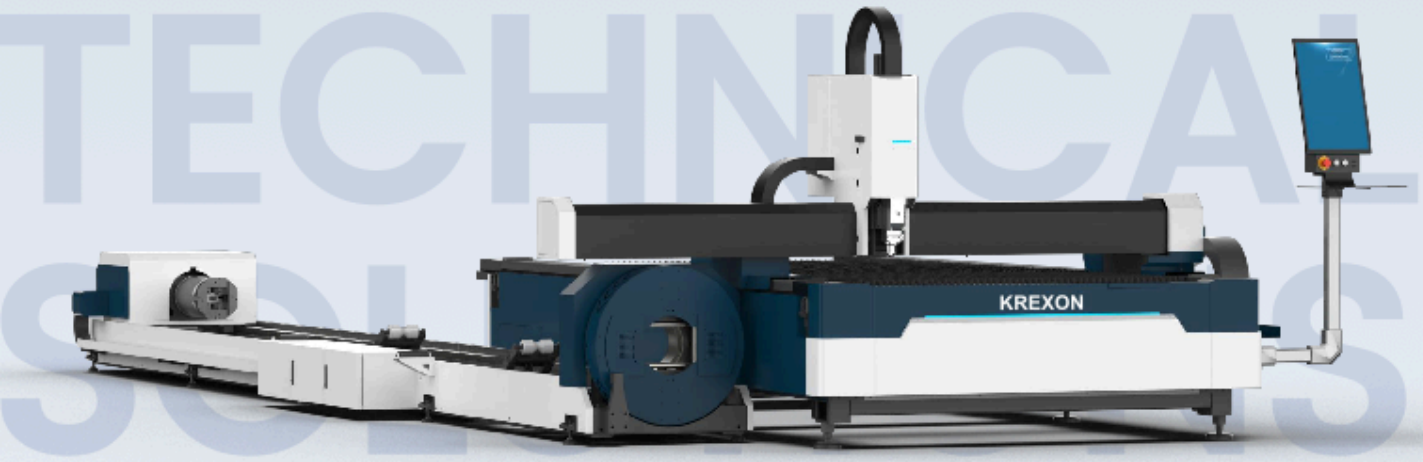
KREXON



K3015C

Tube and Plate Laser Cutting Machine

Technical Parameters

K3015C

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)	350mm				
Tube length	500~6000mm				
Tube diameter	20~220mm				
X/Y axis positioning accuracy (mm)	±0.05mm				
X/Y axis repeated positioning accuracy (mm)	±0.02mm				
Maximum speed (m/min)	100m/min				
Maximum acceleration (G)	1.0G				
Dimensions (L*W*H) mm	8500*3740*2100mm				
Maximum load (KG)	1100KG				
Weight (KG)	3130	3190	3230	3280	3290
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

K3015C

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

K3015C

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.
2. Dark-colored areas in the table indicate that full-sheet processing is not possible and only sample cutting is allowed.

Cost-Benefit Analysis

K3015C

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)	9	9	9	9	9	9	9	9	9	9	9	9	9	9	9
	Dust removal(kW)	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
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)		33.5	18.5	18.5	34.5	19.5	19.5	38.5	23.5	20	47.5	32.5	32.5	44	29	29
Total power consumption (kW/H)		20.1	11	11	20.7	11.7	11.7	23.1	14	14	28.5	19.5	19.5	30.8	20.3	20.3
Total operating cost (1RMB/kWH)		20.6	15.5	71.5	21.2	16.2	72.2	23.6	18.5	74.5	29	24	80	29	24	80

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

K3015C

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	KREXON
2	Machine tool and accessory	1	KREXON
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

KREXON

SF3015C-Laser Source





1.5kW~6kW optional power

1. High electro-optical conversion efficiency
2. High output power with superior beam quality
3. High power stability and long lifespan
4. All-fiber structure, compact design, maintenance-free, and cost-saving

SF3015C-Laser Cutting Head



3kW and below



4kW-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.

