

HIGH PRECISION LASER MIX CUTTING MACHINE L2 SERIES





QUANTUM
DIGITAL TECHNOLOGIES

CO2 MIXED LASER CUTTER

**METAL & NON-METAL
CUTTING**

L2-1313/L2-1325/L2-1530 /L2-2030

Widely used in the processing of high precision high polished organic materials/acrylic cutting, display panel, display cabinet, showcase, lighting industry, photo frame woodworking industry, architectural model, handicrafts, decoration industry, sign advertising words making, LED lighting box, aerospace industry, machinery, ship, elevator industry and metal sheet cutting industry, etc.

Suitable for cutting organic materials/acrylic, plywood, MDF, fabric, leather, paper, Stainless steel, carbon steel, galvanized sheet, etc.



XYZ adopt TAIWAN high
precision ball screw
transmission, Taiwan linear guide

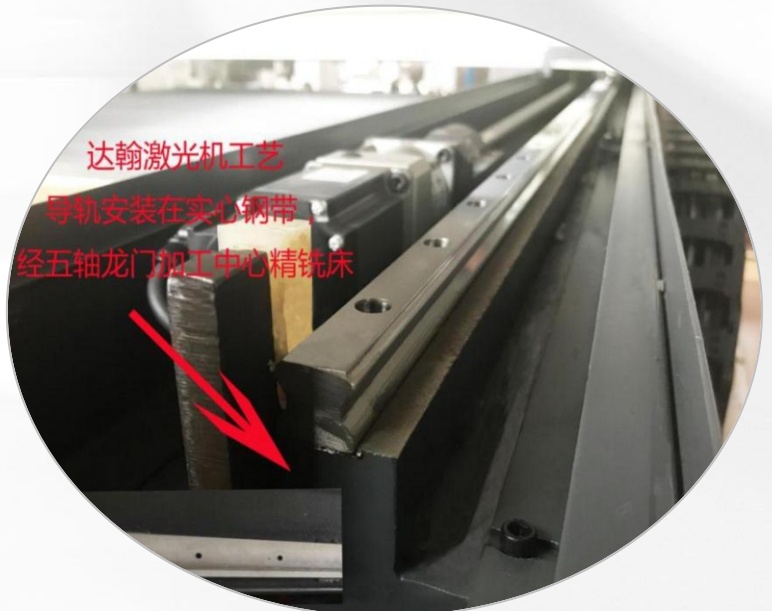


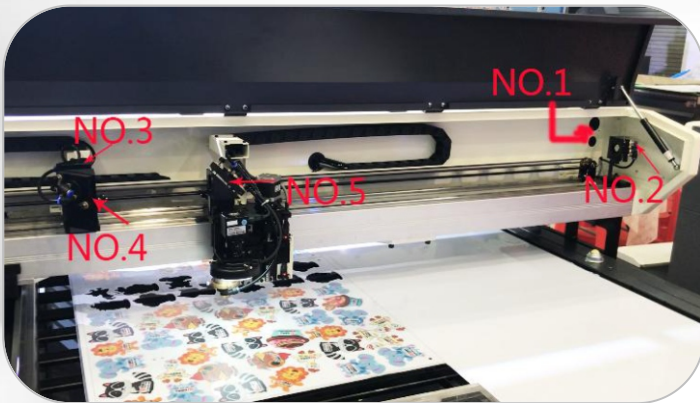
adopt Japanese Mitsubishi servo
motors & drivers.

High speed, high precision

MACHINE BODY technology:

- 1) Machine body baked at 600°C heat treatment then a further 24 hours cooling in the oven; ensure to last 20 years without the table twisting making this machine a viable long term investment.
- 2) Solid steel as base, and finish-milling by 5 axes CNC center, very high precision
- 3) Linear guide installed on this solid steel base, hardly no gap; make sure Y axis more stable and higher accurate, **no-deformation**.

