

QuakeLogic QL-MarkPro

Enclosed Fiber Laser Engraving System

Industrial Precision • Fully Enclosed • Operator-Safe

The QuakeLogic QL-MarkPro Enclosed Fiber Laser Engraving System is a compact, industrial-grade laser engraving platform designed for precise, repeatable marking of metal and multiple materials. Its fully enclosed safety cabinet, integrated control workstation, and robust mechanical structure make it suitable for regulated industrial and institutional environments.



Laser Engraving Capabilities

The QL-MarkPro platform supports a wide range of professional engraving and marking applications across diverse industrial sectors. From permanent part identification to detailed branding requirements, this system delivers the precision and reliability manufacturing operations demand. The fiber laser technology enables crisp, permanent marks that withstand harsh environmental conditions, chemical exposure, and extended service life requirements.

Primary Applications

- Permanent part identification and traceability codes
- Serial numbers, QR codes, and linear barcodes
- Corporate logos, text, symbols, and vector graphics
- Nameplates, placards, compliance tags, and labels

Material Compatibility

The QL-MarkPro handles a comprehensive range of engineering materials commonly found in manufacturing environments:

- **Anodized metals** – excellent contrast marking
- **Coated metals** – surface layer removal capabilities
- **Uncoated metals** including steel, stainless steel, aluminum, titanium, and brass
- **Additional materials** depending on specific application requirements



Stable Beam Behavior

Consistent engraving quality across production runs with minimal drift

Precision Focusing

Adjustable laser head height ensures optimal focal point for various material thicknesses

Versatile Depth Control

Surface marking to deeper engraving tasks with parameter adjustment

Repeatable Results

Engineered for continuous operation environments requiring consistent output

Mechanical, Optics & Safety

The QL-MarkPro's engineering foundation combines mechanical precision with comprehensive safety features, creating a production-ready platform suitable for demanding industrial environments. The system architecture prioritizes long-term dimensional stability, operator protection, and maintenance accessibility—critical factors for facilities managing equipment lifecycle costs and regulatory compliance obligations.

01

Industrial Rigid Frame

Precision-welded steel construction provides long-term stability and vibration resistance, ensuring mark quality consistency over thousands of operational hours

02

Motorized Z-Axis

Automated laser head height adjustment enables rapid setup for varying part geometries and optimal focal positioning without manual intervention

03

Flexible Optical Configurations

Multiple marking field sizes accommodate diverse part dimensions, from small components to larger panels, with interchangeable lens assemblies

04

Integrated Rotary Capability

Optional rotary fixture integration enables cylindrical part engraving for tubes, rods, and round components without external fixturing

Safety & Enclosure Features

The QL-MarkPro meets **Class-1 laser safety classification**, the highest safety rating for laser systems, requiring no special room modifications or operator protective equipment. This classification significantly reduces facility compliance costs and simplifies operator training requirements.

- **Fully enclosed laser cabinet** with laser-rated panels
- **Safety viewing window** with appropriate optical density filtering
- **Door interlock system** immediately terminates laser emission when enclosure opens
- **Emergency stop button** provides instantaneous system shutdown
- **Status indicator tower** displays operational status visible across production floor

Environmental Control

Fume extraction and environmental management systems protect both operators and equipment from particulate contamination and chemical byproducts generated during the engraving process.

- **Integrated fume extraction** with ducted exhaust capability
- **Indoor operation rated** for standard manufacturing environments
- **Low-maintenance architecture** minimizes consumable replacement frequency
- **Sealed optical path** prevents contamination of critical components

Control, Software & Applications

The QL-MarkPro control system balances operational simplicity with advanced parameter control, enabling both novice operators and experienced technicians to achieve optimal results. The integrated workstation eliminates external computer requirements while providing network connectivity for modern manufacturing execution system integration and production data management.



Integrated Control Workstation

Purpose-built interface eliminates dependency on external computers while providing intuitive job setup, parameter management, and real-time process monitoring



Comprehensive Parameter Control

Granular adjustment of engraving speed, laser power, frequency, and focal position enables process optimization for diverse material and application requirements

File Format Compatibility

The QL-MarkPro accepts standard graphics and vector formats, enabling seamless integration with existing design workflows and CAD systems without proprietary conversion requirements.

Raster Image Formats

- BMP (Bitmap)
- JPG/JPEG (Joint Photographic Experts Group)
- PNG (Portable Network Graphics)
- GIF (Graphics Interchange Format)

Vector Graphics Formats

- AI (Adobe Illustrator)
- PDF (Portable Document Format)
- DXF (Drawing Exchange Format)
- NC (Numerical Control) and compatible formats



Streamlined Engraving Workflow

Simplified job creation process from file import through parameter optimization to production execution reduces setup time and operator training requirements



Network-Ready Architecture

Ethernet connectivity supports job file transfer, remote monitoring, and integration with enterprise resource planning and manufacturing execution systems

Typical Industrial Applications



• Manufacturing Traceability

Permanent part identification for quality management and recall prevention

• Product Branding

Corporate logos and brand marks for customization and authentication

• Prototyping & Small-Batch

Rapid iteration and low-volume production marking without tooling costs

• Compliance Labeling

Regulatory-required identification plates and certification marks

Advancing Laser Marking Precision with QuakeLogic Excellence

Designed to support educational laboratories, technical training facilities, and light industrial environments, the QuakeLogic QL-MarkPro Enclosed Fiber Laser Engraving System provides a safe, precise, and reliable solution for metal and multi-material laser engraving applications. The system utilizes industrial fiber laser technology configured to meet all performance, safety, and operational requirements defined in the solicitation.

Connect with QuakeLogic: Your Partner in Precision Laser Engineering

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For strategic collaborations, enterprise-level instrumentation solutions, and comprehensive technical inquiries.

Our Unwavering Commitment to Operational Excellence



Certified Quality Assurance

Complying with international standards for product reliability, performance, and safety.



Pioneering Industry Leadership

Delivering advanced spectroscopy and sensing technologies that ensure precision, repeatability, and ease of use.



Dedicated Client Success

Providing responsive technical support, calibration guidance, and complete after-sales assistance for every system delivered.

Explore Our Complete Product Portfolio



Scan to Access Cutting-Edge Solutions

Discover how QuakeLogic's advanced laser engineering technologies can enhance your instructional labs and prototyping environments—delivering exceptional marking accuracy, material versatility, and fully enclosed safety with the QL-MarkPro.

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