

RayExpress 1530



Fiber Laser Cutter

Processing Size 1500x3000mm

RayExpress 1530 Fiber laser cutting machine is a laser processing solution that is professionally used in metal processing, aerospace, electronic appliances, home appliances, elevators, automobiles, advertising, precision accessories, craft gifts and other manufacturing industries. The equipment is designed with a gantry double drive structure, which is dual gear rack and dual servo motor drive system with high-speed arc cutting function, that can effectively meet the application requirements of metal materials such as carbon steel, stainless steel, aluminum plate, galvanized sheet, etc.



Features

- High Rigidity Enhanced Aviation Aluminum Gantry, improve the gantry strength and rigidity and much lighter;
- Finite element analysis of gantry help to achieve the best critical state of dynamic performance;
- Integrated structure design, reasonable overall layout
- Rack and pinion structure, servo drive, secondary annealing treatment of high rigid welding frame with high accuracy and stability
- Professional laser cutting software with graphic layout and sharp corner smoothing functions, fast piercing & cutting;
- Fiber laser has better Industry-leading wall-plug efficiency (around 30%), less power consumption;
- Hand controller is available, easy for operation;

Technical Data

Item	Specification
Working area	1500mm x 3000mm
Laser power	1000W~4000W
Transmission system	Double rack & pinion and servo drive
Maximum speed	60m/min
Positioning accuracy	±0.03mm/1000mm
Repositioning accuracy of clamp	±0.02mm/1000mm
Format	DXF, NC
Working environment	0-45°C , Humidity ≤ 80%, non-condensing
Equipment power	8KW (Laser and chiller not included)
Power supply	Three phase 380V/50Hz or 60Hz
Total weight	3000Kg
Overall size	5010mm×2260mm×1900mm

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Configuration

Item	Specification	Brand
Machine Body:		
Square tube welding frame	Large gantry finish milling, double annealing	RayOpen
Linear guide rail	Imported precision grade	RayOpen
Rack & pinion	Imported high speed and high precision	LEITESEN-Germany
Planetary reducer	Imported high precision	MOTOVARIO-France
Gantry	Finite element optimization, light weight and high rigidity	RayOpen
II Laser source:		
Power	1000W~4000W	IPG (Maxphotonics optional)
III Optical system:		
Laser cutting head	Auto focus	Raytools-Switzerland
IV Control and drive system:		
Motion Control System	Professional motion control system for laser cutting including CAM software	Raytools-Switzerland
Motor	X-axis servo motor: 1KW, 2000rpm Y-axis servo motor: 1.5KW, 2000rpm Z-axis servo motor: 400W, 3000rpm, with brake	
Electrical control system	Electrical components are international brands such as Schneider	
Industrial computer	I5-4200U/8G/120G/WIFI	
V Accessory:		
Cooling system	Double circulation system, over temperature alarm, flow protection, water level protection	S&A
Exhaust blower	380V/50Hz or 60Hz/3KW/2900rpm	RayOpen
Pneumatic components	Pressure regulating filter, solenoid valve, check valve, etc.	Taiwan/Japan
Precision electronically Controlled proportional valve	0~1MPa	
Optional: Voltage stabilizer	30KVA or 60KVA	
Optional: Air compressor	Air compressor & IV degree filter system & dryer	
Optional: Dust collector		

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Core part-structure

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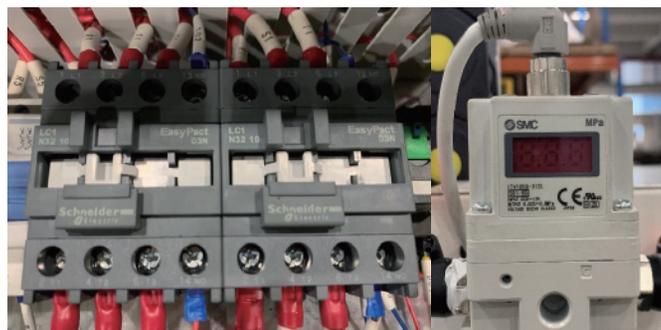


Core part-moving system

- Hand controller is available, easy for operation;
- France brand Schneider drive & servo motor & France brand MOTOVARIO reducer & Germany rack
- Gantry double rack & pinion, double servo motor transmission structure, high inertia and large torque output
- The maximum acceleration can reach 0.8G, which effectively improve the customer's production efficiency

Core part-electronic & gas parts

- Schneider electronic parts and Japan brand SMC electrical proportional valve ensure the long time and stable operation.



