

FIBER LASER CUTTING MACHINE MODEL : TH6012 (V12) - 3000W



TECHNCIAL PARAMETERS

SPECIFICATION		
1	Laser Source	3000W RAYCUS
2	Laser cutting Head	BOCI autofocus laser head BLT310T
3	Body	AORE Laser
4	Beam	AORE Laser
5	X / Y – axis precision rails	AORE Laser
6	X / Y – axis precision racks	AORE Laser
7	X, Y, Z – axis servo motors and drivers	China Innovance
8	Reducer	China kofon
9	Electrical components	AORE Laser
10	Electronic control cabinet	EU standard strong and weak electrical separation electronic control cabinet
11	Control system	FSCUT 3000DE-A
12	Pneumatic components	AORE LASER
13	Water Chiller	HANLI
14	Exhaust Smoke system	Exhaust Fan
	Automatic Loading	YES

MAIN SPECIFICATION

MODEL	TH6012 – 3000W 2 Chucks, 0 Tailings (Including automatic loading 6m & unloading device air conditioning stabilizer)
Maximum Processing tube length	: 6500 mm
Effective cutting diameter of round tube	: ø8 mm – ø120 mm
Effective cutting diameter of square tube	: □8mm-120mm
Max running speed	: 150m/min
Maximum acceleration	: 2G
Max chuck speed	: 200r / min
Chuck loading bearing	: 80kg
The maximum acceleration of the X/Y axis	: 0.8G
Min. tail tube length	: 0 mm
Machine Dimension (L x W x H)	: 9285×2806×2119mm
Weight	: 5325kg
Brand New	: CHINA

Fully Automatic Loading Device

Feeding method	: Automatic loading
Length of feeding tube	: 5500 – 6500 mm
Feeding tube Type	: Round tube, square tube, rectangular tube, track tube, Oval tube
Tube Section Size	: Round Tube : $\varnothing 20$ mm – $\varnothing 120$ mm : Square Tube : 20 – 120 mm : External circle diameter : ≤ 120 mm
Maximum Bearing capacity of all material	: 1.5 T
Maximum Tube Weight	: 80 kg



MACHINE CONFIGURATIONS:

	COMPONENT	DESCRIPTION	BRAND/ ORIGIN
	3000W RAYCUS LASER SOURCE	High-Power Multimode Continuous Fiber Laser Series with high electro-optical conversion efficiency, high light beam quality, high energy density, wide modulation frequency 100,000 hours life time more stable and cost-efficient maintenance free.	
	BOCI BLT310T	Optimized optical configuration & smooth and efficient airflow design, equipped with 3D composite lens groups, the maximum fiber power is up to 3kw. Composite lens groups are used for beam collimating and focusing to obtain the best optical quality and cutting effect.	
	INOVANCE SERVO MOTOR & DRIVER	Servo Signal, high Transmission through the position, torque, speed, fast response.	
	CONTROL SYSTEM (FSCUT3000DE-A)	FSCUT3000DE-M an EtherCAT control system for single-chuck pulling machine's. Compared with other tube cutting systems in the market, it has the advantages of improving cutting efficiency, supporting various bevel processing, and ensuring cutting stability	

	ELECTRIC COMPONENTS	Highly stable Electrical Control Components.	AORE LASER
	PNEUMATIC COMPONENTS	Steples control of air pressure proportional to an electrical signal. Serial communications specifications, Compact/ Lightweight (Integrated communications parts)	AORE LASER
	HANLI WATER CHILLER	Water chiller of Fiber cutting machine's water system adopts double temperature water chiller, one is cooling laser and the other is cooling cutting head	HANLI
	REDUCER	More Powerful, High Efficiency, High Rigidity, Output Diversification. 100,000 hours life time cost-efficient and maintenance free.	KOFON REDUCER
	AORE LASER GUIDE RAIL	Linear guide design, carrying capacity. Long-life high-speed, high precision and smooth linear motion.	AORE LASER
	AORE Laser GEAR & RACK	High precision, long life can provide rigorous support for quenching helical gears and grinding helical gears.	AORE LASER
	AUTO / HIGHER	Raise system adjust the focal length automatically according to the height of the plate	AORE LASER

	Security/Stability IPAD DESIGN SCREEN	A vertical screen display, different from the traditional horizontal one with good response speed, higher contrast, wider view, lower consumption as well as high resolution.	AORE LASER
	VOLTAGE STABILIZER	Voltage deviation 80KVA Stabilizer 380V/3Phase, 50Hz/60Hz	AORE LASER

