



TORONTECH



LASER TENSILE SPECIMEN GAUGE MARKING MACHINE TORONMARK™ -L500

Laser Tensile Specimen Gauge Marking Machine ToronMark™-L500 is a cutting-edge laser marking system, designed for precision and efficiency. It is ideal for marking a wide range of sample gauges and accommodates different material lengths with ease. Featuring industry-leading fiber laser technology and high-quality components, it delivers exceptional accuracy, high-speed performance, and long-lasting reliability.

Complies with ISO 6892-1: Metallic Materials – Tensile Testing – Part 1: Method of Test at Room Temperature.

APPLICATIONS

- **Materials Testing Laboratories** - Precision gauge marking for tensile specimens in compliance with ISO 6892-1 standards, ensuring accurate preparation for mechanical testing.
- **Metallurgical & Steel Industry** - High-accuracy marking of metal samples for tensile, bending, and fatigue tests, supporting consistent quality evaluation of metallic materials.
- **Automotive & Aerospace** - Reliable specimen marking for R&D and quality assurance of components requiring strict tensile performance validation.
- **Research & Academia** - Advanced specimen preparation for material science studies, educational training, and laboratory testing across multiple disciplines.
- **Industrial Manufacturing** - Versatile laser marking of numbers, barcodes, serials, and graphics on metallic and non-metallic parts for traceability and quality control.
- **Certification & Standardization Bodies** - Standard-compliant gauge marking for test specimens used in official certification, calibration, and compliance testing.

FEATURES

1. **Precision Laser Marking** Uses laser technology for line marking, enhancing accuracy and speed for both line and point marking. Ideal for thin materials and surfaces unsuitable for mechanical marking. Also supports marking on

various non-metallic products.

- 2. **High-Precision Workbench** Equipped with a high-precision ball screw and servo motor for smooth operation and exceptional marking accuracy. Dot/line spacing, depth, and width are fully adjustable.
- 3. **Versatile Marking Capabilities** Supports custom markings, including numbers, letters, graphics, logos, barcodes, QR codes, serial numbers, and images.
- 4. **Long-Lasting & Maintenance-Free** Designed for durability, with a laser lifespan exceeding 20,000 hours. Requires no maintenance or consumables.
- 5. **Advanced Automation & Software Compatibility** Runs on Windows XP and Windows 10, supporting English and other languages. Compatible with popular design software like AutoCAD, CorelDraw, and Photoshop. Accepts file formats such as PLT, DXF, AI, JPEG, and BMP. Features automatic encoding and sequential numbering.
- 6. **Reliable Air-Cooled System** Air-cooled design ensures stable performance in various demanding environments.
- 7. **Customizable Work Area** Designed with a reserved working space, allowing installation of fixed sample holders to reduce manual effort and improve efficiency.

TECHNICAL SPECIFICATIONS

Technical Specifications	
Control method	Electric
Line space	Can be adjusted at arbitrary
Line marking method	Laser marking
Gauge Lenght	400mm (Customizable according to requirements)
Center wavelength	1064 ± 4nm
Pulse frequency	30KHz -60KHz
Cooling method	Air cooling
Marking speed	<3000mm/s can set as need

Technical Specifications

Marking range	100mm × 100mm
Laser output power	20w
Line marking depth	≤0.3mm can set as need
Min.line width	0.004mm
Minimum characters	1mm
Repeatability	±0.02mm
Operating temperature	5-40 °C
Communication interface	USB2.0
Voltage	Single phase, AC/220V/50hz (can customize to 110V)
Power supply	≤500W
Dimensions	1100x740x1450mm
Weight	230kg
Main Configuration	
Main Unit (Including laser head)	1 set
PC	1 set



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