

CO₂ Dynamic Laser Marking Machine

For

Greeting Card





Part I. Machine Introduction

1. Brief Introduction

As the high-tech product, CO₂ Dynamic Laser Marking Machine adopts the technologies of Laser, Optics, Precision Machinery, Electronic technology, PC software technology and Cooling Project.

The machine adopts the 10.64um CO₂ laser source, which can satisfy the application in different industries such as marking, cutting, engraving, color removal, paint processing, material micro-processing and etc. The equipment adopts Aluminum frame structure, and the latest motor driving in the whole worktable platform to ensure the stable qualities. The adjustment of laser optical path is driven by two galvanometer motors(XY), and the third axis is driven by pre-scanning gathered system to make a wildly adjustment for focus distance.

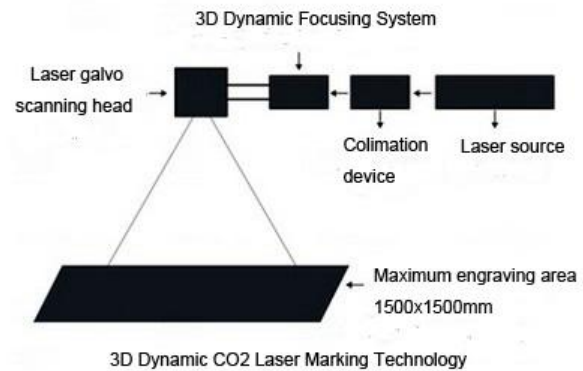
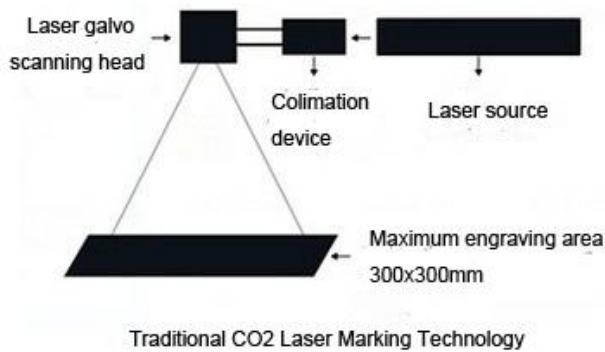
2. Features

1. This machine adopts 3D Dynamic Galvanometer Control System. Original Imported 180W/275W metal RF laser tube. Laser power supply and cutting speed can be adjustable, maximally energy saving.
2. Fully enclosed laser optical system, no adjustment or maintenance needed, can be used directly after installation.
3. Original imported metal RF laser tube with high laser power, excellent laser spot, stable laser generation and lifetime of more than 20000hrs, gas inside the tube can be refilled again.
4. American CTI 3D dynamic scan head, one time scan area could reach to 1500*1500mm. 3D dynamic galvanometer control system and automatic up&down Z axis ensure the best processing results.
5. Large-scale marking engraving cutting dotting and hollowing on leather, shoe, denim, jeans, textile, fabric, invitation paper card, wood, MDF, acrylic, marble and more flexible materials.
6. Equipped with foot switch for easy operation. Back and bottom exhaust fans ensure good exhaust suction effects and environment friendly processing.
7. High precision and speed performance with cutting&engraving working, 20% higher efficiency than the similar models in the market.
8. Professional industrial thermostatic circulation of water cooling system ensures more stable running and lower consumption.
9. Strict multiply protection control system can be applied in wild operation temperature, to make sure the stable continuous working of 24h of laser marking system.
10. With Wisely Laser software, various formats are supported according to your requirements. Application under Windows interface, AutoCAD, CorelDraw, PhotoShop compatible, PLT, DXF, BMP, AI supportive.
11. Especially applies RBI marking with light guild plate or acrylic, and cutting&engraving with leathers, jeans, textile, wood, MDF, acrylic and shoe insole.

3. Advantage of CO₂ Dynamic Laser Marking Machine

1. Permanent: Mark will not subside because of environmental reasons (touch, acidic or reducing gas, high or low temperature etc).
2. Non-contact: Laser marking is a non-mechanical "light knife" for processing, the workpiece will not produce stress after marking. The working surface will not produce corrosion, no "tool" worn, non-toxic, non-polluting.
3. Wide application: CO₂ Dynamic Laser Marking can work on all non-metal materials (Textile, Leather, PMMA, Wood, MDF, Paper, Marble, Glass etc.)