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SF3015C-Machine Bed System

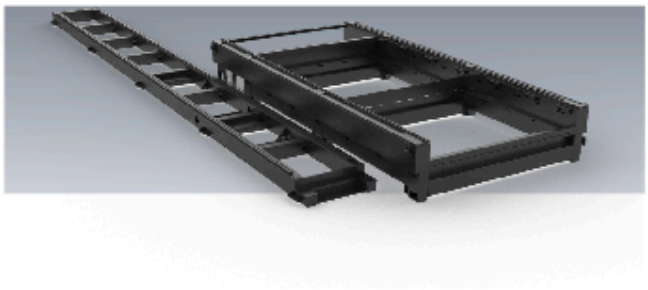
1

Tube Welding Bed

① The reinforced welded bedframe is designed for high-speed movement, with aging treatment to ensure precision and stability during long-term operation.

② The bedframe undergoes annealing to eliminate internal stress and increase rigidity, followed by secondary vibration aging treatment and precision machining.

③ The semi-hollow bedframe structure reduces thermal deformation, extends service life, and ensures cutting accuracy.

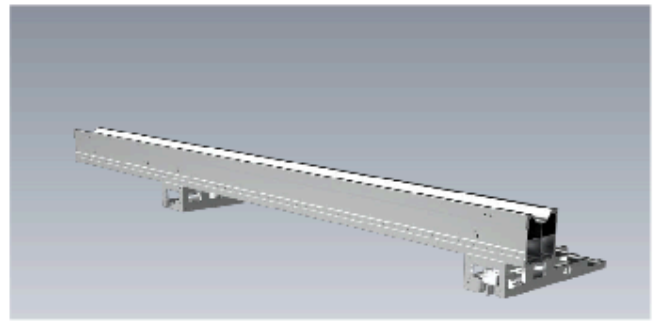


2

High-strength Aluminum Alloy Beam

① The high-strength aluminum alloy beam is lightweight and offers excellent dynamic performance.

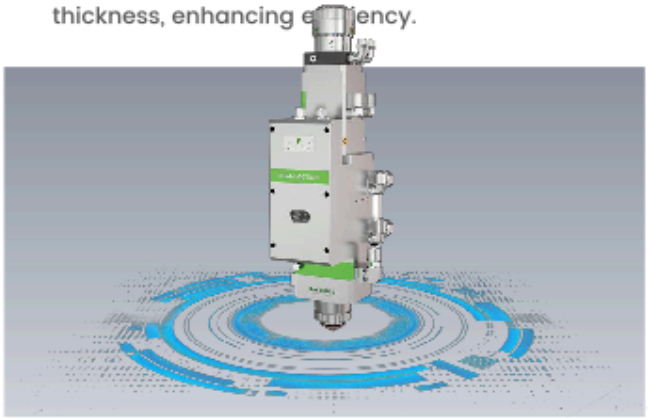
② The beam is precision-machined after secondary vibration aging treatment, ensuring its overall strength and stability.



3

Automatic Focus System

① Equipped with an automatic focusing laser head, the machine adjusts the focus to the optimal cutting distance based on material type and thickness, enhancing efficiency.