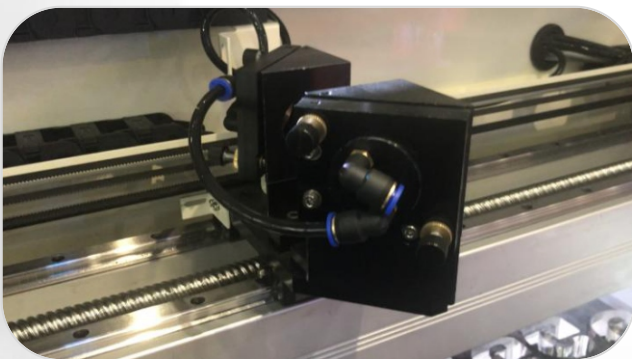




4. **Constant light path Patent design** , composed of **five** reflective mirrors: the distance between laser beam output to the focus head is always the same, whatever the machine move. **More advanced than common light path composed of 3 mirrors or fake 5 mirror light path. .**



5. L6 adopts **Dielectric film high reflection mirrors, big size $\Phi = 38\text{MM}$** . Compare to common Si or Mo mirror of size 30mm diameter, Our factory's reflections mirrors has advantages of well light reflection, long life.



6. Each mirror holder has **air cooling device**, help to reduce the heating phenomenon, prolong the life of mirrors, also improve the quality of light path.



7. Machine body is strong enough. It can hold any type of laser tube. **There are American metal tube, Chinese glass CO2 150W single tube, 300W folded laser tube, or 400W beam combination tube.** Whatever which type of tube, we provide very good after-sale guarantee.

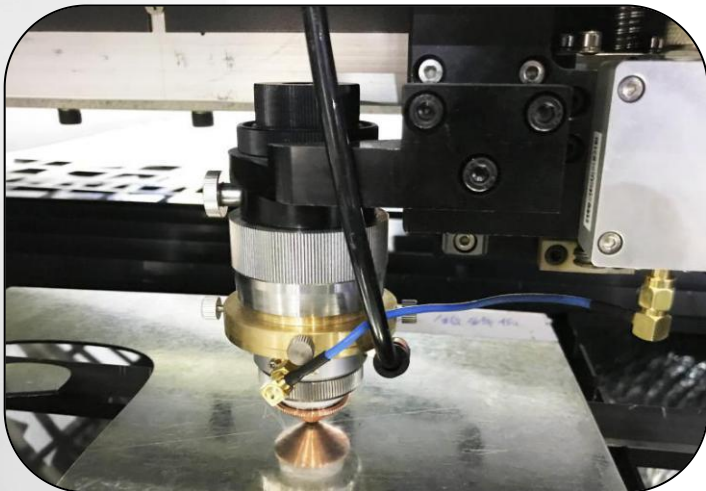


8. **This is untouched following system.**

Its function: metal sheet is normally not flat. When cutting, this system have to sense the metal sheet, and automatically adjust the cutting focus. The higher accuracy of it, the better cutting effect when machine works.

L2 choose this one, same as the one used in fiber laser machine too.

It is very stable. Nearly 0 maintenance in 10 years.



9. **Compare to other kind of head, this one is well sealed. And it can do fine adjustment.**

When we cut metal, the accurate of focus it is, the better cutting effect it cuts. So, this head can help to do **precise adjustment.**



10. Industrial electrical cabinet, professional Wiring. The electric components are from the best quality manufacturers in China.

Quality assurance!!

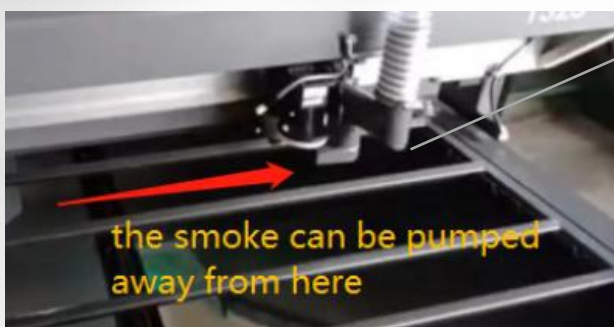
Strong Smoke exhaust design



- ① Standard down smoke exhaust design
3 sides of machine body have vent, with
powerful exhaust fan

