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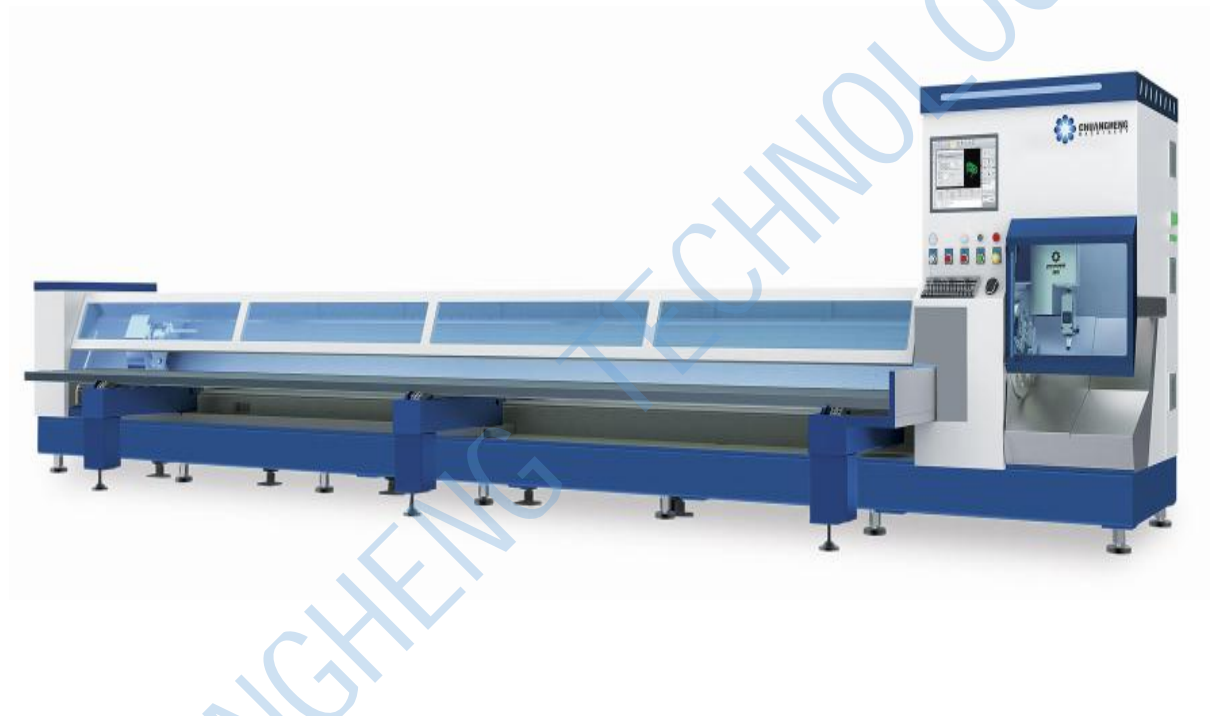
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## CNC Fiber Laser Pipe Cutting Machine

### Machine model

Model:CH-LT7012-1500W



**Basing on your Actual demanding,Recommend you below machine as reference**

Machine Name	CNC Fiber Laser Pipe Cutting Machine
Model	CH-LT-7012
Power of laser source	1500W
Max pipe cutting length	7000 mm
Max pipe cutting diameter	120 mm
Machine Frame Design	Side suspension machine structure

## Advantages

- ① High speed: Chuck rotation speed, cutting efficiency, standard configuration, and the price of the whole machine have high competitive advantages.
- ② Material saving: 30-40mm ultra-short tail material, breaking industry records and increasing material utilization
- ③ High-range compatibility:  $\Phi 10\sim 120$ mm diameter, compatible with round, square, oval, special-shaped, etc., with obvious advantages for thin-walled pipes.
- ④ High-precision chuck: one-time clamping, no need to replace the jaws, long-term accuracy.
- ⑤ Automatic feeding: The structure of the side-mounted machine tool is equipped with a semi-automatic feeding machine as option, which does not need to be stopped for feeding, and realizes 24-hour non-stop operation.
- ⑥ Low cost: No high-cost consumables, the main losses are electricity bills, protective lenses and copper nozzles (combined 13-15 yuan per hour).

