

The DrillMaster Advantage:

- Industrial-grade reliability: 50,000 hours MTBF
- Applications include drill bits, sockets, drive tools and all other cylindrical industrial tools
- Maintenance-free, no service required
- Requires no consumables
- Customizable for a wide variety of tooling parts
- Fast throughput and highest-quality marking and engraving

OVERVIEW:

The LaserTower[™] DrillMaster[™] is a custom fiber laser system built to mark multiple drill bits at a high rate. The system can be customized in many ways to handle a variety of tooling parts. With High Resolution marking capabilities, Laser Photonics DrillMaster[™] drill marking System is the most flexible industrial-grade marking & engraving system in the 3D material processing industry designed to operate under high-vibration, shock and dust conditions.

OVERSIZED ENCLOSURE:

With an oversized enclosure, both circumferential marking and flat marking including UDI/UID barcodes, logos, deep-engraving and many other Direct Part Markings are permanent, legible and non-removal.

PROPRIETARY SOFTWARE:

The DrillMaster[™] drill marking System incorporates Fonon's proprietary FiberScan[™] Software.. The DrillMaster[™] unit is configured with a 50W Fiber laser with a shuttle table and drill bit hopper to ensure the fastest throughput and highest quality mark for applications with depth requirements > 0.003".

COMPLETE TURNKEY LASER BASED SYSTEM:

The DrillMaster[™] Drill marking system is an industrial-grade, complete turnkey laser-based system incorporating a programmable 8" Z-axis for focal height adjustments with 2 optical X'Y' axes increasing the range of the marking area. The DrillMaster[™] system incorporates a movable Shuttle table/drill bit hopper, 50W Fiber Laser, Scan Head, Industrial PC Controller and Power Supply. The DrillMaster[™] is equipped with the latest PLC servo driver and servo motors.

DRILL BIT NEST AND DIRECTIONAL SHUTTLE:

The key to the highest quality mark is the stable drill bit nest and directional shuttle table that continuously moves post laser process to ensure perfect mark quality with straight & smooth walls in unmatched cycle-times. The DrillMaster™ drill marking System uses a unique combination of high energy pulses for deeper material penetration designed for high-speed removal with no re-melting of the material while performing enhanced image detailing and finesse markings.



LaserTower[™] DrillMaster[™] drill marking System: Main Features



FUNCTIONAL CONTROLS ENABLE EASY OPERATION BY THE HANDLER



OVERSIZED ENCLOSURE, ENABLES BOTH CIRCUMFERENTIAL MARKING AND FLAT MARKING PROCEDURES



CUSTOM BUILT FIBER LASER DRILL MARKING EQUIPMENT ENSURES THE HIGHEST QUALITY RESULTS



FULLY FUNCTIONAL DRILL BIT NEST AND DIRECTIONALSHUTTLE



- Maintenance-Free Direct Part Marking (DPM)
- Continuous operation under high-shock, vibration and dust conditions
- Long-term industrial-grade reliability with 50,000 hours MTBF
- Standard wall plug operation with high electrical efficiency
 - Low voltage power source (110/220 VAC) 8 amps
 - Laser "ON" magnetically locked front doors for operator safety
 - Oversized chamber provides working area for larger parts
 - Class 4 Laser-Rated Safety Viewing Port
 - 50W Fiber laser
 - PC-Based Controller, Flat Panel Monitor, Mouse and Keyboard
 - Industrial-grade Extruded Frame with 19" Rack Mount Design
- Dual Shuttle with 24 drill bit nesting capability
- Exhaust outlet for Fume Extractor
- 80 PSI Pneumatic activated front-sliding doors (optional)

Superiority of Fiber Lasers

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- Negligible cost of ownership in comparison with other laser types, where the main factor is depreciation; The laser system will last for 20 years
- Full power control range from 1 watt to 1000 watt opens the way to cut thin and thick materials on the same laser system, while on other laser systems, power is limited to the lasing threshold and is typical from 20% to 50% depending on laser type
 - No beam delivery system purging and protection from contamination and industrial dust required
 - No maintenance or service is required on the Fiber laser making it ideal for 24/7/365 days a year of heavy duty industrial operation
- No laser gas, gas delivery controls, gas pumps or leakage detection required
- No mechanical moving parts or sophisticated optical components
- No resonators to maintain, check or align
- No optical components to clean or replace with no system realignment require

DRILLMaster™ Technical Specifications

Laser Equipment	Fiber Laser: LPQ 50-1.0,
Typical beam quality	M2
Galvo Scanning Head	14mm
Marking Speed	2.5m/s
Mode of operation	Q-Switched
Programmable Z-Axis	8" Travel
System Dimensions	See Diagram Representation
Weight	675 pounds
Maximum Material Weight	120 pounds
Operating Temperature	+18 to +25o C
Relative Humidity	40 – 80% non-condensing
Electrical Requirements	120 volt 8 amps
Clean Dry Air* (If Required & equipped)*	



Safety Considerations During Operation (Fiber Laser)

1 Micron or 1064nm wavelength laser light emitted from the laser system is invisible and may be harmful to the human eye. Proper laser safety eyewear must be worn during operation

21 CFR 1040.10 Compliance (Fiber Laser)

This product is designed for OEM integration into other equipment.

The product is a Class 4 laser as designated by the CDRH and it does NOT MEET the full requirements for a stand-alone laser system as defined by 21 CFR 1040.10 under the Radiation Control for Health and Safety Act of 1968. It is the responsibility of the equipment manufacturer to meet all of the regulatory requirements for the final system.



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DRILLMaster™





Laser Photonics is the industry leader in developing high-tech Fiber and CO₂ laser systems for Engraving, Marking, Cutting and 3D Metal Printing applications. LP exclusively specializes in advanced, innovative, latest generation laser systems, processes and technologies. We focus on cutting edge Laser technology for material processing. We have delivered hundreds of Fiber Laser cutting and engraving machines to countries worldwide. Contact us to learn more about our marking, cutting and engraving systems.