KREXON®



K3015H

Medium and High Power Fiber Laser Cutting Machine

KREXON®

The third generation

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Medium and High Power Fiber Laser Cutting Machine



1	High strength machine bed
2	Intelligent spiral negative pressure dust removal
3	Visual monitoring for safety protection
4	Integrated temperature and humidity control

*The image is for reference only; the appearance and dimensions are subject to the actual product from the factory.

Technical Parameters

K3015H

Item	Parameter				
	1.5kW	2kW	3kW	4kW	6kW
Work area (L*W) (mm)	3000*1500mm				
X-axis travel (mm)	1530mm				
Y-axis travel (mm)	3050mm				
Z-axis travel (mm)	220				
X/Y axis positioning accuracy (mm)	±0.05mm				
X/Y axis repeated positioning accuracy (mm)	±0.02mm				
Maximum speed (m/min)	130m/min				
Maximum acceleration (G)	1.2G				
Dimensions (L*W*H) mm	8520*2270*2180				
Maximum load (KG)	1100				
Weight (KG)	5240	5240	5240	5320	5320
Phase	Three-phase				
Power supply rated voltage (V)	380V				
Frequency (HZ)	50HZ				
Overall power supply protection level	IP54				

Note:
1. Workpiece accuracy depends on factors like type, pre-treatment, sheet size, and position.
2. Technical parameters are subject to change without notice. Final parameters are based on the order agreement.

Cutting Parameters

K3015H

Material	Thickness (mm)	1.5kW	2kW	3kW	4kW	6kW	Gas
		Cutting speed (m/min)					
Stainless steel	1	23-30	30-35	30-45	40-50	45-55	N2/Air
	2	7.0-12	10- 15	20-25	25-30	30-35	N2/Air
	3	4.5-5.5	5.0-6.5	8.0- 10	9.0- 13	18-22	N2/Air
	4	2.0-2.5	4.0-5.0	5.0-6.0	7.0-9.3	10-14	N2/Air
	5	1.4- 2.0	2.0-2.3	3.0-3.6	4-4.5	8.0- 10	N2/Air
	6	1.0- 1.2	1.5-2.0	2.0-3.0	3.5-4.5	4.3-5.0	N2/Air
	8		0.8-1.2	1.0- 1.5	2.0-3.0	3.0-4.0	N2/Air
	10			0.5- 1.0	1.2- 1.6	1.8-2.5	N2/Air
	12			0.4-0.6	0.8- 1.2	1.0-1.5	N2/Air
	14					0.8-1.2	N2/Air
	16					0.6-1.0	N2/Air
	20					0.4-0.7	Air
Carbon steel	1	23-26	25-35	30-40	35-45	40-45	N2/Air
	2	4.2-6.5	10- 15	15- 20	15-20	20-28	N2/Air
	3	3.0-4.5	3.5-5.5	3.5-4.5	7.0-9.0	12-17	N2/Air
	4	2.3-3.0	3.0-3.2	3.0-3.5	3.0-4.0	8.0- 10	N2/Air
	6	1.7-2.5	2.0-2.7	2.5-3.5	2.0-3.0	2.5-3.3	O2
	8	1.2- 1.6	1.3-1.7	1.8-2.3	2.0-3.0	2.3-3.0	O2
	10	1.0- 1.2	1.0- 1.6	1.4-1.8	2.0-2.5	2.0-2.5	O2
	12	0.8- 1.0	0.8-1.2	1.0- 1.4	1.5- 2.0	1.8-2.2	O2
	14	0.6-0.7	0.8-1.0	0.8- 1.0	1.0- 1.5	1.4-1.7	O2
	16	0.5-0.6	0.7-1.0	0.7- 1.1	0.7- 1.2	1.0-1.6	O2
	20			0.5-0.7	0.6-0.8	0.6-1.2	O2
	25				0.4-0.6	0.5-0.7	O2
	30					0.4-0.6	O2

Note:

1. Due to variations in material carbon content, the cutting parameters table is for reference only and should be based on actual conditions.
2. Dark-colored areas in the table indicate that full-sheet processing is not possible and only sample cutting is allowed.