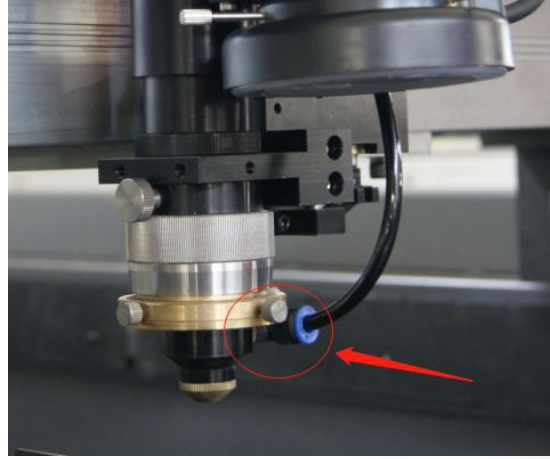


- ② optional choose upper smoke
exhausting design, much better to
discharge smoke



- ③ optional choose head smoke
exhausting design, discharge smoke
very well.

Full range of blower design



Much better to cool while cutting



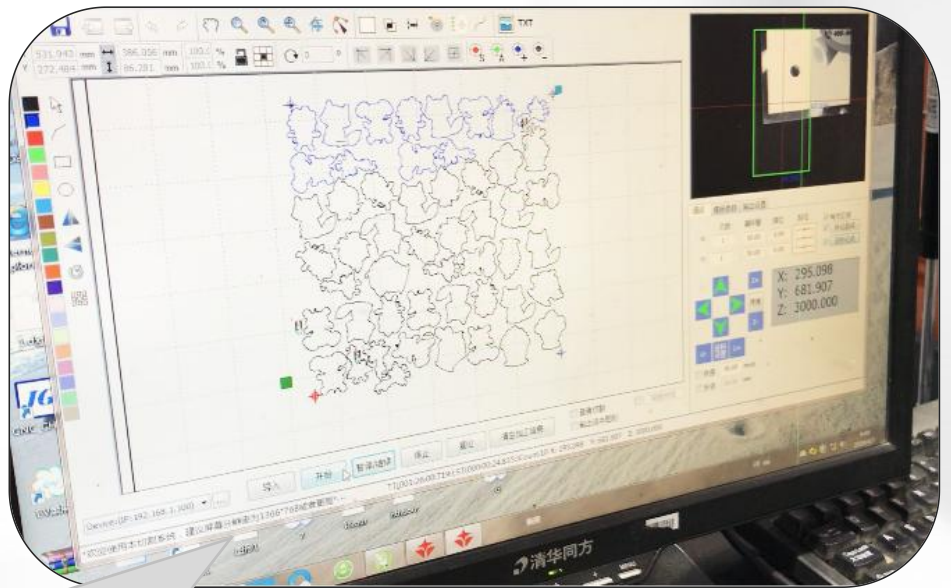
Side blowing
Reduce the material cutting
overheating fire phenomenon.
For the bottom of the painting of
acrylic cutting, the effect is better.

Computer desk (Computer is not included.)



Convenient to place
the computer
Neat and secure.

CCD Camera System



This machine original optional equips CCD camera system, for contours cutting.

It is matched to UV printer. Customer just need to print 4 mark points on the sheet, the machine can automatically read the points and recognize the pictures place, and cut what you want to cut. It is very useful.

