

RayExpress 1530EX



Fiber Laser Cutter

Processing Size 59.1in x 118.1in

RayExpress 1530EX 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, less power consumption;

Technical Data

Item	Specification
Working area	59.1in x 118.1in
Laser power	1000W~12000W
Transmission system	Sync-dual Servo rack and pinion system
Positioning speed(MAX)	4724in/min
Positioning accuracy	±0.001in/39.4in
Repositioning accuracy of clamp	±0.0008in/39.4in
Format	DXF and NC
Working environment	32-113°F , Humidity ≤ 80%, non-condensing
equipment power	12KW (laser and chiller not included)
Power supply	Three phase 380V/50Hz or 60Hz
Total weight	15432lb
Overall size	343in×113in×89in

RayExpress 1530EX



Fiber Laser Cutter

Processing Size 59.1in x 118.1in

Configuration

Item	Specification	Brand
Machine Body:		
Square tube welding frame	Large gantry finish milling, double annealing	RayOpen
Linear guide rail	precision grade	RayOpen
Rack & pinion	Imported high speed and high precision	LEITESEN-Germany
Planetary reducer	Imported high precision	MOTOREDUCER-France
Gantry	Finite element optimization, light weight and high rigidity	RayOpen
Laser source:		
Power	1000W~12000W	IPG (Maxphotonics optional)
Optical system:		
Laser cutting head	Auto focus	Raytools-Switzerland
Control and drive system:		
Motion Control System	Professional motion control system for laser cutting including CAM software	Raytools-Switzerland
Motor	X-axis servo motor Y-axis servo motor Z-axis servo motor	
Electrical control system	Electrical components are international brands such as Schneider	
Industrial computer	M428	
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.	SMC/AirTac
Precision electronically Controlled proportional valve	0~1MPa	SMC

RayExpress 1530EX



Fiber Laser Cutter

Processing Size 59.1in x 118.1in

Core part-laser source

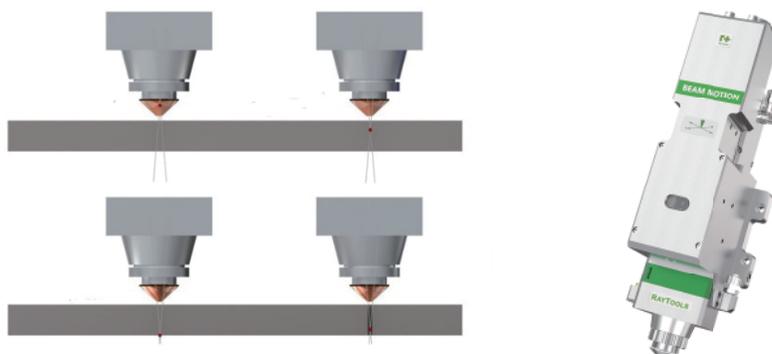
- It has a super compact design with the laser housed in a hermetically sealed cabinet;
- Maintenance-free Operation,
- A dehumidifier is installed within the cabinet to ensure optimal internal humidity;
- Industry-leading wall-plug efficiency our lasers are known for has reached over 40% ;
- The electrical cost savings add up to many tens of thousands of dollars over lifetime of a laser;
- Wide variety of fiber delivery options (50, 100, 150 or 200 μm) core diameter;
- record reliability and maintenance-free operation;
- Hot redundancy ensures 100% up time with no change in power;
- Compact Rugged Design

note: Above info based on IPG laser source



Core part-laser head

- The focus is controlled by the inner precision servo motor, no need for manual operation.
- Punching time reduced by 80% compared to common cutting head. Best match for high-speed thick- metal material cutting and highly reflective material cutting.
- Large and complete cutting technique data base. Operations are done simply through module data selecting among existing data according to the material features. Easy and convenient operation.
- Supporting remote system monitoring through wireless handheld box and Ethernet.