Cutting Parameters

K3015H

Material	Thickness (mm)	1.5kW	2kW	3kW	4kW	6kW	Gas
		Cutting speed (m/min)					
Brass	1	15-20	15-25	25-30	30-35	40-45	N2/Air
	2	4.8-6.0	8.0- 11	12- 17	15- 18	20-25	N2/Air
	3	1.5-2.0	3.0-4.5	5.0-6.0	8.0-10	12-15	N2/Air
	5	0.5-0.7	1.3-1.7	1.8-2.5	3.0-4.0	5.0-6.0	N2/Air
	6		0.6-0.8	0.8- 1.0	2.0-2.5	3.0-4.0	N2/Air
	8				0.8- 1.2	1.5-2.5	N2/Air
	10					1.0-1.5	N2/Air
	12					0.8-1	N2/Air
Aluminum	1	15-23	20-25	30-35	35-40	50-55	N2/Air
	2	6.0-8.0	10- 15	14-20	17-25	25-30	N2/Air
	3	2.0-3.0	4.0-5.0	8.0- 10	10-13	13-16	N2/Air
	4	1.0- 1.7	2.0-2.5	5.0-6.5	6.0-7.5	10-13	N2/Air
	5	0.5-0.8	1.0-2.0	2.5-3.5	4.0-5.0	5.0-6.0	N2/Air
	6		0.6- 1.0	1.2- 1.5	2.5-3.5	3.0-4.0	N2/Air
	8			0.7- 1.3	1.0-2.0	2.0-3.0	N2/Air
	10				0.8-1.2	1.0-2.0	N2/Air
	12				0.4-0.6	0.7-1.2	N2/Air
	14					0.5-1.0	N2/Air
	16					0.4-0.6	N2/Air

Note:

1. Due to variations in material carbon content, the cutting parameters table is for reference only and should be based on actual conditions.
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Cost-Benefit Analysis

K3015H

Item		1.5kW			2kW			3kW			4kW			6kW		
		Air	O2	N2	Air	O2	N2	Air	O2	N2	Air	O2	N2	Air	O2	N2
Peak power consumption	Laser source(kW)	5			6			10			16			16		
	Chiller(kW)	3			3			3			6			6		
	Air compressor(kW)	15	/	/	15	/	/	15	/	/	15	/	/	15	/	/
	Machine tool host (kW)	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
	Dust removal(kW)	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Consumables and gas consumption (CNY/H)		0.5	4.5	60.5	0.5	4.5	60.5	0.5	4.5	60.5	0.5	4.5	60.5	0.5	4.5	60.5
Total power(kW)		38.5	23.5	23.5	39.5	24.5	24.5	43.5	28.5	28.5	52.5	37.5	37.5	52.5	37.5	37.5
Total power consumption (kW/H)		23.1	14.1	14.1	23.7	14.7	14.7	26.1	17.1	17.1	31.5	22.5	22.5	31.5	22.5	22.5
Total operating cost (1RMB/kWH)		23.6	18.6	74.6	24.2	19.2	75.2	26.6	21.6	77.6	32	27	83	32	27	83

If the cutting auxiliary gas is dried compressed air, the cost includes air compressor electricity, machine power consumption, and consumables (protective lenses, cutting nozzles).

Note:

1. The electricity and gas prices are for reference only and may vary by region.
2. Auxiliary gas consumption varies with plate thickness; values are based on 16mm carbon steel for oxygen and 1mm stainless steel for nitrogen, for reference.

Configuration List

K3015H

No.	Item	Qty	Brand
	Laser source		
1	Laser source	1	Max
	Laser cutting head		
1	Laser cutting head	1	Raytools
	Machine Tool & Host		
1	Transmission system	4	JINAN
2	Machine tool and accessory	1	JINAN
3	Reducer	3	SHIMPO, Japan
4	Electrical and pneumatic systems	1	SCHNEIDER, France AVENTICS, Germany
5	AC servo motor and driver	4	Fuji, Japan
6	Water cooler	1	Tongfei
	CNC cutting system		
1	CNC laser cutting system	1	FSCUT

Note:

1. This is Krexon's optimized configuration. Changes in brand or configuration may cause irreversible effects.
2. The warranty period for the entire machine (excluding consumables, non-force majeure natural disasters, war, improper operation, and human damage) is 1 year.

