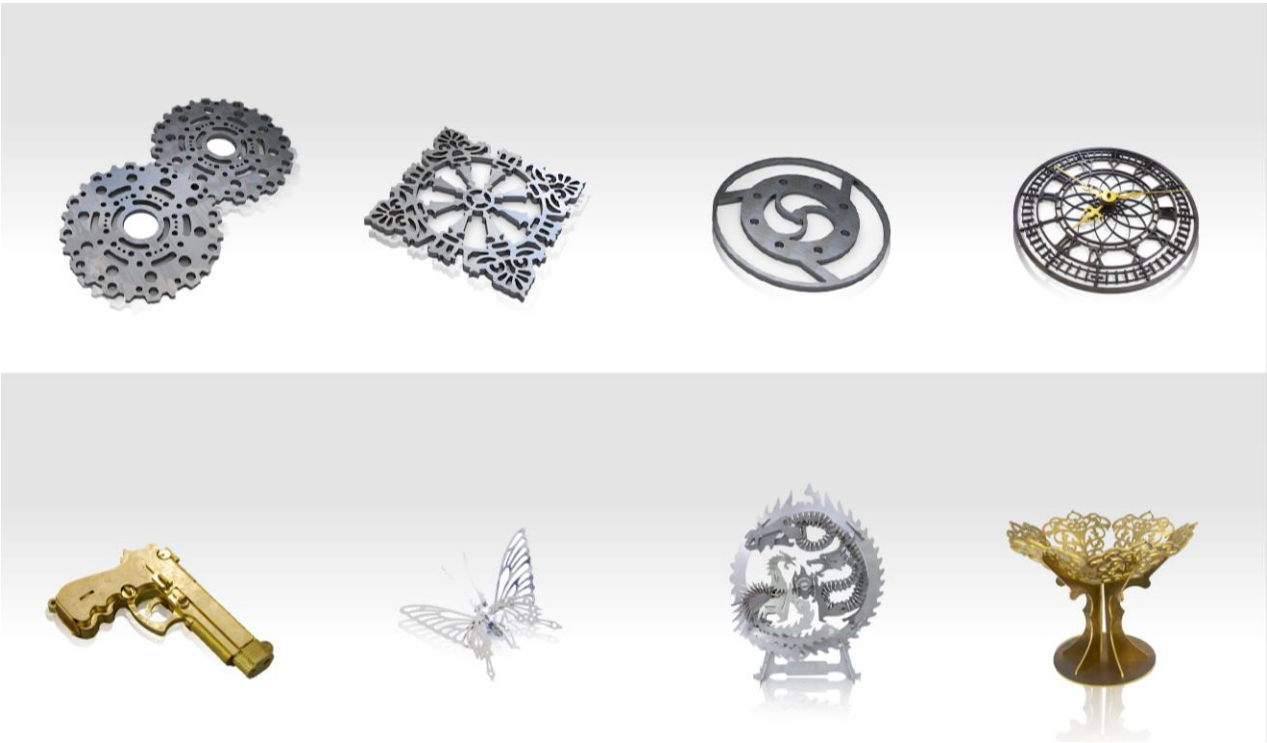
PRODUCT ADVANTAGES

- Open structure with integrated design, saving space.
- Flange output ensures more stable mechanicazl performance.
- The machine’ s rear integrated control cabinet is positioned away from the cutting area, effectively preventing metal dust from entering the electrical control cabinet.
- Equipped with a constant temperature air conditioner, it enhances the stability of electrical components.

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	EC3
Work area	3000*1500mm
Max. sheet weight	1000kg
Machine Size*	4530*2280*1310mm
Machine Net Weight*	1413.3Kg
Power Data	10.8kw/33A (1.5KW) 16.5kw/43A (3KW) 31kw/56A (6KW)
X-axis	1524mm
Y-axis	3050mm
Z-axis	100mm
Positioning Accuracy (X/Y)	±0.05mm/m
Repeated Positioning Accuracy (X/Y)	±0.03mm
Max Speed	100m/min
Max Acceleration	1G
Power Parameters	3-Phase AC380V 50 Hz/60 Hz
Power Protection Level	IP54

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

CONFIGURATION LIST

MACHINE MODEL	EC3
Control System	FSCUT2000E
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	RAYCUS
Laser head	RAYTOOLS BM110 (1.5-3KW) RAYTOOLS BM06K (6KW)
Electronic Components	SCHNEIDER
Proportional Valve	SMC (1.5-3KW) AVENTICS (6KW)
Machine Bed Accessories	BAISON

