3000W
CW Laser Cleaning Machine



LaserSan

Technical Specifications

Laser Cleaning Machine (LS-3000W CW)

Optical Characteristics

Parameter	Specification
Equipment Model	LS-3000 CW
Laser Type	Continuous-Wave Fiber Laser Source
Average Laser Power	3000 W
Central Wavelength	1080 nm
Beam Quality (BPP)	1.8 mm·mrad
Fiber Length	10 m or 20 m
Power Adjustment Range	10%–100%, adjustable
Laser Frequency	0–20 kHz
Laser Line Width	5–160 mm, adjustable (F400) / 5–320 mm, adjustable (F800)
Field Lens Model	F400 standard / F800 included
Minimum Optical Fiber Bending Radius	200 mm
Laser Output Instability	< 5%
Cooling Method	Water Cooling
Polarization Direction	Arbitrary
Guided Laser Function	Available
Anti-High Reflection Function	Available

Technical Specifications

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General Characteristics

Parameter	Specifications
Equipment Model	LS-3000 CW
Net Weight	**210 kg**
Laser Head Weight	1.8 kg
Machine Dimensions	977 × 735 × 1185 mm
Operation Type	Handheld
Power Supply Voltage	AC 380V ±10%
Grid Frequency	50/60 Hz
Operating Temperature Range	0–40 °C
Storage Temperature Range	-10–60 °C
Power Consumption	≤12 kW
Optical Cable Length	10 m or 20 m
Control Interface	7-inch touchscreen control system
Supported Languages	Multi-language interface
Scanning Patterns	12 scanning patterns
Cabinet Design	IP65 cabinet design

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Performance Characteristics

Parameter	Specification
Beam Quality (BPP)	1.8 mm·mrad
Spot Size	400 μm
Scan Speed	14 m/s
Reference Cleaning Performance – 20 μm Rust	36 m²/h
Reference Cleaning Performance – 20 μm Oil	48 m²/h
Reference Cleaning Performance – 20 μm Paint	27 m²/h
Reference Cleaning Performance – Ground / Wall Surface	36 m²/h
Laser Safety Class	Class 4
Scanning Technology	2D scanning system / galvanometric scanning
Scanning Patterns	12 scanning patterns
Control System	Touchscreen control system
Supported Languages	Multi-language interface
Generator Compatibility	Compatible with suitable generator rated above equipment power consumption
Air Supply Requirement	>0.6 MPa, clean, oil- and water-free compressed air
Certification	CE conformity: MD 2006/42/EC, LVD 2014/35/EU. Standards: EN ISO 12100:2010, EN ISO 11553-1:2020, EN 60204-1:2018, EN 60825-1:2014+A11:2021
Fume Extraction Compatibility	Compatible with external fume extraction / HEPA + activated carbon filtration systems

*Reference cleaning performance is based on laboratory testing under automatic conditions. Actual performance depends on material, contamination or coating type, layer thickness, selected parameters and operating conditions.

NOTE: All specifications are provided for reference purposes and may vary depending on configuration, machine version and continuous product improvements.

Technical Specifications
Laser Cleaning Machine (LS-3000W CW)

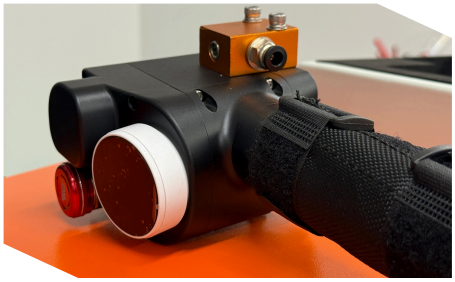
Laser Cleaning Head Platform

The LS-3000 CW is equipped with a dedicated industrial handheld cleaning head designed for continuous-wave laser cleaning.
The cleaning head combines integrated safety controls, real-time parameter access and a two-dimensional scanning system for stable and flexible operation across a wide range of industrial cleaning applications.

Feature	Description
Head Weight	Approx. 1.8 kg
User Interface	Integrated rotating knob screen
Scanning System	2D dual-axis scanning system
Emergency Stop	Integrated emergency stop button on cleaning head
Laser Activation	Supports user-defined double-click laser activation
Distance Monitoring	Real-time working-distance monitoring with automatic laser shut-off outside the set operating range
Lens Protection	Dual air curtain protection system
Positioning	Double red-dot guidance
Working Distance Sensor	Integrated laser off-focus distance sensor
Protective Cover	Flip-in protective cover with safety detection
Process Control	Access to scan pattern, scan width and operating parameters directly from the head interface

Key Advantages

- Integrated emergency stop directly on the cleaning head
- Rotating control screen for quick access to operating parameters
- Real-time working-distance monitoring
- Automatic laser shut-off outside the defined working range
- Double red-dot guidance for positioning
- 2D dual-axis scanning for stable and flexible cleaning
- Dual air curtain protection helps reduce lens contamination
- Flip-in protective cover helps protect optical components
- Designed for industrial handheld operation
- 1.8 kg head weight for controlled handling



Technical Specifications
Laser Cleaning Machine (LS-3000W CW)

Standard Package Contents

The standard package contents supplied with the LS-3000W CW Laser Cleaning System are listed below.

Supplied Item	Item Picture	Quantity
Digital User Manual		1 standard
Laser Protective Glasses		1 pair — standard
Protective Lenses		5 pcs — standard
F800 Focus Lens		1 standard
Lens Paper / Lens Cleaning Material		Available on request

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.