K3015H-Laser Source





1. High-power and high-quality laser output
2. Uniformly distributed beam energy
3. Excellent performance and strong processing ability
4. Compact structure and maintenance-free
5. Wide range of applications

K3015H-Laser Cutting Head



1.5-3kW



4-6kW

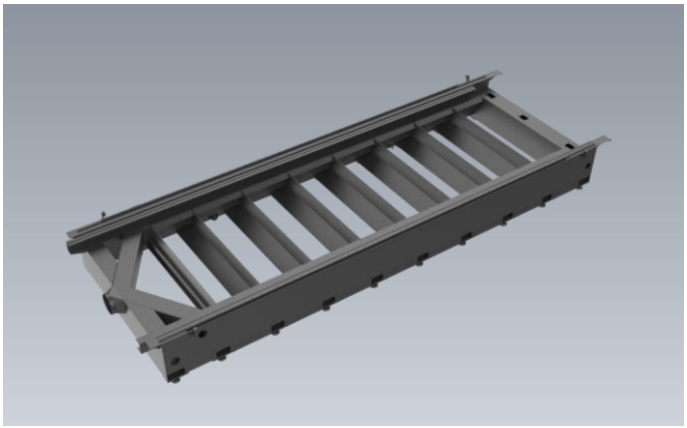
1. Efficient Cooling: Cooling structures for collimating and focusing lenses, plus extra cooling airflow for nozzle, extend operating time.
2. Rapid Focusing: Collimating focus adjustment offers faster focal point movement and a wider focusing range compared to focusing adjustments.
3. Multiple Protective Lenses: Four protective lenses reduce contamination during fiber and lower lens replacement, extending the life of collimating and focusing lenses.
4. Optimized Structure: Integrated body design ensures sealing. Improved QBH, QD, and G5 fiber interfaces enhance laser compatibility and prevent issues like rust from leaks.

K3015H-Machine Bed System

1

High strength machine bed

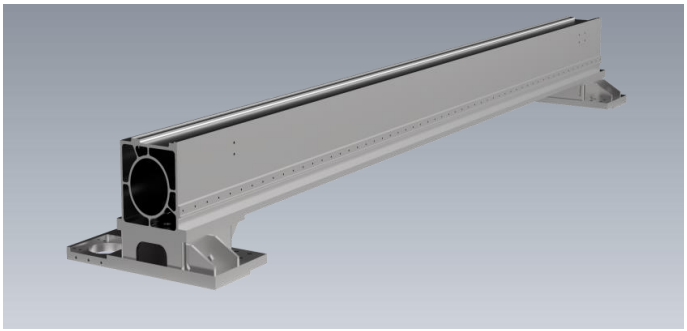
- It is welded using precision welding techniques, and after stress-relief annealing, it undergoes secondary vibration aging treatment and finishing.
- Through finite element analysis, the optimal stress points and support structure are achieved, greatly reducing resonance during movement and ensuring the long-term stable operation.



2

Aerospace-grade high-strength aluminum beam

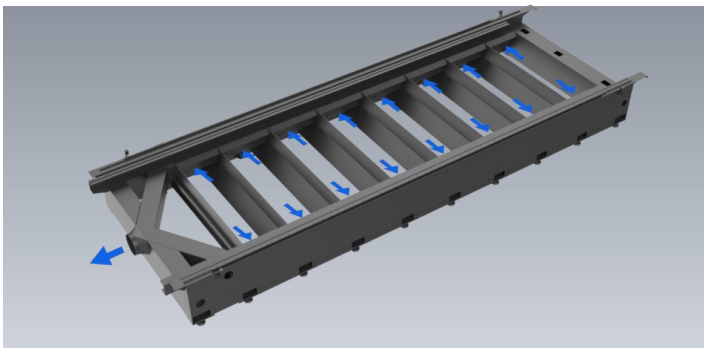
- The beam is made of aerospace-grade high-strength aluminum alloy, extruded, heat-treated, and precision-machined for excellent rigidity and surface quality. Its corrosion resistance, light weight, high rigidity, and toughness are ideal for high-speed laser cutting.
- The optimized internal structure ensures excellent dynamic performance, enabling high-speed cutting with accuracy.



