

LASER CUTTING MACHINE

ULT / ULTB



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CONTACT US

COMPANY PROFILE

Established in 2002, ADH Company is situated in Ma'anshan City, Anhui Province, just 30 kilometers from Nanjing Lukou Airport. Our expansive 2,000,000 square meter facility specializes in manufacturing press brakes, hydraulic shearing machines, laser cutting machines (including automatic production units), CNC turret punches, intelligent flexible bending centers, and sheet metal automation equipment. As a leading high-tech manufacturer prioritizing R&D and innovation, we hold numerous patents and industry certifications.

2002

Founded

6000 +

Annual Production

120 +

R&D Personnel

100 +

Exported Countries



Mission

We are committed to research and development, improving product and service quality, in order to establish a globally renowned sheet metal manufacturing machinery center.



Vision

Our goal is to become a highly respected sheet metal support service provider, earning the trust of customers and the pride of employees.



Values

Innovation, Lean Manufacturing, Integrity, Win-Win.

LASER CUTTING MACHINE

Tube & Pipe

ULT/ULTB Series



- Positioning accuracy within $\pm 0.05\text{mm}$.
- Cuts round, square, and custom profiles.
- Low power use, eco-friendly operation.
- 8mm steel bed prevents long-term deformation.
- Auto-feed system supports up to 5 tons.
- Streamlined machine ensures space efficiency.
- Intuitive operation with advanced automation.

PRODUCT DETAILS



Frame

- Innovative patented bed structure (Patent No. ZL202023148390.7), refined via finite element analysis, adaptable to diverse lifting mechanisms including servo-following systems and variable diameter wheels, delivering a streamlined and effective design.

Crossbeam

- Stress-relieved crossbeam ensures rigidity and stability for precise laser head movement by undergoing annealing to eliminate internal stresses.
- Equipped with elastic cushion pads and limit switches, the crossbeam guarantees safe and accurate operation during motion.



Control System

- Cypcut cutting software ensures user-friendly operation with convenient installation, simple debugging, and excellent performance for enhanced precision and flexibility in cutting processes.
- Features a powerful cutting process database and adjustable speed-power settings, allowing for greater customization and optimized laser cutting control.



Cutting Head

- The auto-focusing laser cutting head adjusts focus based on material thickness, ensuring precise cutting, reduced operation time, and improved cutting quality.
- Patented anti-collision protection and waste-cutting micro-connections prevent plate warping, guaranteeing high-speed, stable operation with minimal disruption.

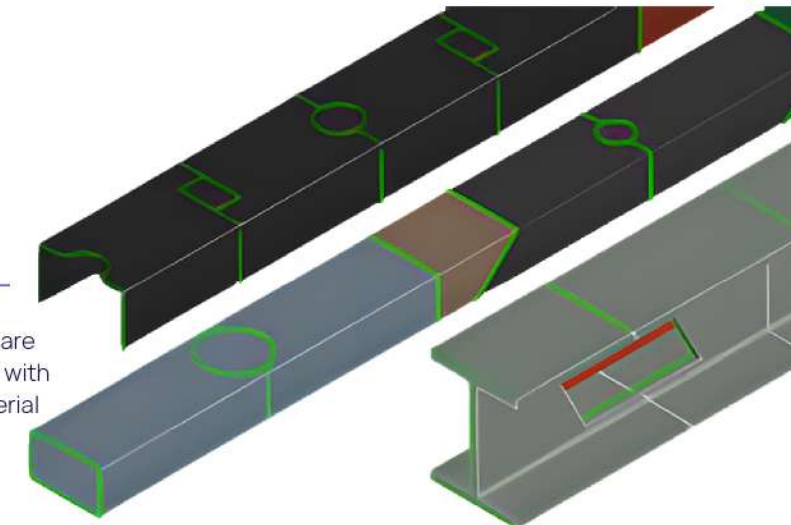


Servo Motor

- Delta servo motors from Taiwan deliver high speed, precision, feedback, and excellent inertia capabilities, ensuring superior performance in productivity-focused operations.

TubeST (Optional)

- TubeST is Bochu's specialized nesting software for tube laser cutting, seamlessly integrated with TubePro/CypTube systems to optimize material usage and enhance cutting precision.

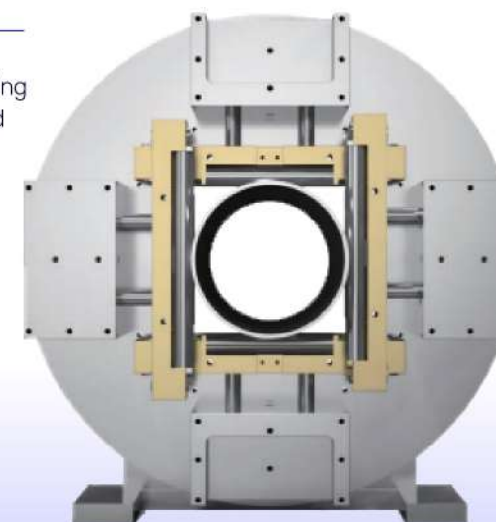


Laser Source

- The laser boasts a photoelectric conversion rate over 30%, ensuring energy savings and consistent beam quality across the power range.
- Featuring a modular design, the fiber laser source ensures convenient installation and stable performance for precision cutting.