4. High precision for engraving & marking: CO₂ Dynamic Laser Marking Machine can engrave fine pattern, the minimum line width can reach to 0.04mm. Engraving&Marking result is clear, durable and beautiful.
5. Low operating costs: Low energy consumption, no consumptive materials, and therefore lower operating costs.
6. High efficiency: CO₂ Dynamic Laser Marking Machine's Engraving&Marking speed can reach to 7-10m/s, three times than that of traditional laser marking machine, marking process can be completed in seconds.
7. Large marking area: With the high power laser tube and the 3D Scanner technology, the CO₂ Dynamic Laser Marking Machine can work on large size materials such as the clothes processing, leather processing, LGP(Light Guide Plate for LED Panel Light and TV) processing.



8. Easy development: Due to the combination of laser technology and computer technology, the laser print can be realized by the order from the computer program, and may change the print design at any time, replaces the traditional mold marking process from the fundamental, shorten the product upgrade cycle and provide a convenient tool for flexible production.

4. Machine Structure

CO₂ Dynamic Laser Marking Machine adopts imported laser tube and high speed galvo scanner, Wisely Laser self-developed linear 3D Dynamic Focusing System, device control system, advanced Control software and the high precision thermostatic water cooling system. The host machine is as follow:



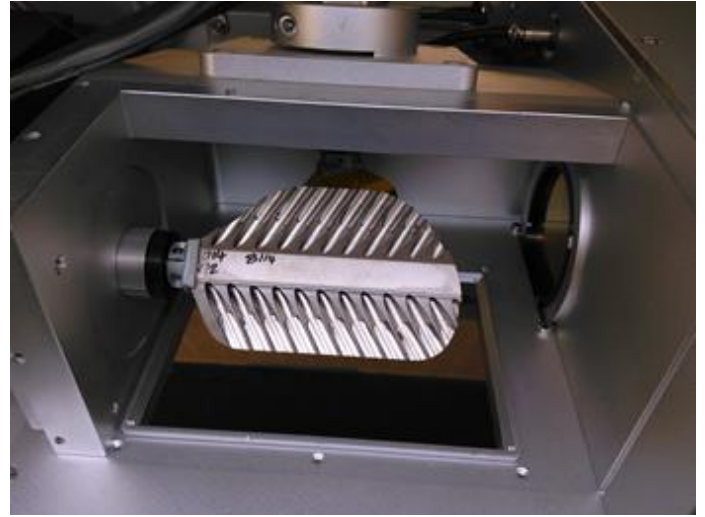
Machine's Control section is focused on the Electrical main control section. The whole machine's optical components are focused on the optical main beam and inside the square head through the complete optical design. The integrated water chiller provides a circulation water cooling system for the machine during working. CO₂ Dynamic Laser Marking Machine mainly includes the following parts:

- ▶ Optical System
- ▶ Water Cooling System
- ▶ Electrical Control System
- ▶ IPC&Marking Motion Card
- ▶ Wisely Laser Self-developed Control Software
- ▶ Exhausting System

RF Metal Laser Tube from USA



High-speed & High-precision Scanner from USA



Professional Industrial PC



Water Chiller for laser tube



Exhausting Fan for fume outlet





5. Technical Parameters

Model	MY-C6060M
Marking Area	600x600mm
Max. Marking Area	800x600mm
Laser power	150w
Marking Speed	≤7000mm/s
Power Consumption	≤ 5 KWH
Worktable	Marble Worktable/Aluminum Honeycomb Worktable
Laser Source	Coherent CO ₂ metal RF Laser Tube
Laser Wavelength	10.64μm
Laser Frequency	20kHz~200kHz
Scanner	CTI America
Repetition Precision	0.01mm
Min.Letter Size	0.3mm
System Support	WIN 7/WIN 8
Output Compatibility	AutoCAD, PhotoShop, CorelDRAW etc.
File Formats	PLT, DXP, BMP, JPG, AI etc
Software Character	Integrated Function of Dotting Design, Vector Drawing, Marking, Scribing and Cutting
Power Supply	110V~380V/50Hz~60Hz
Cooling Way	Circulation of Water Cooling