3

Intelligent spiral negative pressure dust removal

- The dust extraction system can intelligently control the exhaust vents based on the current cutting position, enabling timed, zoned, and sectional exhaust.
- Combined with the base's bottom return-seal design, it ensures smoke-free cutting.



4

Visual monitoring for safety protection

- The all-around monitoring system minimizes blind spots, ensuring safe and stable cutting operations.



5

Temperature-controlled electrical cabinet

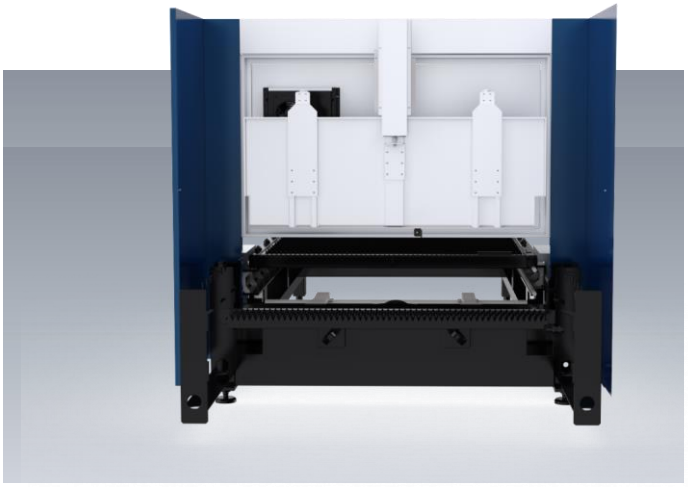
1. The H series features a newly added temperature-controlled electrical cabinet, eliminating the need for an additional air-conditioned room.
2. The internal environment is temperature and humidity controlled, offering excellent environmental adaptability.
3. Significantly extends the lifespan of electronic components in the control system, ensuring more stable laser cutting performance.



6

Fully enclosed lift door

The fully enclosed lift door enhances the machine's sealing, improving dust extraction and reducing smoke.



