



Introduction of fiber laser marking machine

1. Technical requirements

- 1) 20W optical fiber laser marking machine, adapt to the complex work environment, really free maintenance.
- 2) The lifespan of the laser source can be upto 100 000 hours.
- 3) According to the characteristic of products, we can design special fixtures.
- 4) With high-quality scanning galvanometer, greatly improving mark speed.
- 5) Mark with the feature of clear and beautiful, the QR code or planar bar code clear and easy to be scanning.

2. Features

The real beauty of our F-Series is not only the fact that they produce excellent marking quality, but they are basically maintenance-free. This technology doesn't require external chiller units, lamp changes, and many of the other somewhat tedious upkeep procedures that other systems do. Simple periodic filter changes and basic cleaning techniques will keep your laser running optimally for a very long time. F-Series laser systems also have the benefit of a very long lifespan. Fiber technology in general is rated for 100,000 hours before needing any replacements. Also, our fiber systems are not only cheaper to maintain but are typically less expensive than many of our other systems. This makes for a better entry-level solution that many of our customers can appreciate. These are a popular choice not only for heavy industrial applications, but also for smaller job shops as well.

3. Equipment composition and configuration introduction.

The fiber laser marking machine mainly consists of four parts: fiber laser, galvanometer scanning system, computer control system and the worktable.

1) Main Configuration

Name	Origin	Remarks
Optical maser	Raycus fiber laser	Long service life, high reliability, fine beam quality
Galvo mirror	HZL	Fine marking, more quick and high reliability
F-θ lens	wavelength	High quality optical device
Marking software	Special marking software	Powerful, simple and convenient operation, AutoCAD, CorelDraw, Photoshop software compatible format
Control computer	China	Intel i3 CPU + Asus Motherboard + 4G Kingston Storage + 500G Seagate Hard Disk + Asus DVD + AOC Monitor
Control cabinet	China	Optical fiber special cabinet, all the mold production, high seal

A. Fiber laser

Optical fiber laser integrated structure, no optical pollution, no power of the coupling loss, compact structure compact, air cooling, with other laser don't possess the high efficiency and reliability.

Excellent beam quality

The optical fiber laser is the medium mixed yb double-clad fiber, resonant cavity length, so the beam quality is very good, M2 value is 1.1, the output flare diameter can achieve 10 microns.

Excellent beam quality to ensure that optical fiber laser marking machine in a variety of material satisfying marking effects, widely applied in most metal marking industries (such as brass, titanium, steel, iron, aluminum and so on) and non metal materials like cloth, fabric, PVC, MDF, leather, acryl, plastic and etc.

Laser long service life

The optical fiber laser marking machine use 915 nm laser diode as the sources are used to pump, the average working hours can up to 100 000 hours.

Small and exquisite Volume, applicable in the bad environment

Optical fiber surface area/volume ratio is high, also good cooling effect, no need huge water cooling system, just simple air cooling, can be running in bad conditions, such as high impact, high vibration, high temperature, dirt under the conditions of the normal operation.

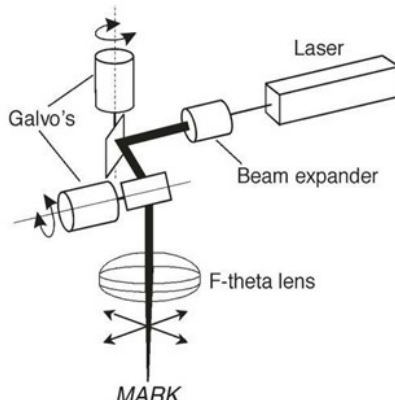
Free maintenance operation

Optical fiber laser no need for any maintenance (not including adjust or clean lens)

B. Light path and galvo scanning system

The optical system: 1064 nm based on the high precision, vibrating mirror reflection focusing system.

Laser correction: choose red visible laser collimator's systems instructions axis position, indicating light and laser coaxial, in the process to tracing the function of the instructions and timely and accurate registration. Galvo mirror is set to track operation of the laser executive mechanism, and it mainly consists of high accuracy servo motor, motor driven plate, mirror, F- θ lens and dc supply of power.





C. Computer control system (see the above)

D. Special marking software

Marking software in WINDOWS interface, English operating system, compatible with PHOTOSHOP, CORELDRAW, AUTOCAD and so on many kinds of drawing software: time date, bar code, serial number, mark, output in English, graphics, all kinds of bar code, QR code, etc. Word stock the function is all ready, 200 kinds of fonts, can customize wired font, creating one of the proprietary dictionaries.

Optional: shaft marking-easy to use, Dual axle puzzles marking-many way to compensate for mechanical failure.

Powerful: marking software in WINDOWS XP / 7-32/64bits / 8-32/64bits running, adopt standard industrial control card for laser and scanning of the head of a data transmission, mark speed than the traditional way to improve nearly doubled;

Friendly interface: marking the software allows personalized WINDOWS user interface set, so the software can be adapted to user use personalized requirements. Many languages support, relaxed and localization. Directly from a SQL database according to the factory Numbers retrieval need to play standard data marking, and can be used for the design of the print content. Reserve the Ethernet interface, and ensure the tender inviting party plant data information transmission system.(the warranty period and the company data system networking supplier provided free technical support until networking finish).