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

MAIN CONFIGURATION

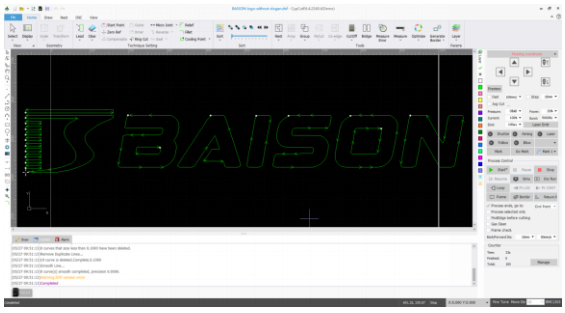
Laser source

- 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



- Intelligent Features: The system includes advanced features such as auto-focusing, intelligent nesting, and path optimization, which help improve material utilization and reduce waste, contributing to lower production costs.
- 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.
- 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.

Images for reference

MAIN CONFIGURATION

Reducer

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

Servo Motor

- High accuracy
- High-speed performance
- High adaptability & stability
- Timeliness, short dynamic response time of motor
- Comfort less fever and noise

Guide

- Low noise
- Wear-resistant
- Smoothly,enable fast speed

Water chiller

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

Images for reference

COST ANALYSIS-1.5KW

Items		Air	Oxygen	Nitrogen
Peak Power Consumption (KW)	Laser	5.50	5.50	5.50
	Water Cooling	3.50	3.50	3.50
	Air Compressor	7.50	/	/
	Machine Main Frame	5.00	5.00	5.00
	Dust Removal Equipment	1.50	1.50	1.50
Total Power(KW)		23.00	15.50	15.50
Typical Power Consumption(KW) (*75% Total power)		17.25	11.63	11.63
Power Consumption Cost (0.15USD/kwh)		2.59	1.74	1.74
Consumable Parts (USD/h)		0.2	0.2	0.2
Gas Consumption(USD/h)		0	2.5	6
Total Operating Cost (USD/h)		2.79	4.44	7.94

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.

COST ANALYSIS-3KW

Items		Air	Oxygen	Nitrogen
Peak Power Consumption (KW)	Laser	10.00	10.00	10.00
	Water Cooling	7.40	7.40	7.40
	Air Compressor	11.00	/	/
	Machine Main Frame	5.00	5.00	5.00
	Dust Removal Equipment	1.50	1.50	1.50
Total Power(KW)		34.90	23.90	23.90
Typical Power Consumption(KW) (*75% Total power)		25.65	17.93	17.40
Power Consumption Cost (0.15USD/kwh)		3.85	2.69	2.61
Consumable Parts (USD/h)		0.2	0.2	0.2
Gas Consumption(USD/h)		0	2.5	6
Total Operating Cost (USD/h)		4.05	5.39	8.81

Note:

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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.