L2 parameter and main configuration

ITEM NO.	L2-1313	L2-1325	L2-1530	L2-2030
Max working size	130x130 CM	122x250 CM	150x300 CM	200x300 CM
Overall size(CM)	245×199×130	365×199×130	420×215×130	448×264×130
Laser Power	150W / 300W / 320W			
Positioning accuracy	±0.01mm			
Cutting thickness (150W)	Acrylic ≤ 30mm; Wood/MDF≤ 8mm; plywood≤ 15mm, etc.			
Cutting thickness (300W/320W)	Acrylic≤ 40mm; Wood/MDF≤ 15mm; plywood≤ 20mm, etc.			
Electricity	220V/50HZ/60HZ, ± 5%; Exhaust fan: 380V, 3ph.			
Environment	Temperature 0-40 °C, Humidity ≤ 80%, no condensation.			
Electrical consumption	150W: 2KW; 300W/320W: 3.5KW			
Weight	700KG	900KG	1200KG	1350KG
Packing size (CM)	255×204×145	375×204×145	430*225*145	Bare packing
Voltage stabilizer	150W needs 5KVA Voltage stabilizer; 300W/320W: 10KVA Voltage stabilize. Prepared by users themselves.			
Unload way	Forklift with extension jib, prepared by users themselves.			
CCD Contours cutting	It is not standard configured. It is an optional function.			
Machine body	Industrial machine body, Precision machined			
Drive	XYZ High precision ball screw transmission & Linear guide			
Servo	XYZ Japanese Mitsubishi servo motors.			
Light path	Constant light path composed of five reflective mirrors			
Mirror	Dielectric film high mirrors and lens from USA.			
Focus	Auto focus adjusting for metal cutting			
Feeding way	fixed platform			
Working platform	Standard configured Aluminum bars . Honeycomb platform is another option.			
Cooling system	Industrial water chiller, Automatic refrigeration			
Files support	Files from autoCAD, coreldraw, etc., such as *.dxf, *.ai format.			

300W /320W Cutting speed for Different power different materials(For reference)

Stainless steel / carbon steel	thickness	Speed (mm/s)	Min Power(%)	MAX Power(%)	Open delay (ms)	Dot Interval(s)	Oxygen (Mpa)
	0.4mm	140-180	30-60%	80-95%	400-600	400-600	0.2-0.4
	0.6mm	100-150	30-60%	80-95%	400-600	400-600	0.4-0.6
	0.8mm	80-120	30-60%	80-95%	400-600	400-600	0.4-0.6
	1.0mm	60-80	30-60%	80-95%	400-600	400-600	0.5-0.6
	1.2mm	40-50	30-60%	80-95%	400-600	400-600	0.5-0.6
	1.5mm	30-40	30-60%	80-95%	800	800	0.8-1
	2.0mm	20-30	30-60%	80-95%	800	800	0.8-1
	3.0mm	10-20	30-60%	80-95%	800	800	0.8-1

galvanized sheet	Thickness	Speed (mm/s)	Min Power(%)	MAX Power(%)	Open delay (ms)	Dot Interval(s)	Oxygen (Mpa)
	0.6mm	50-70	30-60%	80-95%	400-600	400-600	0.5-0.8
	0.8mm	40-50	30-60%	80-95%	400-600	400-600	0.5-0.8
	1.0mm	40-50	30%	80%	400-600	400-600	0.5
	1.2mm	30-40	30-60%	80-95%	400-600	400-600	0.6-1.0
	1.5mm	20-30	30-60%	80-95%	400-600	400-600	0.6-1.0

Acrylic	Thickness	Speed (mm/s)	Min Power(%)	MAX Power(%)	Open delay (ms)	Dot Interval(s)	Air (Mpa)
	2mm	95	60-70%	70-75%	0	0	0.2-0.4
	5mm	40-50	60-70%	70-75%	0	0	0.2-0.4
	8mm	15-20	60-70%	70-75%	0	0	0.2-0.4
	10mm	10-15	60-70%	70-75%	0	0	0.2-0.4
	12mm	8-12	60-70%	70-75%	0	0	0.2-0.4
	20mm	3-5	60-70%	70-75%	0	0	0.2-0.4
	30mm	2-3	60-70%	70-75%	0	0	0.2-0.4
	40mm	1-2	60-70%	70-75%	0	0	0.2-0.4

Wood / MDF	Thickness	Speed (mm/s)	Min Power(%)	MAX Power(%)	Open delay (ms)	Dot Interval(s)	Air (Mpa)
	2mm	120	60-70%	70-75%	0	0	≥0.8Mpa
	5mm	55-70	60-70%	70-75%	0	0	
	12mm	10-15	60-70%	70-75%	0	0	

