

TECHNICAL PROPOSAL



V24XL-E (6+6)

Product Overview



V24XL-E-3000W professional laser pipe cutting machine is designed for cutting large, heavy and long pipes and other multi-size pipes. It can cut stainless steel, carbon steel and other metal round pipes, square pipes, rectangular pipes, channel steel, I-beam, angle iron and special-shaped pipes, etc. This equipment is widely used in heavy industry machinery, construction machinery, steel structures, hoisting machinery, bridge engineering, elevators

Features:

and other industries.

- 1. High precision: strong clamping force, more stable cutting.
- 2. High stability: clamped by three chucks to solve the problem of pipe swinging.
- 3. Zero tailings: under the condition of satisfying cutting conditions, zero tailings can be achieved.

Intelligent cutting system:

- 1. The operation is simple and easy to use, reducing the difficulty of labor.
- 2. Automatically find the center, correct the pipe material error, and ensure the cutting accuracy.
- 2. Intelligent nesting, common edge cutting, reducing tailings and production costs.







Technical Parameter

Processing Format & Working Range			
X-axis Stroke	300mm		
Y-axis Stroke	6000mm+6000mm		
Z-axis Stroke	500mm		
W-axis Stroke	360°×N		
Accuracy			
X/Y Axis Positioning Accuracy	±0.05mm/m		
X/Y Axis Repositioning Accuracy	±0.05mm/m		
Speed			
Max. Moving Speed	80m/min		
Max. Chuck Speed	106r/min		
Weight & Size			
Max Single Tube Loading Weight	400kg		
Tail Length	0		
Dimension (L×W×H)	14760*1935*2320mm		

Note:

- 1: To a certain extent, the accuracy depends on the type of workpiece, the pretreatment, the size of the plate and the position of the plate in the working area.
- 2. The above parameters are subject to change without notice. The final technical parameters are subject to the actual order agreement.







Technical Parameter

Processing Capacity

Material	Maximum thickness (mm)	Cutting thickness suggested (mm)
Mild steel (Air / N2 Cutting)	3	1-2.5
Mild steel (O2 Cutting)	13	1-12
Stainless steel (Air / N2 Cutting)	7	1-6
Aluminum (N2 / Air Cutting)	6	1-4

Processing Range

Pipe Type	Cutting Range	Standard Cutting Length
Round	Ø10-Ø240mm	
Square	□10*10-□220*220mm	
U-Steel	22b# (220x79mm Professional fixtures are required)	C000mm
Angle Iron	22# (220x220mm Professional fixtures are required)	6000mm
I-beam	22b# (220x112mm Professional fixtures are required)	
H-beam	200x200mm (Professional fixtures and nesting software are required)	

Note:

The above data are for reference only, not as acceptance criteria.



Processing Capability

Cutting Samples

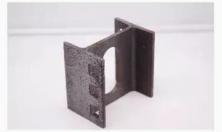






















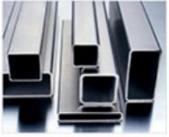






















Configuration	Brand / Specification		
Control System	FSCUT 5000A Bus System+TubesT Software		
Fiber Source	RAYCUS		
Cutting Head	RAYTOOLS BM110 3D		
Servo Motor	VEICHI		
Gear And Rack	KH		
Guide	SHAC		
Proportional Valve	SMC		
Speed Reducer	TECHMECH		
Water Chiller	HANLI		







Automatic Loading Rack

Specification	
Loading Length	6000mm
Single Tube Weight	400KG

Features of semi-automatic feeding rack:

Control the feeding rack by running the automatic feeding program to automatically load the material;

Simply place the pipe on the feeding platform, solving the problems of manual feeding difficulty, low safety factor, and low efficiency.