## Main Components

Machine Name	CNC Fiber Laser Pipe Cutting Machine
Cutting Torch	Raytools/Ospri China
Machine frame	CHUANGHENG, China Heavy duty,Hollow section and pipe combined welding design
Laser source	MAX,China
Rack	YYC,Taiwan
Reducer	SHIMPO,Japan
Linear Guide rails	HIWIN,PMI,Taiwan
Servo Motor and Drivers	B axis,Y axis by PANASONIC,JAPAN X axis,Z axis by INOVANCE,Taiwan Max 4000 rpm bus driver
Board Control system	FSCUT5000B,FRIENDNESS,China Total 5 axes Bus CNC system
Full automatic Pneumatic Chuck	CHUANGHENG,China Double chucks,Front and rear
Main Electrics Parts	Schneider,France
Main Gas parts	AirTAC,Taiwan
Water Chiller	Hanli,China
Semi-Automatic Pipe loading	As option,1.2 m wide for 7 pieces
Pipe unloading plate	Skateboard blanking,welded with machine,1.2m wide
Voltage Stabilizer	Standard Voltage 380V/50HZ,3 phase,Any customized request,please let us know

## Parameters of Components

Components	Item	Data
Laser Source	Output Power	1500W
	Working Mode	Fiber continuous
	Diameter of Fiber	50 $\mu$ m
	Cooling Method	Water chiller
	Cutting material	MS,SS,AL,CU
Machine bed	Frame designed	Hollow section and plate combined welding,Whole body quenching and polished
	Machine dimension length	8700 mm
Pipe Chuck	Chuck Model	QL120
	Power supply	Pneumatic
	Max loading weight	35KG
Cutting torch	Focus focal length	125 mm
	Collimated focal length	100 mm
	Focus adjustment speed	100 mm/s (only auto focus)
	Auxiliary air pressure	$\leq 3$ Mpa
Water Chiller	cooling medium	Distilled/Deionized Water
	Normal temperature water/chilled water setting	30 /20(adjustable)
	Water temperature adjustment accuracy	$\pm 0.1^{\circ}$ C
	Pump flow	10L/Min
	Pump delivery distance	20m



## Parameters of Machine details

Item	Attributes	Data
Device properties	Series	LT 120 mm small pipe cutting series
	Dimensions	8700 mm X 3300 mm X 2300 mm
	Total Weight	3-3.5 tons
	Full load power	20-25 KW
	Operating temperature	0-40 °C
Cutting range	Pipe cutting size	Round pipe $\phi 10$ - $\phi 120$ Square tube $\square 10$ - $\square 80$
	Cutting seam width	0.1 - 0.2 mm
Stroke range	Chuck clamping one time stroke range	$\phi 10$ mm - $\phi 120$ mm
	Y/X/Z/U axis stroke	7000/150/250/infinite spin
Repeat positioning accuracy/speed	X/Y axis positioning accuracy (mm)	$\pm 0.03/1000$ ( $7000 \pm 0.06$ )
	Repeated positioning accuracy of X/Y axis (mm)	$\pm 0.03$
	Rotational U-axis repeatability (arcmin)	$\leq 5$
	U-axis maximum rotation speed (RPM)	160
speed and acceleration	X/Y axis maximum acceleration	1.4G
	X-axis maximum dry running speed (m/min)	90
	Maximum dry running speed of Y axis (m/min)	160
Pipe loading	Manual loading	7000 mm
	Automatic loading	5600 - 6500 mm
	Cycle feeding cycle (s)	The first feeding $\leq 50$ , the subsequent feeding $\leq 17$
	Max capacity of loader (kg)	300
	Max weight per piece of pipe	35KGS
Pipe Unloading	Tail length after cutting	30-40 mm
	Max pipe blanking length	1200 mm