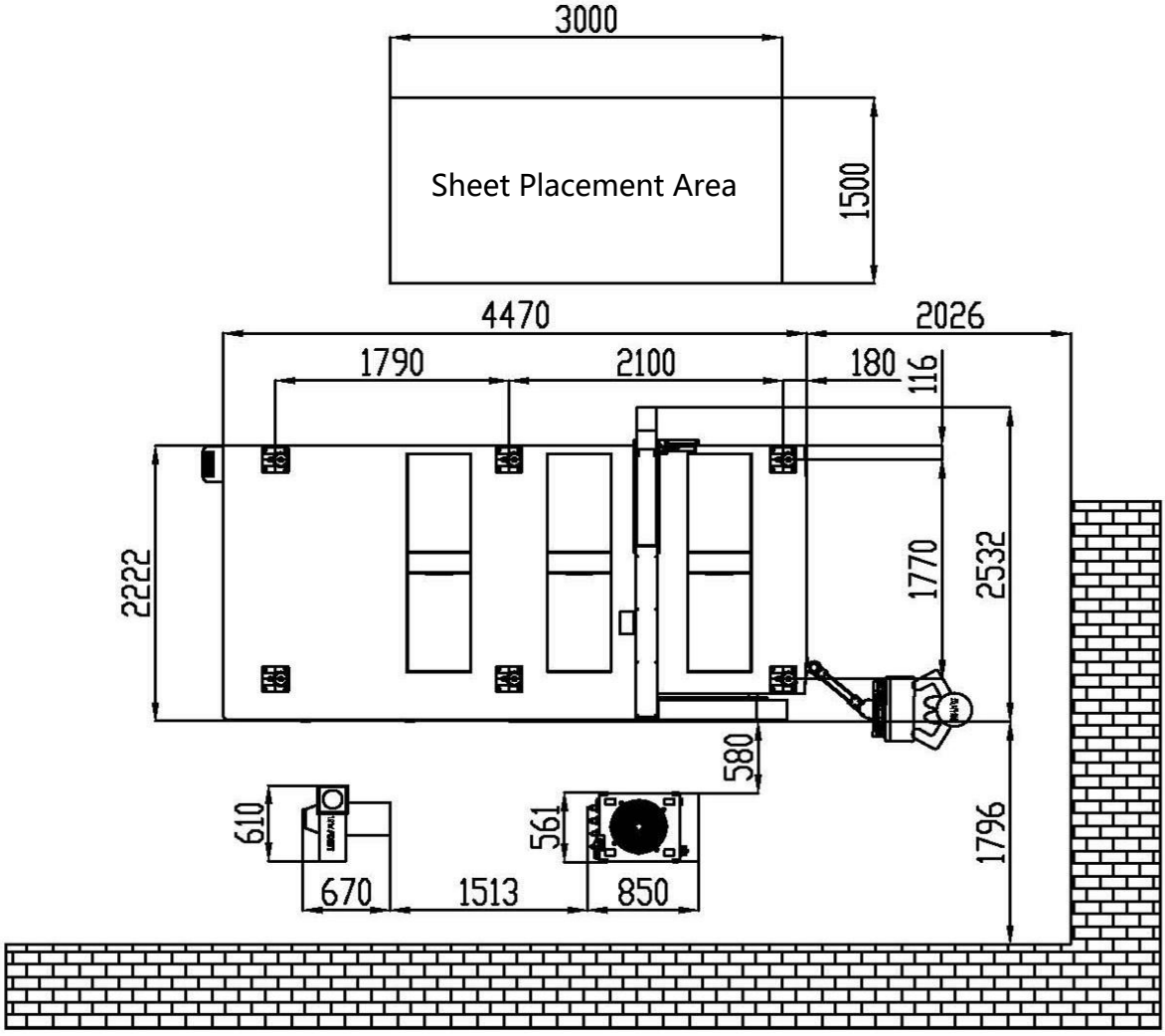
COST ANALYSIS-6KW

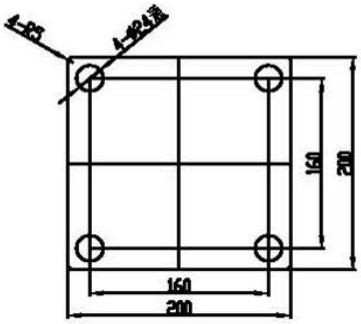
Items		Air	Oxygen	Nitrogen
Peak Power Consumption (KW)	Laser	18.50	18.50	18.50
	Water Cooling	8.50	8.50	8.50
	Air Compressor	20.00	/	/
	Machine Main Frame	12.00	12.00	12.00
	Dust Removal Equipment	5.50	5.50	5.50
Total Power(KW)		64.50	44.50	29.86
Typical Power Consumption(KW) (*75% Total power)		48.37	33.37	33.37
Power Consumption Cost (0.15USD/kwh)		7.26	5.01	5.01
Consumable Parts (USD/h)		0.2	0.2	0.2
Gas Consumption(USD/h)		0	2.5	6
Total Operating Cost (USD/h)		7.46	7.71	11.21

Note:

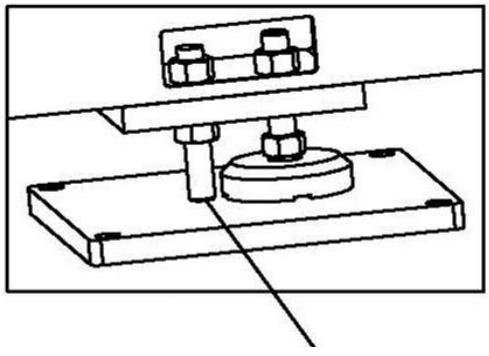
1. The above data is for reference only. Electricity and gas prices vary by country and region.
2. The consumption of assist gas will vary depending on the material and thickness being cut.
3. If the cutting assist gas is compressed air that has been dried, the cost includes the actual electricity consumption 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





Q235A 20t 6PCS



M24-150L Screw

About BAISON LASER

Founded in 2004, Foshan Huibaisheng Laser Technology Co., Ltd. (BAISON Laser) is a high-tech enterprise specializing in the R&D, 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.