Pneumatic Chuck

- Automatic pneumatic chuck ensures precise centering and high-speed processing, improving efficiency and accuracy while reducing operational weight for enhanced productivity.
- Fully automatic double pneumatic chuck accommodates clamping within 15-220mm, eliminating claw replacements and providing high thrust and rigidity for secure material handling.

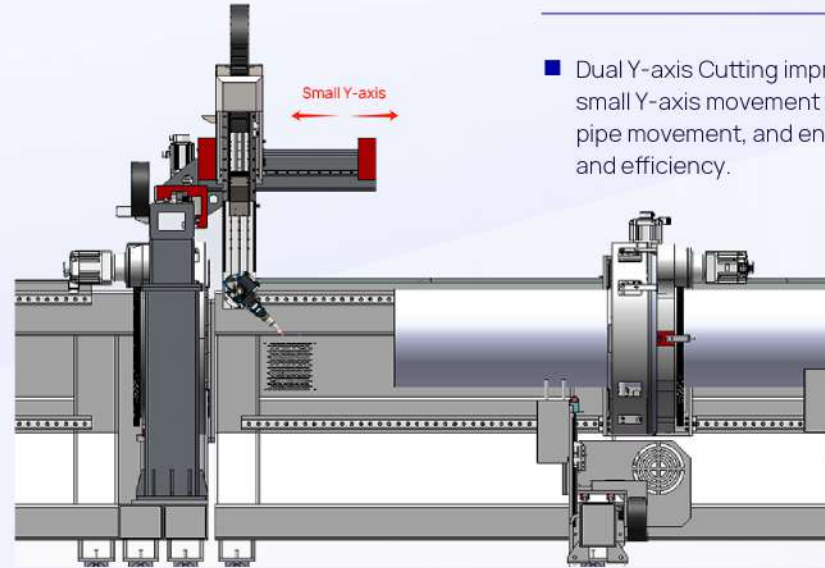


Gear, Rack, Linear Guide

- The precision-ground gear and rack transmission paired with Hiwin linear guides ensure high-speed, vibration-free, and accurate long-distance operations, exceeding screw-driven system limitations for reliable and efficient performance.



Dual Y-axis Cutting



- Dual Y-axis Cutting improves precision by enabling small Y-axis movement within 900mm, eliminating pipe movement, and enhancing processing speed and efficiency.



Water Chiller

- Enhanced with advanced safety measures like over-temperature alarms, flow protection, and water level protection, this water chiller ensures reliable operation, efficient cooling, and reduced maintenance costs by 15%-20%.

Gearbox

- DESBOER gearboxes from Japan, known for high torque, precision, stability, and durability, integrate innovative technology that enhances these performance characteristics, setting them apart in the market for their quality and longevity.

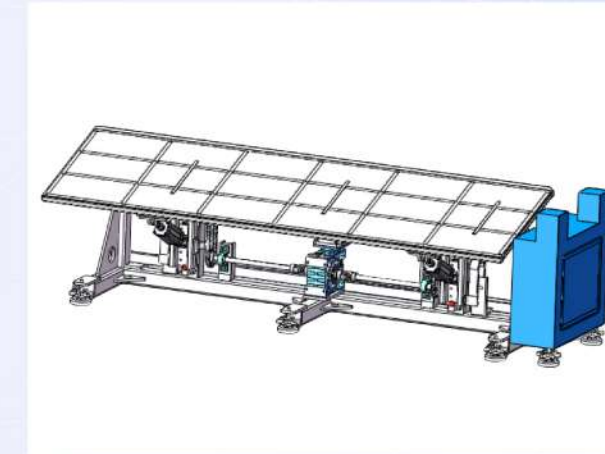


OPTIONAL



Fully Automatic Loading

- Fully automatic loading streamlines material handling, reducing labor costs and enhancing productivity for seamless, uninterrupted operation.
- Automatically loads materials with precision, minimizing downtime and boosting efficiency for high-volume production environments.



Professional Pipe Cutting

- Equipped with a "0" tailings function, it minimizes material waste while achieving high accuracy for pipe dimensions between 20mm-200mm in diameter 12.
- Features auto-loading and unloading with optional five-axis cutting for versatile angle requirements like $\pm 45^\circ$ bevel cuts, streamlining complex operations 13.