LASER CUTTING HEAD BLT310T

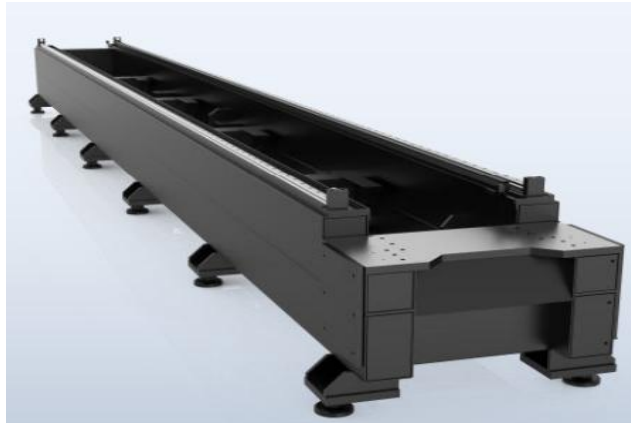
CUTTING HEAD	BLT310
Laser Wavelength	: 1030 - 1090nm
Laser Power	: ≤3 kW
Fiber Interface	: QBH/EOC
Spot Magnification	: M=1.5/2.0
Max. Focus Adjustment Range	: ±50 mm
NA	: Max. 0.13 at Fc100
Centering Adjustment Range	: ±1.5mm
Focusing Acceleration	: 7.5 m/s ²
Cutting Gas Interface	: ø 10, max 25 bar (2.5 MPa)
Nozzle Cooling Gas Interface	: ø 6, max 5bar (0.5 Mpa)
Water Cooling Interface	: ø 8, max 5 bar (0.5 MPa), min flow 2.0l/min
Operating temperature	: 5 ~ 55°C
Storage Temperature	: -25 ~ +55°C
Dimension	: 405 mm x 119 mm
Weight	: 4.5kg


BOCI

MAIN CONFIGURATION

High-speed Tube Fiber Laser Cutting Machine

TH Series is an efficient laser pipe cutting machine, using side hanging bed structure, with intelligent and efficient, stable and material saving characteristics, is widely used in fitness equipment, fence partition, agricultural greenhouse, building ventilation pipe, shelf truss, metal processing and other industries.



INTEGRATED MACHINE BED

- ❖ Solid and stable, high strength, good rigidity, good vibration resistance, long-term deformation;
- ❖ Ensure the agility and stability of the chuck when it runs at high speed.



HIGH SPEE CUTTING EXTREME

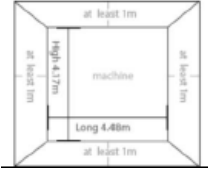
- ❖ The maximum speed of the chuck can reach 200r/min
- ❖ Maximum acceleration 2G
- ❖ Maximum moving speed 150 m / min



ULTRA SHORT TAIL

- ❖ The end of the pipe can be cut in two ways
 - 1) Frond card avoidance cutting and front card moving cutting
 - 2) Realize 0mm ultra-short tail cutting

PREPARATION BEFORE ORDER:

Power Supply	 Industrial Electricity 380V 50HZ	(1) Rated output voltage : 380V (2) Voltage Frequency : 50Hz (3) Three-phase voltage stability: +5% (4) Output voltage regulation
Position to Show Machine		Put machine evenly on ground. Position follows 6 "No rules-no inflammable, no explosive, no volatile solvent, no dust, no corrosion, no fumes.
Cutting Assisted Gas	 Oxygen	When using oxygen as assisted gas, the pressure is to be up to 1MPa and purity of 99.9%; when cutting iron, an additional small carburetor has to be added with vaporization capacity 30NM3/H or vaporization flow amount 50NM3/H.
	 Nitrogen	N2 cut for stainless steel, its pressure reaches 2MPa, in other name 20KG, purity of 99.999%; A capacity for Carburetor is 50N3/H with design pressure 2.5MPa. When using with small cylinder of N2 for cutting, a high pressure nitrogen meter is a must with range from 0 to 6MPa.
		Air cut mainly used in cutting for thin sheet steel: It is better to use the screw type air compressor (stable pressure of 1.2MPa, the displacement of 100 L /min). Prepare with you a 3- grade filtration device (Q.P.S) and that equipped with air dryer (treatment capacity 2.5Nm2/min), an air storage tank (0.6 cubic meters). Recommend to select the quality filter, the higher the configuration, the least possibility of being contaminated the protective lens by oil and water. Thus, the cutting effect is better.)