Part II. Standard Configuration for CO₂ Dynamic Laser Marking Machine

No.	Item	QTY	Origin
1	CO ₂ Metal RF Laser Tube	1	Imported from Germany/USA
2	Galvo Scanner	1	Imported from the USA
3	3D Dynamic Focusing System	1	Imported from the USA
4	Optical Lens	1	Imported from the USA
5	Exhausting System	1	Wisely Laser
6	IPC	1	High Type
7	19" LCD	1	AOC
8	Control Software & Control Card	1	Wisely Laser
9	Machine Structure	1	Wisely Laser
10	Industrial water cooling system	1	Doluyo

Part III. The application of CO₂ Dynamic Laser Marking Machine

1. Invitation&Greeting Paper Card Processing

CO₂ Dynamic Laser Marking Machine can accomplish Invitation&Greeting Paper Card's hollowing and cutting process. Comparing with normal CO₂ Laser Engraving&Cutting Machine, it has smaller carving line and high speed hollowing speed (one normal paper card hollowing can be finished in 1-2 seconds), therefore, the final product will have no black cutting edge and increase the processing efficiency.





2. Wood Product Laser Processing

CO₂ Dynamic Laser Marking can be used for wood product quick carving, marking, cutting etc., especially for wooden boxes, musical instruments and other wood materials processing, can mark the arbitrary text and pictures on wood products in accordance with the requirements.



3. Leather Laser Processing

CO₂ Dynamic Laser Marking Machine can be used for leather carving, marking, cutting, hollowing, have the strong cutting ability and high-speed marking ability.



4. Shoes & Insole Laser Processing

CO₂ Dynamic Laser Marking Machine can be used for different kinds of shoes materials processing, including carving, drilling, cutting etc.



5. Jeans Laser Processing

CO₂ Dynamic Laser Marking Machine can mark the arbitrary text and pictures on the jeans, to achieve washing effect.



2. Marble Laser Processing

CO₂ Dynamic Laser Marking machine can be used for Large Size Marble Engraving. In order to achieve color engraving result, generally affix the sticker on the marble plate first, and use laser mark the words or pictures on the plate, then do the sandblasted on the surface of the entire plate, finally paint on the plate, the words or pictures will appeared completely. The steps are as follow:



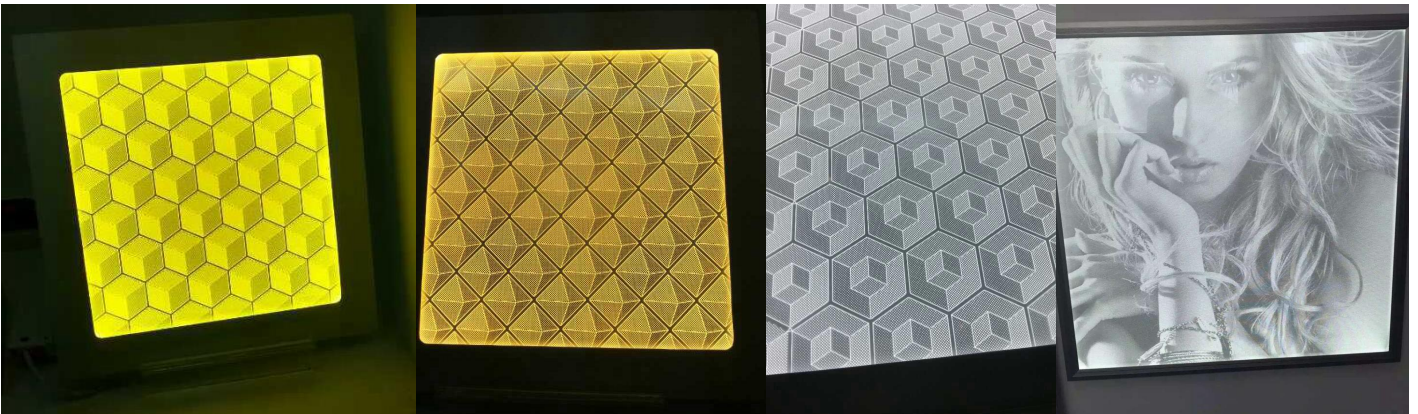
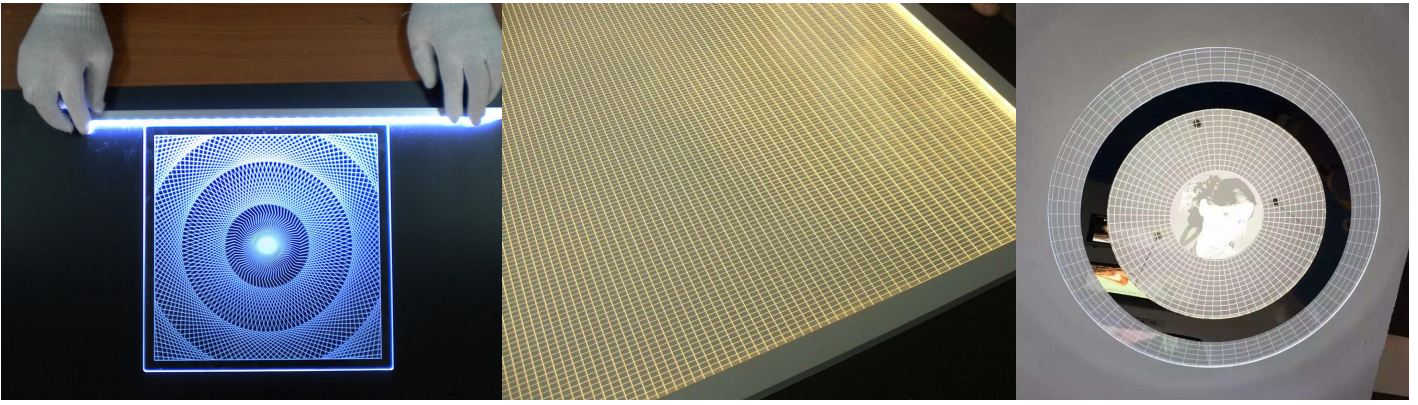
3. LGP Laser Dotting Processing for LED Panel Light and TV LCD