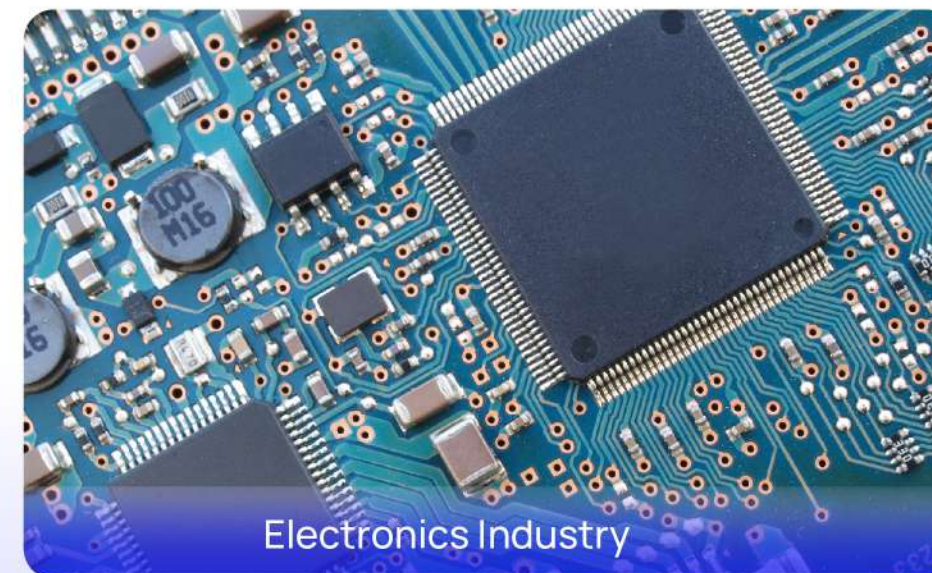
Automatic Feeding System

- Handles various tube shapes and sizes with precision, accommodating up to 275kg per tube and a maximum feeding size of 220mm circumferentially.
- Ensures efficient workflow with auto-adjust position mechanics, capable of precise orientation and separation, with a cycle time of 19 seconds.

Samples



Industrial Applications



Specifications

ULT/ULTB Series

SPECIFICATIONS	
Model	ULT/ULTB
Pipe Dimensions	160mm*850mm
Tube Category	Round,Square,Oval,Rectangular, Triangle,ect.
Laser Power	1500W-40000W
Max. Acceleration	0.8-1.5G
Rotary Speed	107r/min
Positioning Accuracy	±0.03mm
Repositioning Accuracy	±0.04mm
Total Power Consumption	39KVA-54KVA
Power Supply	380V50Hz/380V60Hz/220V60Hz
Dimensions	16500*3096*2900mm(Depending on the model)

CONFIGURATION	
Component Function Names	Brand/Manufacturer
Bed	ADH
Control system	Cpycut
Laser	Raycus/ MAX
Cutting head	BOCI
Servo motor	INOVANCE
Gearbox	DESBOER
Gear, rack	YYC
Linear guide	Hiwin
Water chiller	Hanli
Electrical components	ADH
Automatic lubrication device	ADH

Conditions For On-site Installation Preparation		
Serial Number	Content	Requirements
1	Power supply capacity	Not less than 120 KVA
2	Power supply quality	Three-phase voltage instability ≤ ±5% Three-phase power imbalance ≤ 2.5% Grounding resistance should be ≤ 3 ohms, and the power supply voltage should not suddenly cut off.
3	Compressed air	For high-pressure air cutting, the pressure should be ≥13 kilograms and the flow rate should be ≥1.5 cubic meters. The dew point temperature should not exceed. The oil content should be ≤0.01 ppm and the solid particles should be ≤0.01 micrometers.
4	Auxiliary gases	The purity of oxygen and nitrogen should be ≥99.96%.
5	Cutting material	Smooth, flat, rust-free, and uniformly rolled, meeting ISO standards.
6	Foundation requirements	Equipment installation foundation must have no settlement, constructed according to the foundation drawings provided by Party B.
7	On-site conditions	The working environment should have a stable temperature of 5-30 C . The humidity requirement is less than 70%. After the equipment installation and debugging, the laser should be isolated and an air conditioner should be installed.
8	Operators	Personnel with basic skills in electrical, mechatronics, and CNC machine tooloperations.
9	Other supporting equipment	Equipped with a computer for programming and monitoring laser operation. Equipped with the necessary cables for on-site equipment installation.

Consumable Supplies		
Name	Lifespan	Recommended stock quantity
Focusing protective lens	40 hours	3-5 pieces
Collimating protective lens	500 hours	1-3 pieces
Focusing lens	Approximately 3000 hours	2 sets
Collimating lens	Approximately 3000 hours	1 set
Nozzle	120 hours	Based on the variety of sheet metal being cut by the customer, it is recommended to purchase 3-10 units of the required model.