EXCLUSIVE OFFER IN COLLABORATION WITH BROTHER GAS

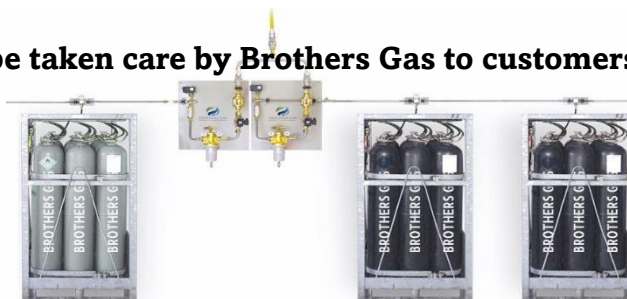
- ❖ Initial 2 racks will be provided FOC to customer upon purchase of Laser Cutting Machine for its commissioning upon dealing with Brother Gas.
- ❖ Brother Gas will support installation and commissioning of total bulk gas solution along with pipeline, FOC upon minimum volume commitment with Brother Gas.
- ❖ Special liquid price will be provided to customer with an additional 15% discount compare to market price along with tank and pipeline investment.

*****tank investment and bulk installation is completely subject to minimum volume commitment from customers.***

- ❖ Complete AMC of gas supply system will be taken care by Brothers Gas to customers, FOC.



Nitrogen Rack - 1x16 Cylinder (160Nm3) - 99.999%



Oxygen Rack - 1x16 Cylinder (160Nm3) - 99.5%



Gas Dura Cylinder

CRITERIA FOR GAS SUPPLY SELECTION:

Supply Solutions	Purity (min.)	Pressure (Bar)	Civil Work	Min. Gas Consumption (m3/month)	Capital Investment
Loose Cylinders	4.6	200	No	<500	Low
Cylinder Rack	4.6	200	No	> 500 – 1500	Low
Bulk – Dura/Mini Bulk	5	17 - 32	No	> 500 – 1500	Low

NOTE: TSF PROVIDES A UNIQUE DEAL TO ITS CUSTOMERS IN CORPORATION WITH BROTHER GAS. THE PRICE COMMITMENT WILL SOLELY BE BETWEEN BROTHER GAS AND CUSTOMER.

OPTIONAL CONFIGURATION:

Save your Gas Cost, below is an Estimate of Cutting Capability by Compressor to Save Gas Cost. Contact our experts to know more about our Compressor.

OPTIONS :	DESCRIPTION	BRAND
	Air Compressor Up to 10 Bar Pressure can be used so save cost up to 35% of your thickness capacity. (Save Nitrogen/Oxygen Cost)	ATLAS COPCO
	16-Bar Screw Compressor 60-70% of the thickness capacity can be easily cut by the 16 Bar Pressure Compressor, providing you a great saving on Cost per cut. (Save Nitrogen/Oxygen Cost)	PIONEERAIR
	18-Bar Screw Compressor 75- 85% of the thickness capacity can be easily cut by the 18 Bar Pressure Compressor, providing you a great saving on Cost per cut.	PIONEERAIR
	COMPRESSED AIR SYSTEM FOR LASER 30-Bar Booster Compressor Cut 95% of the thickness capacity by the 30 Bar Pressure Booster 0.3Mpa reciprocation air compressors, directly get 30 bar compressed air Ø 300 liters vertical air storage tank integrated. No dust, No oil, No water for pure air source. Centralized automatic water drainage system, easy, convenient. (Save Nitrogen/Oxygen Cost)	PIONEERAIR

DELIVERY & INSTALLATION:

1. Delivery at your site within UAE.
2. Training & Installation by our skilled Engineers at your site.

AFTER SALES SERVICE:

1. Two years warranty (One year spare parts & 2nd year free Service).
Except for consumable items e.g Nozzle, Lens etc.
2. Complaint will be solved within 12 working hours, by our in-house skilled Engineers

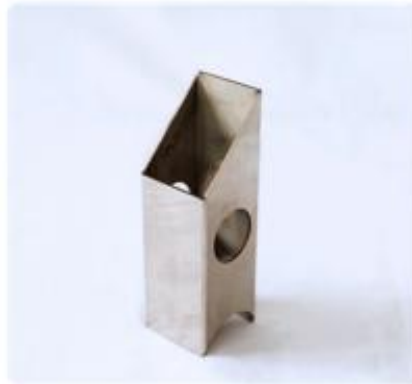
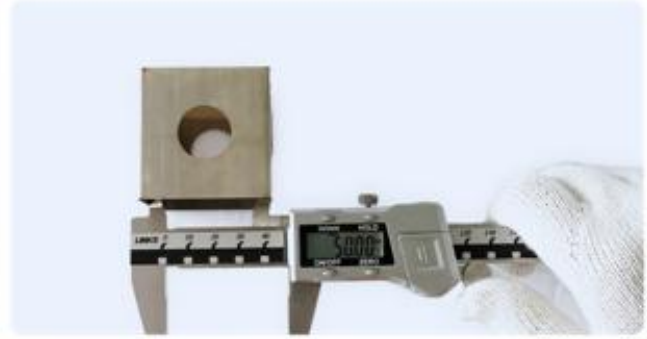
CUTTING SAMPLES :





TSF
MACHINERIES

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