## Fiber Laser Source

Fiber laser cutting machine adopts single-module continuous fiber laser series covering products between 1500W and 3000W, with high electro-optical conversion efficiency, good beam quality, high energy density, wide modulation frequency, high reliability, long life, and maintenance-free operation. It can be widely used in welding, precision cutting, cladding, surface treatment, 3D printing and other fields. Its fiber output characteristics make it easier to integrate with robots into flexible manufacturing equipment to meet the needs of three-dimensional processing. The development and production of multi-module continuous fiber laser series products are completely completed independently. The company's scientific research and production team has strong innovation ability, so that this series of products can meet the needs of customers to the greatest extent. The output optical system of this series of products adopts reinforced armored output fiber, and the output connector is QBH/QD, which is more convenient for customers to configure. The dynamic operating range of this series of products is between 10% and 100% of the rated output power, the electro-optical conversion efficiency is higher than 35%, and the modulation mode operating frequency can reach up to 5kHz, which can meet the needs of most applications, and has many control mode, its good compatibility has been widely recognized by the market, and the products sell well at home and abroad.

## Fiber series laser generator advantages:

- High electro-optical conversion efficiency
- Output fiber length can be customized
- Output cable: QBH/QD
- Maintenance-free operation
- Wide modulation frequency range
- Small size for easy installation
- Simple process setup
- Industry leading beam quality
- >30% electro-optical conversion efficiency
- Unparalleled product longevity
- Fiber lasers will have long lifetimes, so fiber lasers can last up to 100,000 hours.
- Low power consumption, maintenance-free products

## Main Parameter for Fiber laser source

Type of laser source	Fiber laser source
Laser Operating Mode	Continuous/Pulse
Transmission fiber diameter	100 $\mu$ m
Tuning frequency	5KHz
Cooling method	Water cooling
Output power stability	$\pm 2\%$

Energy output regulation	10%-100%
Central radiation wavelength	1080 ± 10 nm
Power	400 ± 40VAC
Cutable material	Stainless steel, carbon steel, aluminum, brass, copper, manganese, nickel and other metal materials

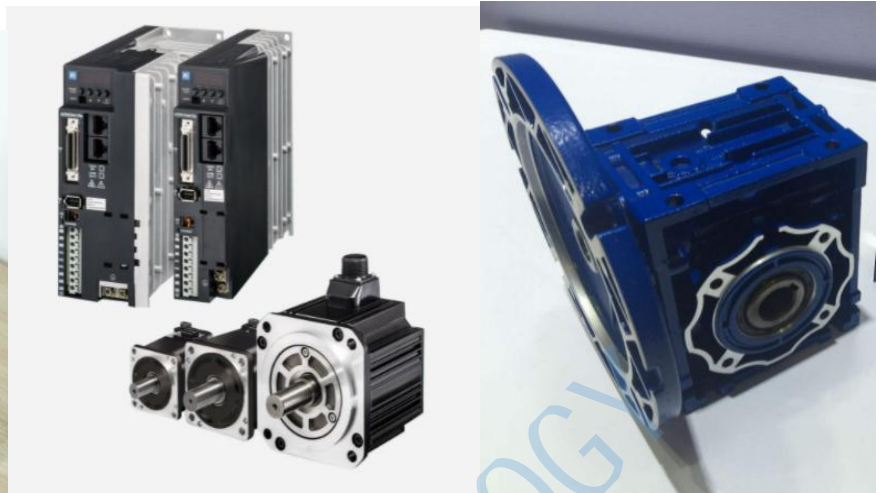
## Environmental requirements

Temperature range: 10—35℃ Humidity range: 40—85% Below 1000 meters above sea level, no flammable, explosive, strong magnetism, strong shock