Automatic Unloading Rack

Specification	
Diameter of Receiving Tube	Any size of pipe material
Receiving Length	6000mm
Single Tube Weight	400KG

Features of fully automatic material receiving rack:

Double chuck clamping for cutting, more stable clamping and safer cutting. With 2 sets of follow-up cutting racks, it can complete a workpiece length of 1-6 meters

Automatic cutting reduces the safety issues of manual cutting and improves the efficiency of heavy pipe cutting.



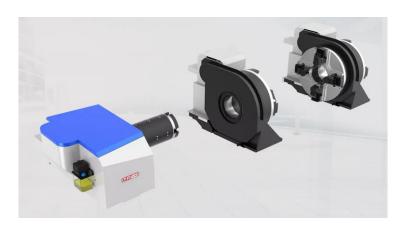


Super Heavy Steel Welding Machine Bed



- Adopts a 12mm super-thick monolithic steel plate for laser blanking.
- The groove welding method is used to make the plates reach an equal strength butt.
- Stress annealing and natural aging treatment are applied to eliminate internal stress.

Intelligent Clamping System



 The system includes a pneumatic centering function that prevents swinging of the pipe during clamping, improving the linearity of the pipe. It can clamp both sides, providing higher clamping force, better dynamic performance, and faster response speed.

Intelligent Servo Follow-up Support



 The follow-up support system ensures that the tube is accurately positioned and maintained during the cutting process, resulting in precise cuts and high-quality finished products.



Laser Cutting Head



- Auto focus
- Higher accuracy
- Longer service life
- Calbration and focus lenses and nozze beter protection

MOTOREDUCER



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

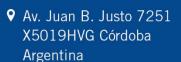
Servo Motor



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









Control System



- Easy to use
- Various file editing functions
- Real-time alarm and protection
- Built-in simple nesting function maximizes the utilization of the sheet metal.
- Fly cutting / Secondary perforation cutting, etc.

Water Cooling System



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

Guide



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









Processing Cost

Items		Air	Oxygen	Nitrogen
Peak Power Consumption (3KW)	Laser	12	12	12
	Water Cooling	4.16	4.16	4.16
	Air Compressor	11.00	/	/
	Machine Main Frame	28.45	28.45	28.45
	Dust Removal Equipment	3	3	3
Total Power(KW)		58.61	47.61	45.16
Typical Power Consumption(KW) (*75% Total power)		43.95	35.7	35.7
Power Consumption Cost (0.15USD/kwh)		6.59	5.4	5.4
Consumable Parts (USD/h)		0.2	0.2	0.2
Gas Consumption(USD/h)		0	2.5	6
Total Operating Cost (USD/h)		6.79	8.1	11.6

If the cutting gas is the dry treated compressed air, the cost is actual the air compressor operating electricity + machine power + consumables (protective lens, cutting mouth).

Note:

- 1. The electricity price and gas price in the above list are for reference only, and the prices will be different in different regions.
- 2. Auxiliary gas consumption varies when cutting plates of other thickness.



Inspection & Assembly

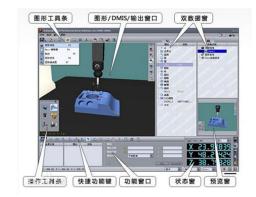
DURING ASSEMBLY

Check whether the beam machining form and position tolerance is within the design scope to ensure the equipment quality.



THREE COORDINATE INSPECTION OF BEAM

Three coordinate measuring machine (CMM) is a kind of instrument that can calculate all kinds of geometric shapes and dimensions according to the point data returned by the probe system in three-dimensional measurable space. It is also called three-dimensional element.



The bed beam collimator detects the guide rail surface - measures the straightness of the guide rail to ensure the accuracy of each equipment.