Plywood	Thickness	Speed (mm/s)	Min Power(%)	MAX Power(%)	Open delay (ms)	Dot Interval(s)	Air (Mpa)
	2mm	120	60-70%	70-75%	0	0	≥0.8Mpa
	5mm	55-70	60-70%	70-75%	0	0	
	12mm	20-40	60-70%	70-75%	0	0	
	20mm	10-15	60-70%	70-75%	0	0	

Requirements and matters needing attention of users at work site

I environmental standards of equipment sites

1. There should be a necessary safety distance between the equipment and between the equipment and the wall of the plant. The specific distance should be changed according to the actual situation of the customer, but it should not be less than the technical safety distance.
2. The factory ground shall be cement ground or reinforced concrete ground, and the carrying capacity shall be more than twice the weight of the equipment, and the flatness shall be $\pm 3\text{CM}$.

II standards for the selection of electricity

1. The equipment shall use the standard $220 \pm 5\text{V}$ 50Hz single phase four-wire alternating current. The actual specifications of the purchased machines shall prevail.
In case of voltage instability or power mismatch a voltage regulator or transformer may be used to meet the above standards.
2. Plant wires, safety leakage switches and other corresponding plant supporting facilities shall guarantee the carrying capacity of 1.5 times of the maximum installed power of the equipment
3. The factory must have a separate good grounding position to install the normal grounding for the equipment

III requirements for cooling water

1. Deionized water or distilled water must be used. If you can't do that, you can use bottled water instead. But cannot use mineral water, otherwise it will affect the service life of the laser;
2. In the frozen area in winter, the chiller shall be placed in an environment above 0°C .

IV installation environment requirements for chiller, air compressor and freeze dryer:

1. The cold dryer and air compressor can be placed outdoors. The surrounding environment must be dry, with less dust and rain protection.
2. If the chiller, air compressor and freeze-dryer are placed in the room, it must ensure that there is little dust and good ventilation, and the hot air generated by the chiller must be discharged out of the room.

V The main cutting auxiliary gas used by laser cutting machine is Oxygen and air.

Oxygen (O₂): used to cut metal sheets. the cutting surface will be a little blackened.

The higher the purity of the auxiliary O₂ used in cutting, the better the quality of the cutting surface.

The air is used in cutting non-metal materials. If for cutting acrylic, just a small air pump is fine.

If for cutting wood/mdf/plywood, need higher pressure air, bigger than 0.8MPA is fine.

Whatever O₂ or air which from air compressor, it should be provided by users themselves.

The technical requirements for auxiliary gases are shown below.

Gas	Purity	Remark
Oxygen (O ₂)	Normal oxygen 99.5%, pure oxygen 99.95%	

LASER L6 QUOTATION

NO.	Commodity	Specification / Item NO.	Quantity	Unit Price / US\$	Amount / US\$
1	Mixed Laser cutting machine	L2-1325-300W	1	19,750.00	19,750.00
2	Voltage stabilizer (Optional)	10KVA for 300W			
3	Reflecting mirror (Optional)				
4	Focus lens (Optional)				
5	High frequency wire Ceramic ring				
6	Copper nozzle for cutting metal				
7	Installation cost i.e. visa, air ticket, hotel, food etc. need to be borne by customer				
Total in US dollars					19,750.00

Remark:

- 1, Currency: US dollars
- 2, Lead-time: 1-2 weeks after payment
- 3, Trade term: EX-work China
- 4, Payment term: T/T, 50% as deposit, the balance should be paid before shipment.
- 5, Shipping time as per actual.
- 6, Bank information:
 - A/c Holder's Name: **Quantum Digital Technologies FZC**
 - Bank Name : **RAK Bank**
 - A/c No. : **0242933076001**
 - IBAN : **AE220400000242933076001**
 - Branch & SWIFT Code: **SHARJAH & NRAKAEAK**