Model	CH-LS3015-1500W
Working Area	1520*3020mm
Laser Power	1500W MAX
Laser Wave Length	1064nm
Working Table	Saw tooth
X, Y axis Position Accuracy	±0.05mm/m
X, Y axis repeat positioning accuracy	±0.03mm
Max X, Y axis Position Speed	80-100 m/min
Minimum Line Width	± 0.02mm
Position Type	red dot
Working Voltage	220/240/380V/415V 50Hz/60Hz
Auxiliary Gas	oxygen,nitrogen,air

## Machine Details photos as reference



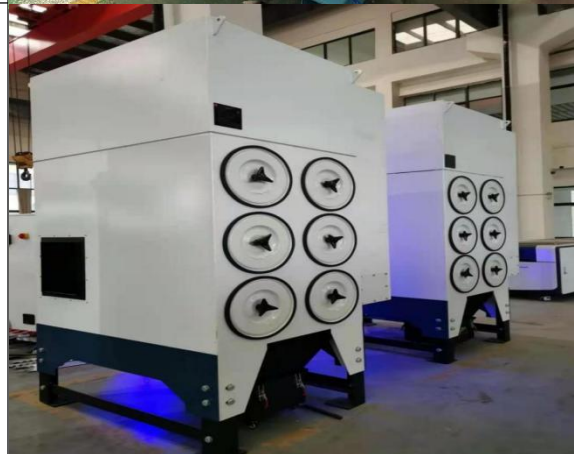


### Options:

Professional air compressor for laser cutting,3-IN-1  
Stable,clear,reliable



Vacuum Dust collection and remove device  
Powerful,Less noise



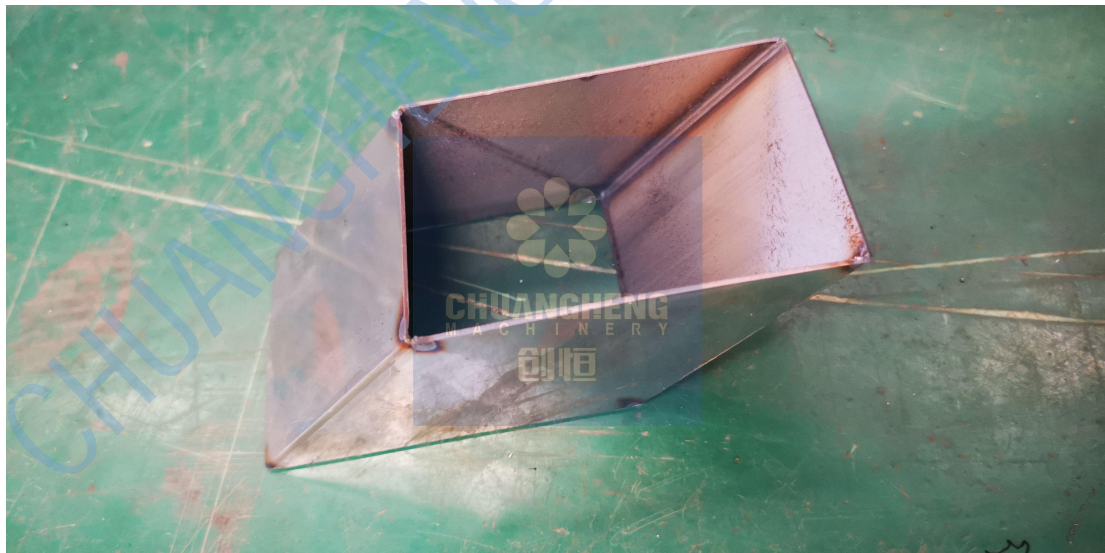
## Warranty

100% warranty in one year under right operation.