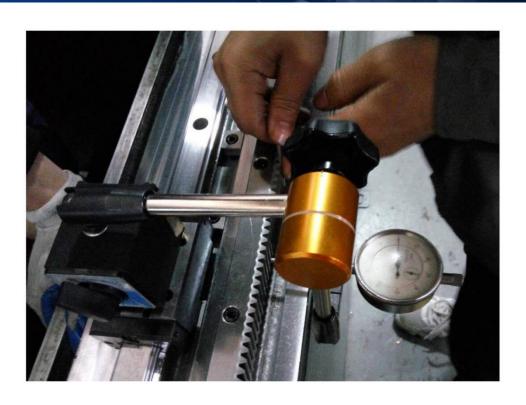




Inspection & Assembly

DURING ASSEMBLY

Installation detection and fixation of guide rail and rack. The professional technicians assemble such important precision parts such as guide rail and rack and adjust them with a dial indicator so as to ensure rack&pinion is assembled properly.

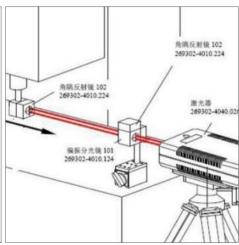


ASSEMBLY COMPLETION DETECTION

Laser interferometer-It has such advantages as high measurement accuracy and speed, etc Interferometer, mainly laser as light source, constitutes a measuring system withinterference. A laser interferometer with various refractive mirror to the linear position, speed, angle, flatness, straightness, parallelism and perpendicularity measurement work, and can be used as calibration of precision machine tool or measuring instrument.

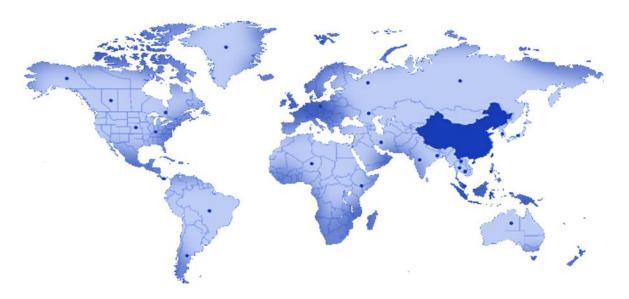








Service System



PRE-SALE SERVICE

- Provide technical guidance, equipment solutions and other information services according to your needs.
- 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.
- Provide free proofing service.

SELLING SERVICE



Technicians would offer field installation, debugging and training when they come to the customer's factory.



Ensure the equipment is delivered on time.



Train customer operators in strict accordance with the equipment operation process to ensure that they are proficient in the operation, maintenance and safe use of the equipment.

AFTER-SALE SERVICE

- Baisheng provides professional door to door installing and training service, and daily online after sale service and technical advisory.
- We will establish communication group including technicians, after-sales managers, salesmen and operators of customers.



ASSEMBLY WORKSHOP





ASSEMBLY WORKSHOP!

ASSEMBLY WORKSHOP II

WHOLE INDUSTRIAL CHAIN LAYOUT















- The 10000 m² plant area covers sheet metal machining, spray painting, turning, milling, planing, grinding, fine finishing, machine assembly, and process debugging workshops.
- · Baisheng Laser has the largest self-owned super-heavy gantry milling and full-temperature CNChigh-temperature annealing furnace processing base in the China, ensuring independent production from each piece of sheet metal to the complete machine equipment, and a strict self and mutualinspection process for each process.
- · We use superior materials, constantly improve and optimize the process, so that we can win by quality.



About Us



- Foshan Huibaisheng Laser Technology Co., Ltd. (Baisheng Laser), founded in 2004, is a high-tech enterprise integrating laser, precision machinery, numerical control, software development and modern management, specializing in the R & D, production and sales of large and medium power laser equipment.
- Since establishment, Baisheng Laser has developed rapidly. As one of the few laser cutting machine manufacturers in China with the ability to independently produce beams, sheet metal and machine tool frames, Baisheng Laser's Foshan headquarters has a plant area of about 100000 square meters, with 200+ sets of precision machining equipment, 500+ employees, 40+ R & D team and 100+ after-sales engineers.
- With strong enterprise strength and strong manufacturing strength, Baisheng Laser has become a leading and world-famous large and medium power laser equipment manufacturer and solution provider in China, and its marketing network covers more than 60 countries and regions around the world.



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