LGP laser dotting software can design different dot shape (such as Round Dot, Ellipse Dot, Lines etc.), different dot size, standard (Square, Rectangular, Circular) and irregular (Sector, Star etc.) LGP screen design according to customers' actual application requirements.

Making 600x600mm size LGP need around 40s, plus materials changing 5s, 1 hour can produce around 80 pcs 600x600mm LGP.



WISELY LASER MACHINERY LIMITED
No. 7 Building, No. 5 Industry Zone Shutianpu, Matian
Guangming New District, Shenzhen 518106 China
T: +86-755-32998419 E: sales@wwlaser.hk W: www.wwlaser.com
智·信·銳意·敢擔當——威斯利激光





Part IV. Wisely Laser Service Support

Wisely Laser has always been committed with the service idea of Customer Cares to supply Installation, Adjustment, Training and Maintenance in pre-sales and after-sales service.

1. Pre-sales Service

Before signing contracts, Wisely Laser supply customers service of production plan, technical consultant, sample trail and equipment suggestion and so on.

2. Installation and Debugging

Equipment will be delivered to the target place in time according to customers' requirement. Our professional engineer can make sure Installation and debugging processes be settled down in 1~2 days, as well as a clear, tidy and orderly field.

3. Training

Wisely Laser supply free technical training for all customers all over the world until the workers from buyer can operate the machine normally and individually. Mainly training are as follow:

- 1) Training for Control software operation
- 2) Training for normative turning on/off operation of the machine
- 3) Instruction of technical parameter settings, as well as their setting ranges
- 4) Solutions for common hardware problems
- 5) Technical suggestions during daily production
- 6) Basic daily cleaning and maintenance for the machine

4. Training can be processed in the following ways:

- 1) Customers can get face-to-face training in our factory.
- 2) Local training at customers' place is available.
- 3) Free remote training by TeamViewer, Skype, WhatsApp, WeChat, QQ, Viber and so on.

5. Equipment Maintenance

- 1) One year free maintenance, unlimited support
- 2) Free technical consultant and software updating
- 3) Customer Service responding in 12 hours
- 4) Continuous support with software and hardware after free maintenance

5. Warranty

The warranty period shall be 12 months. Except the damage artificially, we are responsible for offering the fittings free of charge during the warranty period, but you must send the damaged fittings to us by courier with your charge before we send back the alternative fittings to you. After the warranty period, the parts required to repair or change, if any, shall be paid.