ML-73 D Series

Yb: Fiber Laser Markers

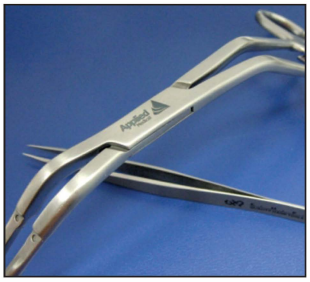
The ML-73 D Series laser markers combine cutting-edge technology with industrial robustness for a wide range of marking applications. This versatile series has numerous performance options to match the right laser to the application. The system is designed with multiple integration options to suit standalone operation, full production automation and prototype development. Owners of the ML-73 D Series also benefit from our commitment to providing industry-leading customer support.

KEY FEATURES

- 10-100W fiber laser markers
- High-power, high-speed laser marking system for metals, plastics, and ceramics
- Excellent contrast and crispness of annealed and engraved marks
- Air-cooled, sealed industrial package designed for operation in harsh environments
- Powerful control software with industry standard programming
- Multiple integration options to match application needs
- Meets International Safety Standards IEC13849-1 category 3 PLd
- Marker motion unit comes with integrated stage controllers for up to 4 axes

TYPICAL APPLICATIONS

The ML-73 D Series is composed of galvo scan head markers used for marking metals, plastics and ceramics. Typical applications can be found in the medical industry, automotive and electronic components.



Medical tools & instruments

Implantable medical devices

Metal engraving for automotive and UDI applications

Electrical components

Plastic housings

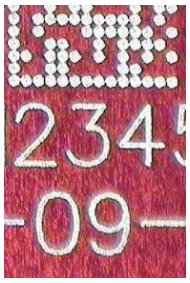
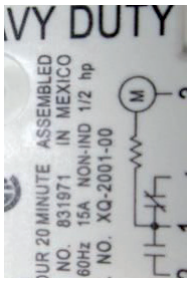
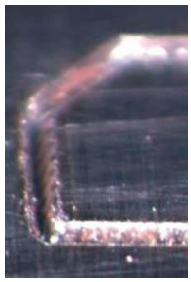
Cutting of thin metals

MARKER SELECTION GUIDE

We offer a wide range of lasers to correctly match any marking application. The table below highlights the choices in laser power and typical applications for each laser. Contact us about free feasibility samples for your application.

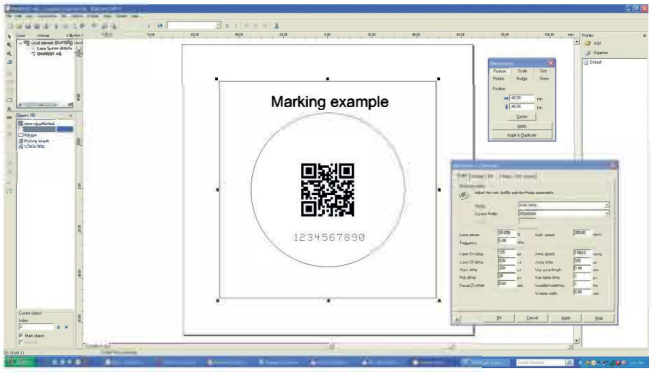
LASER/SYSTEM SPECIFICATIONS

	F-THETA OUTPUT LENS			
	100 mm	160 mm	254 mm	420 mm
Field Size (mm)	62 x 62	99 x 99	157 x 157	291 x 291
Working Distance*)	98 ± 1 mm	176 ± 2 mm	296 ± 3 mm	494 ± 5 mm
Lens Diameter (mm)	90	90	120	120
Wavelength	1064 nm ± 5 nm			
Nominal Power/ Frequency Range	ML-7310D – 10W/20-200 kHz ML-7321D – 20W/20-200 kHz ML-7320D – 20W/2-500 kHz, CW ML-7322D – 20W/2-500 kHz, CW (Single mode) ML-7340D – 35W/2-500 kHz, CW ML-7350D-50W/50-200 kHz ML-7310D-HP– 100W/5-200 kHz			
Guide Laser	Diode 630-650 mm			
*) working distance is the distance from the focus point to the lens assembly (52mmx52mm) for 35W version				

ML-7310D	ML-7321D	ML-7322D	ML-7320D	ML-7340D	ML-7350D	ML-7310D-HP
10W Basic Marking System	20W Marking System	20W Precision Marking System	20W Marking System	35W Advanced Marking System	50W Marking and Engraving System	100W Marking and Engraving System
						
General marking on plastics and metals	Marking on metals	Precision marking for smallest feature size	Marking on metals and plastics	Marking on plastics and large area annealing	Engraving of stainless Steel	High speed marking of aluminum