RayExpress 1530EX



Fiber Laser Cutter

Processing Size 59.1in x 118.1in

Core part-structure

- 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

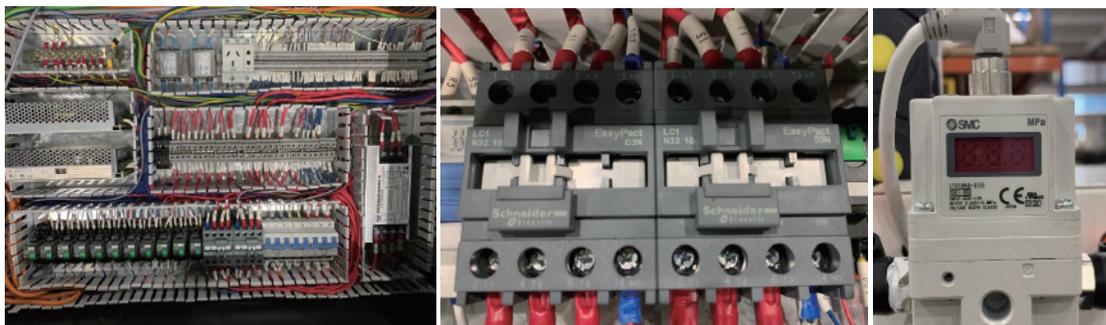


Core part-moving system

- 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.



RayExpress 1530EX



Fiber Laser Cutter

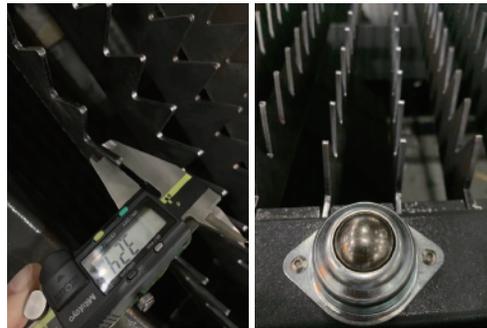
Processing Size 59.1in x 118.1in

Core part-self-lubrication system

- self-lubrication system will run automatically

Core part-special design

- .12in thickness blade strip table
- Ball design will make it easily loading metal sheet material



Power control function

- Control the analog quantity according to the axis moving speed, and then control the laser power change to ensure the cutting effect of sharp corners



RayExpress 1530EX



Fiber Laser Cutter

Processing Size 59.1in x 118.1in

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

Material	Thickness(in)	@1500w Speed (in/min)	Gas
SS	.04	1378~1969	N2
SS	.08	591~906	N2
SS	.12	276~433	N2
SS	.16	157~236	N2
SS	.24	79~126	N2
SS	.31	47~71	N2
SS	.39	28~35	N2
SS	.47	12~16	N2
SGCC	.04	1772~1890	AIR
SGCC	.08	709~748	AIR
SGCC	.12	374~413	AIR
SGCC	.16	197~217	AIR
Brass	.04	1496~1654	N2
Brass	.08	669~709	N2
Brass	.12	276~315	N2
Brass	.2	138~165	N2
CS	.04	1772~1890	AIR
CS	.08	787~906	AIR
CS	.12	394~433	AIR
CS	.12	138~197	O2
CS	.2	98~142	O2
CS	.24	94~118	O2
CS	.31	71~94	O2
CS	.39	47~71	O2
CS	.47	39~59	O2
CS	.63	28~31	O2
CS	.79	24~28	O2
CS	.87	20~26	O2
CS	.98	16~24	O2
Al	.12	256~315	N2
Al	.16	138~197	N2
Al	.2	98~138	N2
Al	.24	71~118	N2
Al	.31	35~51	N2
Al	.39	16~28	N2
Al	.47	12~16	N2

RayExpress 1530EX



Fiber Laser Cutter

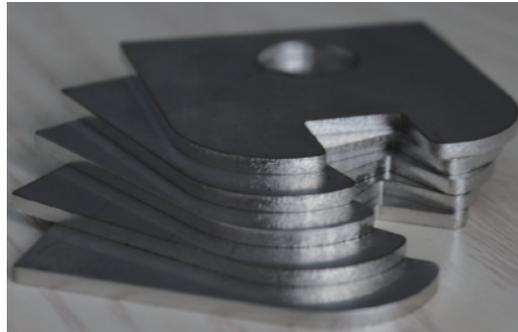
Processing Size 59.1in x 118.1in

Applications & Samples

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



.08in SS



.12in SS