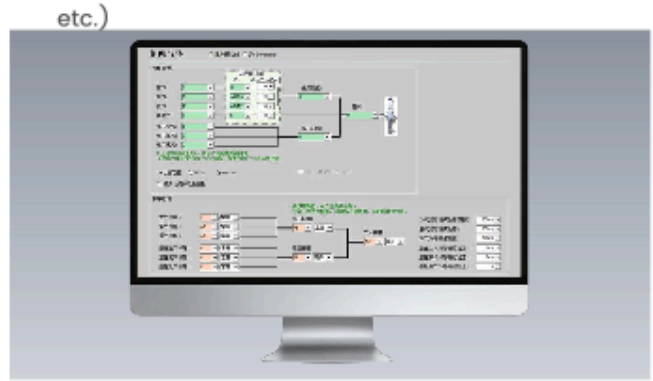


4

Pneumatic System

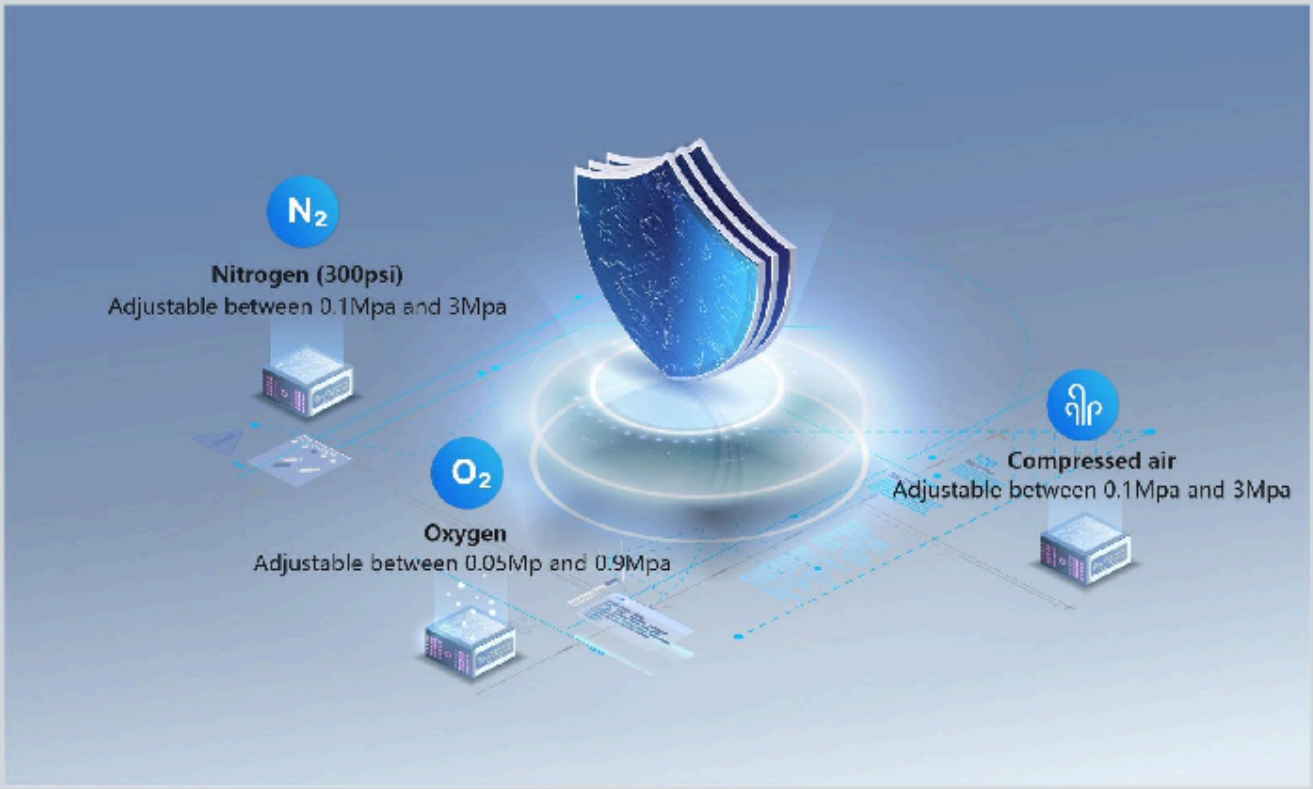
① The pneumatic system is equipped with AVENTICS control valves and proportional valves, allowing electrical control of pressure and flow for each gas.

② Cutting auxiliary gases (O2, N2, compressed air, etc.)



KREXON

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.

KREXON

K3015C-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