SOFTWARE FEATURES

- Powerful, user-friendly Windows® based job editor
- WYSIWYG “what-you-see-is-what-you-get” editing
- Easy to import graphics
- Multi-Language support
- Advanced DXF filter with process optimization
- Password protected security lockout
- Touch Screen GUI Enabled
- Windows XP and Windows 7 compatible



MARKING OPTIONS

- Galvanometric scanner, XY - Standard
- XYZ and rotary stages (Optional)
- Automation: I/O control, 4-axis motor control, time delays, and custom operator messages
- On-the-fly (Optional)

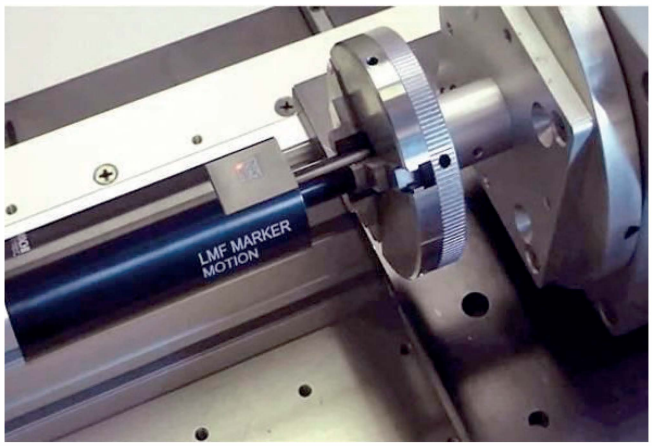
Accepted file types:
.dxf, .dwg, .plt, .emf, .wmf, .bmp, .jpg, .gif, .cdr and .ai

MARK TYPES

- Line-art graphics: CAD, line-drawings, logos
- Shaded graphics: photos, halftones & grayscale artwork
- TrueType™ fonts, filled or outline-only
- Single point or drill object arrays
- 1D and 2D (Data Matrix and QR code) barcodes
- AutoDate™, TextMerge™, serialization, and barcode

MARKER MOTION

Marking systems are often required to control one or more motors or actuators to execute complex production sequences. The ML-73 D Series has an integrated motion system allowing the user to control up to four stepper motors (typically XYZ and Rotary) with integrated controllers using a the Winlase software interface for easy configuration and control without extensive hardware requirements.

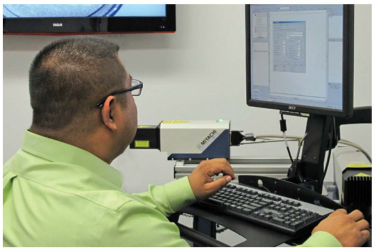


- Step and repeat marking.
- Focal plane height adjust - Adjust the height of the marker head to pre-programmed static positions to accommodate marking surfaces at different heights above the tooling plane.
- Rotary - Rotate a circular cylindrical part while marking to ensure mark completely wraps around part with no distortion or areas out of focus.

SYSTEM INTEGRATION

We offer the widest range of integration options to match any marking/engraving application. Whether working in a job shop or fully automated production line. Our markers are designed with the integrator in mind and include several input/ouput options including RS-232, Ethernet, and safety interlocks. In addition, we offer a wide range of accesories for marking workstations including standard and custom Class 1 enclosures.

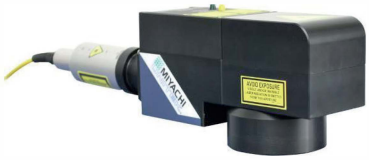
Standard and custom Class 1 enclosures available (entry level enclosure shown)



CONTROLLED BY PC/TOUCHSCREEN INTERFACE

Ideal for:

- Small lot marking
- Application labs/ job shops
- Jobs with barcode scanners
- Semi-automatic workstations



CONTROL THROUGH PLC

Ideal for:

- Production lines
- Machine controlled processes
- Low-level operators
- High speed and part throughput
- On-the-fly marking

TECHNICAL SPECIFICATIONS

Parameter	Value
Pump source	Laser Diode
AC Power	Single Phase, 90-130 VAC/180-260 VAC, 50/60 Hz, 10A
Environment Temperature	15°- 40° C*
Environment Humidity	Less than 90% RH (non-condensing)
Cooling	Air cooled

*15°-35°C for ML-7310D, ML-7321D, ML-7322D, ML-7320D, ML-7340D and ML-7350D

WEIGHT - DIMENSIONS

	Controller	ML-73D Series Controller	Microhead
Dimensions HxWxD (mm)	670,9 x 431,8 x 186,1	939.8 x 520.7 x 825.5	215.6 x 77 x 107.2
Controller Weight (in kg)	27,7	90.9 kg	3.8 kg