1000W
Water-Cooled Pulsed Laser Cleaning Machine



LaserSan

Technical Specifications
Laser Cleaning Machine (LS-1000W)

Optical Characteristics

Parameter	Specification
Equipment Model	LS-1000
Laser Type	Pulsed Fiber Laser Source
Average Laser Power	1000W
Central Wavelength	1064 nm
Fiber Length	10 m
Power Adjustment Range	10% -100%
Laser Pulse Frequency	20 kHz – 4000 kHz, Adjustable
Laser Line Width	X: 5 mm - 110 mm, adjustable Y: 5 mm - 110 mm, adjustable
Scan Area (Adjustable)	X: 5–114 mm / Y: 5–114 mm
Field Lens Model	F254
Minimum Optical Fiber Bending Radius	150 mm
Laser Output Instability	< 5%
Cooling Method	Water Cooling
Polarization Direction	Arbitrarily
Guided Laser Function	Available
Anti-High Reflection Function	Available

Technical Specifications
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General Characteristics

Parameter	Specification
Equipment Model	LS-1000
Net Weight	150 kg
Laser Head Weight	1.4 kg
Machine Dimensions	L-W-H: 912 × 572 × 880 mm
Operation Type	Hand-Held
Power Supply Voltage	220V ±10%, 32A / 380V, 21A – configuration dependent
Grid Frequency	50/60 Hz
Operating Temperature Range	0–40 °C
Storage Temperature Range	0–40 °C
Power Consumption	< 8 kW
Optical Cable Length	10 m
Control Interface	Multi-Language Touchscreen System
Cleaning Modes	12 Cleaning Modes (Simple Operation & Expert Mode Adjustment)
Process Presets	9 Presets

Technical Specifications
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Performance Characteristics

Parameter	Specification
Beam Quality (M^2)	4.7/5/11
Pulse Duration	30 -500 ns
Maximum Single Pulse Energy	5/15/50 mJ
Spot Size Range	10–40 mm
Scan Speed	20.0 m^2/h
Source Rated Lifetime	≥100,000 h
Laser Safety Class	Class 4
Scanning Technology	2D Galvanometric
Scanning Patterns	12 Types
Control System	Multi-Language Touchscreen System
Supported Languages	28 Languages
Generator Compatibility	Compatible
Air Supply Requirement	0.6–0.8 MPa, Oil-Free & Water-Free
Source Brand	JPT (MOPA)
Certification	CE, IEC 60825-1
Fume Extraction Compatibility	HEPA + Activated Carbon Compatible

※Note: All specifications in this document are provided for reference purposes and may vary depending on configuration, machine version and continuous product improvements.

Technical Specifications
Laser Cleaning Machine (LS-1000W)

Laser Cleaning Head Platform

All proposed LaserSan systems are equipped with the same industrial laser cleaning head platform.

The cleaning head has been developed for professional industrial operation, combining low weight, ergonomic handling and stable cleaning performance across a wide range of applications and working environments.

Feature	Description
Head Weight	Approx. 1.1–1.4 kg (depending on configuration)
User Interface	Integrated Mini Touchscreen
Scanning System	2D Galvanometric Scanning
Safety Control	Dual Safety Activation
Distance Monitoring	Automatic Shut-Off Outside Defined Range
Lens Protection	Dual Air Protection System
Positioning	Red Laser Guidance
Modular Interface	Supports Flexible Configuration Across Different Cleaning Applications
Ergonomics	Low-Fatigue Industrial Design
Protective Cover	Prevents Dust Intrusion and Protects Optics During Operation

Key Advantages

- Lightweight ergonomic design
- Stable operation during extended working sessions
- Precision scanning trajectory
- Reduced operator fatigue
- Improved accessibility on complex geometries
- Consistent cleaning results across different materials and surfaces
- Integrated safety and monitoring functions
- Integrated touchscreen and real-time system feedback



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Standard Package Contents

The standard package contents supplied with the LS 1000W Laser Cleaning System are listed below.

Supplied Item	Item Picture	Quantity
User Manual		1 standard
Interlock Connector		1 optional, available on request
Laser Protective Glasses		1 pair — standard
Protective Lenses		5 pcs — standard
External Control Cable / External Laser Button		1 standard
Power Cable		1 standard

LASERSAN SUPPORT INCLUDED

Each machine is supplied fully tested, configured and prepared for operation. Technical documentation, onboarding, start-up guidance and remote technical support are included as standard.