4. Technology parameter table

	Model	MY-M20CF
Laser parameters	optical maser	Raycus laser
	Laser wavelength	1064nm
	Average output power	10W/20W
	With/Without light isolation	With
	Modulation frequency range	20kHz~80kHz
Galvo parameters	Max. speed	7000mm/s
	Resolution	0.001mm
	Repositioning Precision	0.003mm
Optical output characteristics	Default Marking Area	100mm*100mm
	Optional Marking Area	50*50mm / 70*70mm / 150*150mm / 200*200mm
	Minimum line width	0.01mm
	Minimum height of characters	0.2mm
Cooling system		Air cooling
System properties	Power Consumption	500W
	Input	AC220V / 50HZ / 1-ph & AC110V / 60HZ /1-ph
	Environmental requirements	0 ~ 35 ° C, 90% or humidity



5. The quality of the goods, the delivery and service guarantee

1). Quantity and inspection approval:

In strict accordance with the general international standards, The enterprise standard in the process of the production work environment and working conditions, the basic technical requirements, cooling requirements, laser radiation safety, electrical safety, test method, inspection and acceptance of packaging transportation make detailed standard. The fiber laser marker has passed ISO9001 international quality management system certification, formed the small and medium-sized power laser processing equipment in the design, manufacture and service quality guarantee system.

2). Quality assurance measures

Our company strictly according to the prevailing international ISO9001;2010 quality system management, in order to guarantee the quality of the product, prevent insulate the next procedure, from initial inventory of raw materials to the factory to as incoming goods inspection, process inspection and final inspection, through implementing effective control of the production process, to effectively control the quality of the products purpose, to ensure that all the factory products are qualified products.

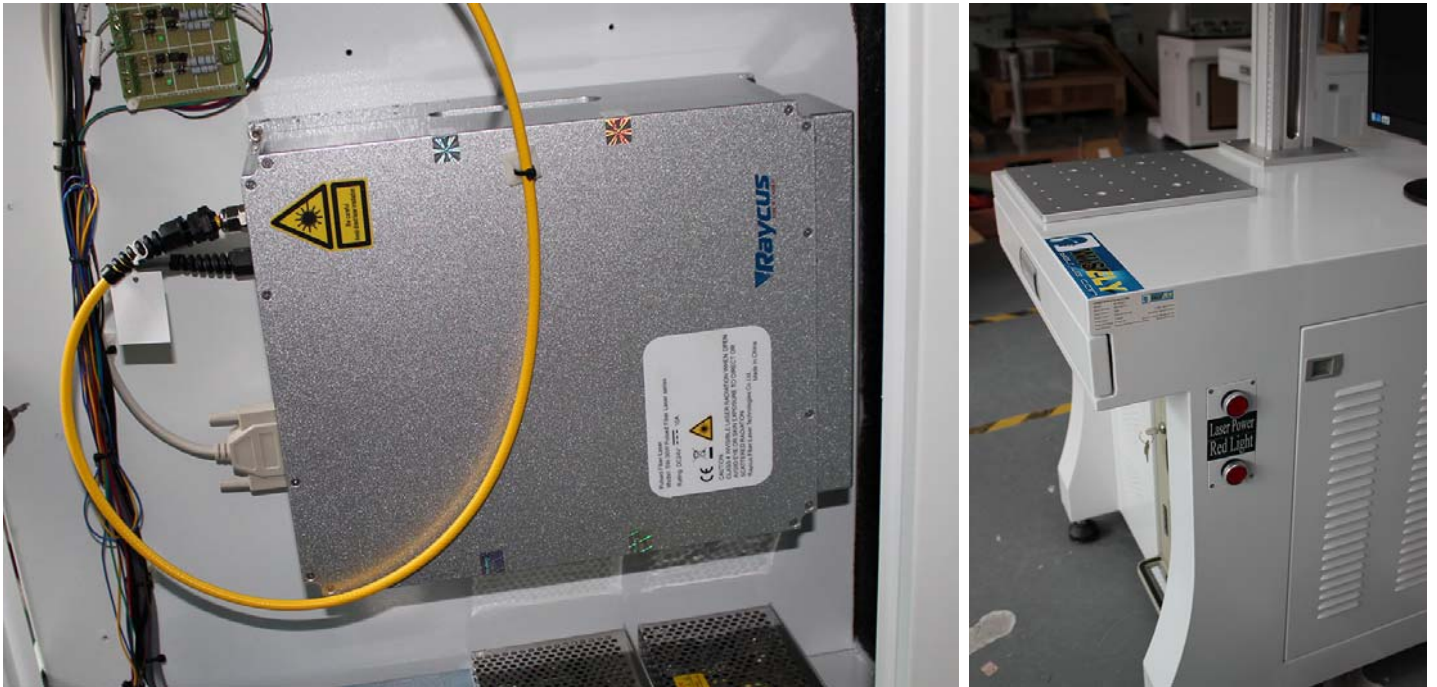
3). Ensure delivery time measures

The production and business operation strictly according to ISO9001 quality system operation, from sign a contract to deliver the customer the whole process of use is strictly controlled, all contracts are after review, therefore, this system can ensure supplier quality, on time and in quality and delivery products.

4) Packing, shipping and delivery time

Packing in international packaging standard. Our machine will be packed in strong wooden case, it is suitable for the long-distance truck or train transportation, moisture, rust and shock, prevent rough handling, suitable for integral lifting. All the parts of the equipment according to the standard packaging, each packing boxes with detailed packing list

5. Machine Picture



6. Marking samples



Black Marking--1mm Stainless Steel



0.4mm--Deep Marking--steel

