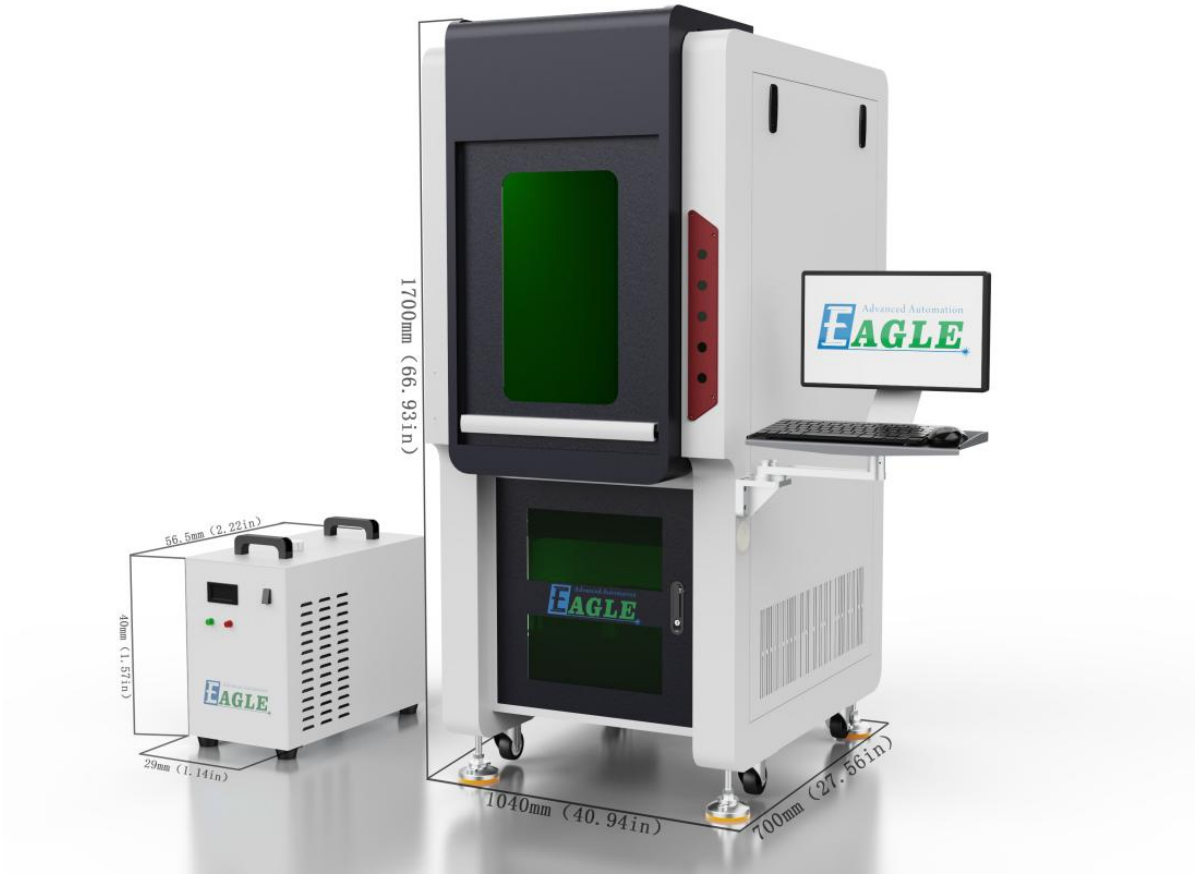
F1 MOPA 100 UV Laser marking machine



- Full Closed Control Cabinet
- Safety Using & Humanized Operation
- Fast ScanLap Marking Head
- High Quality JPT Laser Source
- Up to 8000mm/s Fast Marking Speed

F1 MOPA100 laser marking machines are designed with user convenience and flexibility in mind. Hardware and software are integrated in a complete, ready-to-use package with many features that enhance usability and profitability.

Compared with green laser light (532 nm), UV laser light has a remarkably higher material absorption rate. This means more highly visible marks can be achieved with less power, ensuring a damage-free mark. The high absorption rate also means a UV laser marking machine tackles difficult materials such as plastics, highly reflective metals, and heat sensitive materials. For example, UV laser marking machines are used for product identification, medical device manufacturing, and aerospace components where heat damage from conventional lasers is not permitted. It is also used on different plastics and

colored plastics that are difficult or impossible to mark with the fiber wavelength.

TECHNICAL SPECIFICATIONS

Model	F1 MOPA100 Laser Marking Machine
Laser wavelength	355/1064 nm
Working area	110×110mm/150×150mm/200×200mm (4.3"×4.3"/5.9"×5.9"/7.9"×7.9")
External dimension	1100×750×1712mm(43.3"×30.9"×70.5")
Laser source	Fiber laser/UV (Optional)
Laser power	3W/5W/10W/100W(Optional)
Beam quality	< 1.3 ㎡
Application	Rubber/Plastic/Ployfoam/Metals etc.
Marking speed	0-8000mm/second
Repeated Precision	+0.0001mm
Minimum Character	0.01mm
Electric Requirements	Single Phase AC 220V/50HZ 5A
Supported Graphic Formats	Al，BMP，DST，DWG，DXF，DXP，LAS，PLT
Cooling type	Water cooler/Air cooler
Controlling Software	EZCAD

Fiber Laser Source:

MOPA

JPT M7 series high power pulsed fiber lasers make use of master oscillator power amplifier (MOPA) configuration, and show excellent laser performance as well as high level of temporal pulse shaping controllability. As compared to the Q-switching technology, the pulse repetition frequency (PRF) and pulse width can be controlled independently in MOPA configuration, through adjusting different combination of the above parameters, the peak power of laser can be well maintained. And enable JPT laser suitable for more material processing which Q-switch limited. The higher output power makes its advantages especially in high speed marking applications.