Core part-self-lubrication system

- self-lubrication system will run automatically

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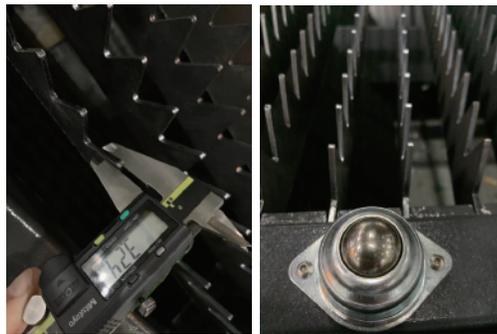


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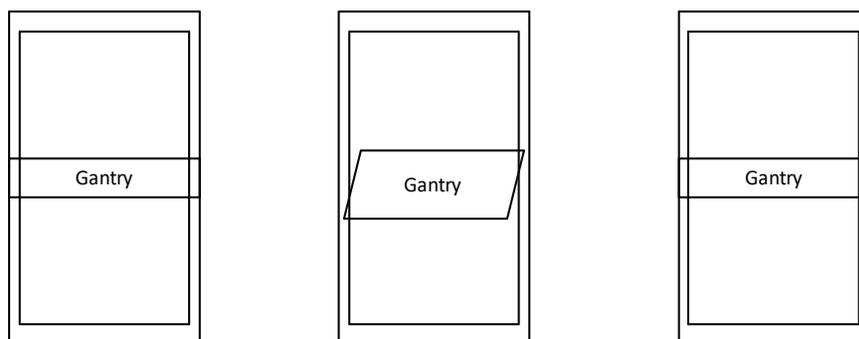
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Core part-special design

- 3mm thickness blade strip table
- Ball design will make it easily loading metal sheet material



Gantry Deviation Self Correction



Edge Search

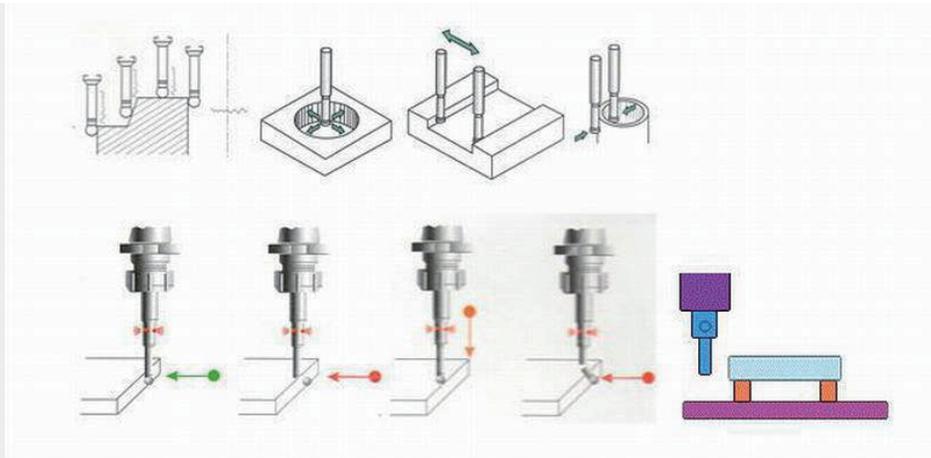
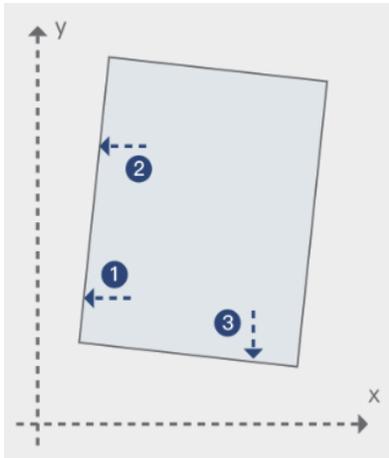
To position the metal sheet edge on the working table which is not consistent with the X / Y coordinate, the cutting head can be quickly determined by the Edge Search function to improve the processing efficiency.

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Cutting Ability

(for reference only,
the real cutting speed
depends on material and gas)

Material	Thickness(mm)	@1500w Speed (m/min)	Gas
CS	1.5	19.2	O2
CS	2	8.4	O2
CS	3	4.8	O2
CS	4.7	2.1	O2
CS	5.7	2	O2
CS	7.8	1.5	O2
CS	9.7	1.32	O2
CS	13.8	0.72	O2
CS	16	0.7	O2
SS	1	45.6	N2
SS	1.8	19.2	N2
SS	2.8	4.8	N2
SS	4.6	1.8	N2
SS	6	0.9	N2
SS	7.5	0.3	N2
Al	2	7.8	N2
Al	3	5.7	N2
Al	5	0.78	N2
Al	6	0.54	N2
Brass	1	33.6	N2
Brass	3	2.7	N2
Brass	5	0.78	N2
Cooper	1	15.6	N2
Cooper	3	2.1	N2

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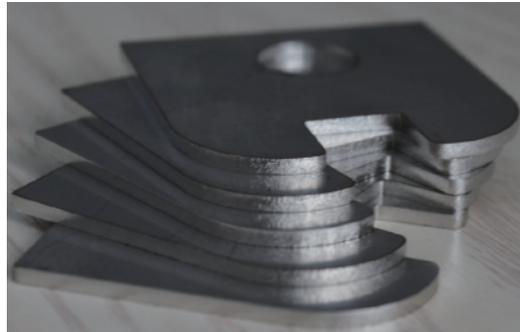
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Applications & Samples

Metal materials :
Carbon steel, Stainless steel, Aluminum alloy, Titanium alloy, Galvanize sheet, Brass, Red copper etc.



2mm SS



3mm SS