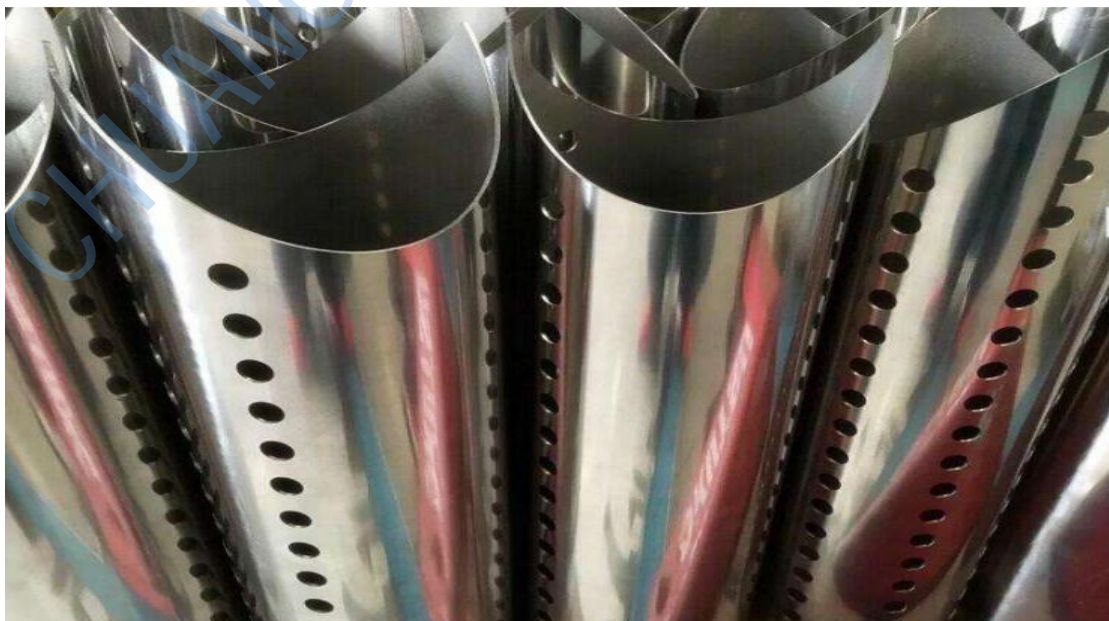
## Delivery time

In 30 days after seller receives the 40% deposit.

## Cutting Result as reference







## Laser Source Cutting Parameters

3.1 单模块 RFL-C1500S 纤芯 50 μm 切割数据 (准直 100mm/聚焦 125mm)

RFL-C1500S 连续激光器 (50 μm)								
材料	厚度 (mm)	速度 (m/min)	功率 (W)	气体	气压 (Bar)	喷嘴 (mm)	焦点位置 (mm)	切割高度 (mm)
碳钢 Mild Carbon steel	1	20	1500	N <sub>2</sub> / Air	10	1.5S	0	1
	2	5			2	1.2D	+3	0.8
	3	3.6			0.6	1.2D	+3	0.8
	4	2.5			0.6	1.2D	+3	0.8
	5	1.8			0.6	1.2D	+3	0.8
	6	1.4			0.6	1.5D	+3	0.8
	8	1.2			0.6	1.5D	+3	0.8
	10	1			0.6	2.0D	+2.5	0.8
	12	0.8			0.6	2.5D	+2.5	0.8
	14	0.65			0.6	3.0D	+2.5	0.8
	16	0.5			0.6	3.0D	+2.5	0.8
不锈钢 Stainless steel	1	20	1500	N <sub>2</sub>	10	1.5S	0	0.8
	2	7			12	2.0S	-1	0.5
	3	4.5			12	2.5S	-1.5	0.5
	5	1.5			14	3.0S	-2.5	0.5
	6	0.8			16	3.0S	-3	0.5
	1	18			1500	N <sub>2</sub>	12	1.5S
2	6	14	2.0S	-1			0.5	
3	2.5	14	2.5S	-1.5			0.5	
4	0.8	16	3.0S	-2			0.5	
黄铜 Cooper	1	15	1500	N <sub>2</sub>	12	1.5S	0	0.5
	2	5			14	2.0S	-1	0.5
	3	1.8			14	2.5S	-1.5	0.5

备注：表中红标参数为打样参数，在实际加工中受各类因素影响较大，仅适