7

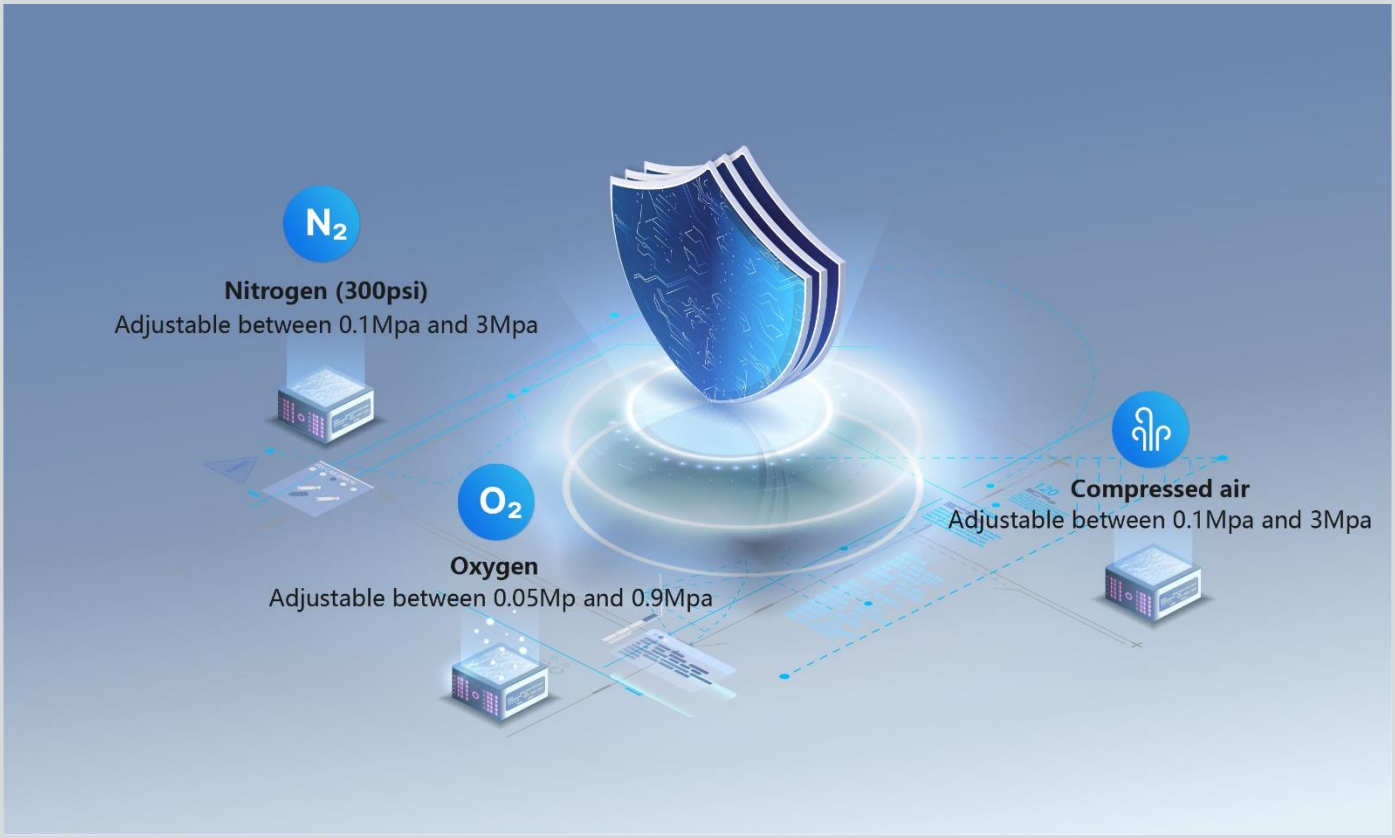
Modular Z-axis

Safety protection, easy maintenance

1. The modular Z-axis has good sealing performance, reducing contamination and lowering the failure rate.
2. Modular installation and replacement greatly reduce maintenance time and difficulty.



Auto Gas Distribution System



Precise Control of Each Gas Flow

The CNC laser cutting machine has two separate gas lines: nitrogen (air) and oxygen. Each gas line can be independently controlled for flow rate and pressure.

- The equipment software terminal is equipped with an automatic auxiliary gas selection feature.
- The type and pressure of auxiliary gases can be automatically set and selected through the CNC program, eliminating the need for manual operation.
- The actual gas pressure at the cutting head outlet can be easily read and displayed on the panel in real-time.

K3015H-CNC System



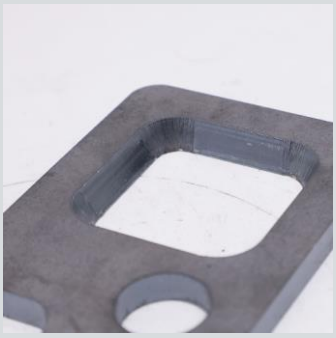
This intelligent bus system is specifically designed for fiber laser cutting. It integrates motion control, laser source control, and cutting gas control, offering stability, reliability, easy deployment, simple debugging, production safety, and a rich set of features with excellent performance. It offers modular, customizable, automated, and informational solutions. The system features memory buffering and a comprehensive cutting process database, offering optimized parameters for various materials and thicknesses. This ensures fast operation and efficient cutting, making it ideal for industries such as sheet metal, kitchenware, and lighting.

- Supported file formats: Direct processing of DXF files and high-speed reading and writing of LXDS and NRP files generated by CypNest.
- Equipped with a cutting database, allowing real-time adjustments during cutting to achieve optimal processing quality.
- Features: Multi-stage piercing, sharp corner entry, and centering significantly enhance high-power cutting efficiency and stability.
- Optimized for various rapid travel modes, including the "LeapFrog" function.





KREXON®











Customer testimonials