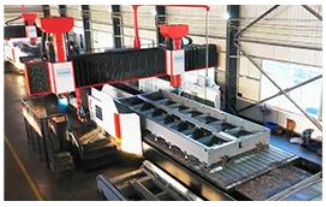
It owns the largest super-heavy gantry milling machine and full-temperature CNC high-temperature annealing furnace processing base in the Chinese market.

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

- Guaranteed response within 24 hours online. Professional after-sales engineers will provide technical support and services to global users through the internet and telephone.
- On-Site Professional After-Sales Engineers will quickly arrive at the customer site within 24 hours to provide technical assistance and services.

PRE SALE SERVICE

1. Provide technical guidance,equipment solutions and other information services according to your needs.
2. Welcome you to visit our company and equipment exhibition hall.And our engineers will offer the best explanation and demonstration. If you can't come to us, we will do a live broadcast to show you our factory and machine.
3. Provide free proofing service.

SELLING SERVICE

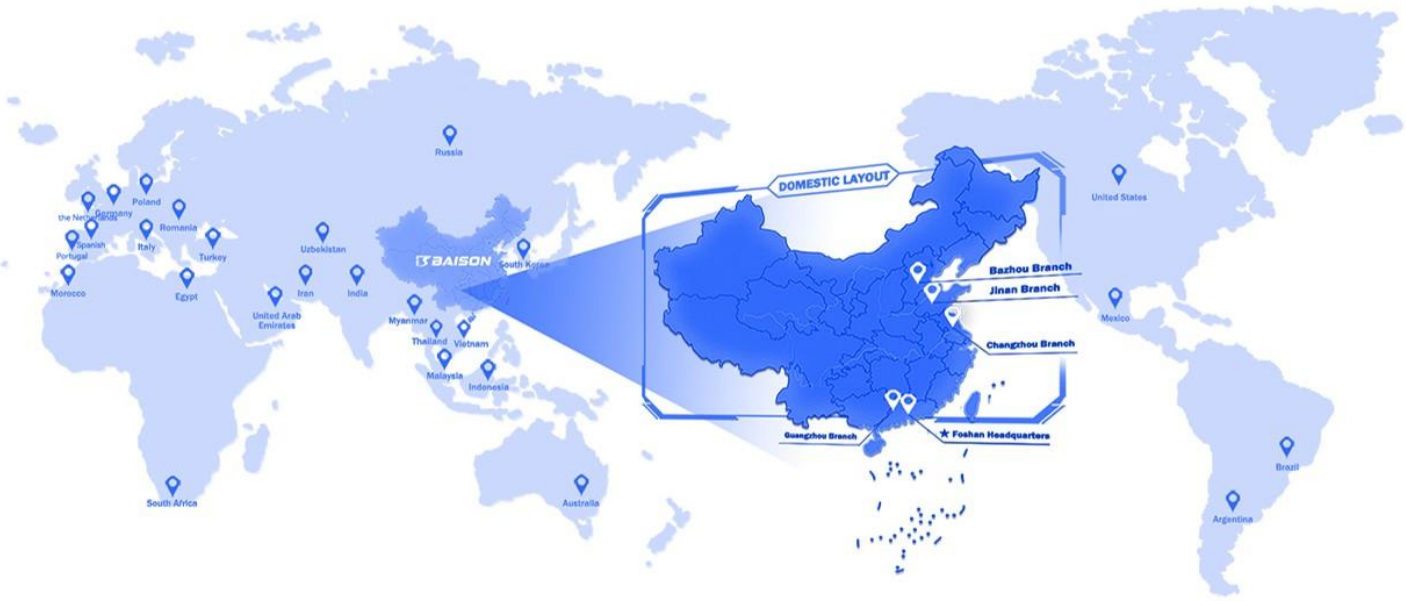
1. Technicians would offer field installation,debuggingand training when they come to the customer's factory.
2. Ensure the equipment is delivered on time.
3. Train customer operators in strict accordance withthe equipment operation process to ensure that they are proficient in the operation,maintenance and safe use of the equipment.

AFTER-SALE SERVICE

Adhering to the service principle of "All for customers, for all customers," we are customer-centric, integrity based, take pride in professionalism, and provide satisfactory after-sales service to our customers.

Baison Global After-Sales Service

GLOBAL LAYOUT



We have more than 15,000 users around the world, covering more than 60 countries, including South Korea,Germany, Italy, the USA, Brazil, Russia, India, Indonesia, Thailand, Vietnam, Turkey, Mexico, Saudi Arabia, Spain,UAE, Japan and etc.

15000+
Global Sales

60+
Countries and Regions

Global Exhibition Highlights