Models	M7
Nominal Power	100W
Delivery Cable Length	3m
Maximum Pulse Energy	1.5
Pulse Repetition Rate Range	1~4000kHz
Pulse Duration	2~500ns
Output Power Stability	<5
Cooling Method	Air cooling
Supply DC Voltage (VDC)	24V
Power Supply	<440W
Environmental Supply Current	>18A
Central Emission Wavelength	1064nm
Emission Bandwidth@3dB	<15nm
Anti-high Reflection	Yes

Polarization	Random
Output Beam Diameter	7±0.5mm
Output Power Tuning Range	0~100%
Operation Temperature	0~40℃
Storage Temperature	-10~60℃
Weight	8.5kg (18.7lbs)
Dimension	336×255×90mm (13.2"×10"×3.54")

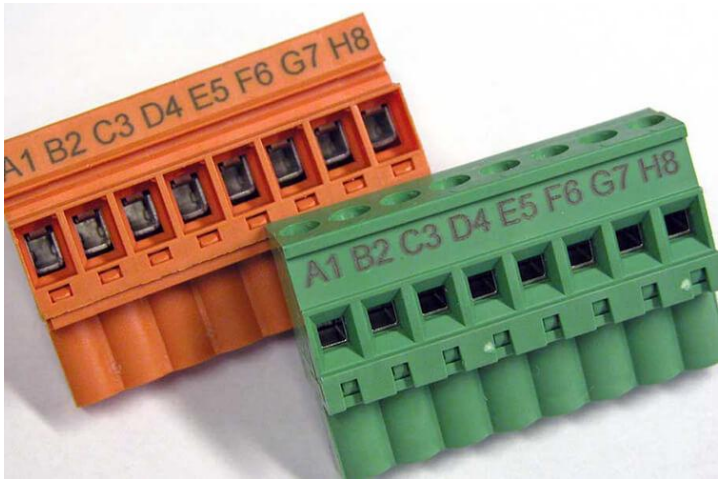
Water Chiller Included:

Recirculating Water Chiller CWUL-10 is often installed to provide active cooling for UV laser marking machine up to 15W to ensure stable laser output. This portable air cooled chiller delivers high temperature stability of ±0.3℃ and a refrigeration capacity of up to 750W. Being in a compact and lightweight package, CWUL-10 UV laser chiller is built to last with low maintenance, ease of use, energy efficient operation and high reliability. Two firm handles are mounted on top to ensure easy mobility while the chiller system is monitored with integrated alarms for full protection.

Model	CWUL-10
Nominal cooling capacity	2559Btu/h 0.75kW 644Kcal/h

Refrigerant	R-134a
Precision	±0.3℃
Tank capacity	6L
Inlet and outlet	Rp1/2”
Dimension	580×290×520 mm (22.8"×11.4"×20.47")
Weight	24Kg (52.9 lbs)
Reducer	Capillary

Applications & Samples:



UV laser marking machines are primarily used for ultra-fine marking and engraving, especially suitable for the high-end market of ultra-fine processing. The marking effect is precise, clear, and durable, surpassing general inkjet coding and free from pollution. They are suitable for marking on flexible PCB boards, scribing, micro-hole and blind-hole processing on silicon wafers, two-dimensional code marking on LCD glass, perforation on glassware surfaces, coating marking on metal surfaces, and marking on materials such as plastic buttons, electronic components, gifts, communication equipment, and building materials.

Easy Maintenance and Safe Laser System:

Save Time and Effort: The maintenance process of UV laser marking machines is very simple, requiring only regular cleaning, inspection, and replacement of necessary parts in daily use. There is no need for complex debugging and repairs. This simple maintenance approach can save users a significant amount of time and effort.

Extend Equipment Lifespan: Regular maintenance helps to maintain the performance indicators of UV laser marking machines, preventing wear and aging caused by long-term use. This can extend the equipment's lifespan, creating more value for users.

Ensure Production Efficiency: Improper maintenance of UV laser marking machines can lead to equipment failures, affecting production efficiency. Proper maintenance, on the other hand, ensures the stability and reliability of the equipment, guaranteeing smooth production.

Reduce Repair Costs: Regular maintenance can identify and address potential issues promptly, preventing minor problems from accumulating into major faults. This, in turn, reduces repair costs and the frequency of repairs.

Warranty:

Mechanical, electronic components and Fiber Laser Source:

2 year against manufacturing defects. Parts and components damaged due to improper usage and operation of the equipment are not covered under warranty. The complete warranty shall be available once the customer has accepted and received the training program and the purchase agreements are signed by the customer.

6 months against manufacturing defects. Laser optical components, like focus lens are considered consumables and are therefore not covered during the warranty period.In order to ensure the customer experience, the best performance of the equipment and the complete warranty policy of our company, we urge following the instructions on the Safety Notice in

the Operation Manual and following the instructions of our technician on the installation of the laser machine. Failure to do so may render the warranty null and void.

Technical support is offered via telephone, e-mail and other means. Instruction of installation will be written (emailed). A video with the installation of the Laser Machine is available. Until 8 hours of training (2 days of 4 hours) in the Installation Maintenance & Operation of the Laser Machine, as well as software included is available Free of charge in our premises in Los Angeles, California.

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