



LATWA SERVICE LTD.
Apsītes, Zūras, Vārves pagasts, Ventspils novads, LV-3623, Latvia
Reg.No.: 41203055642
VAT No.: LV41203055642
Mob.: +371 27815555
E-mail: latwaservice@gmail.com;
WEB: www.latwaservice.lv

Product introduction

Laser cleaning machine is the latest high-tech product. Easy to install, operate, easy to achieve automation. Plug in power, turn on and start cleaning - without chemicals, media, dust, water. Cleaning with no detergent, no media, no dust, no water. It can clean curved surface and offers gentle cleaning for surface. Cleaning resin, oil stain, rust, coating materials, paints on workpiece surface.

Features

1. Non-contact cleaning, no damage to workpiece;
2. Precise positioning, selective cleaning, desired cleaning area can be applied to the workpiece;
3. No need for chemical detergent, no consumables. Safe & environment-friendly;
4. Easy to operate. Either portable or equipped with robot for automatic cleaning;
5. High cleaning efficiency, time-saving;
6. Stable laser cleaning system, free of maintenance.

Applications

1. Metal surface rust removal;
2. Paint cleaning;
3. Oil stain, contaminant cleaning;
4. Coating surface cleaning;
5. Welding/Coating surface pre-treatment;
6. Stone figure surface dust & attachment cleaning;
7. Plastic mould residues cleaning;
8. Any other desirable material surface.



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Comparison to traditional surface treatment methods

Comparison	Laser cleaning	Chemical cleaning	Mechanical grinding	Dry ice cleaning
Method	Non-contact cleaning	Contact cleaning	Abrasive contact cleaning	Contact cleaning
Harm to base material	None	Medium	High	Low
Efficiency	High	Low	Medium-High	Medium
Consumable	Electricity	Chemical detergent	Abrasive paper, grinder, abrasive stone	Dry ice (expensive)
Precision	Controllable accuracy, high precision	Uncontrollable, low precision	Uncontrollable, medium precision	Uncontrollable, poor precision
Result	Very good, clear	Medium, uneven	Medium, uneven	Good, uneven
Safety/environment	No pollution, environment friendly	Chemical pollution	Dust pollution	No pollution
Operation	Easy to operate and learn, portable	Complicated process, higher technical requirement for operator. Pollution prevention measures required.	More time and manpower. Pollution prevention measures required	Easy to operate, semi-portable.
Investment	High investment on machine, but no consumables and low maintenance costs	Low investment, expensive consumables	Medium investment, high manpower costs, endless consumable costs	Medium investment, high consumable costs



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Technical data for HL ML-MF-2001-LC cleaning machine

TYPE	UNIT	ML-MF-2001-LC
Average output power	W	200
Laser source producer		IPG PHOTONICS (GERMANY)
Laser source type		Fiber laser
Central wavelength	nm	1064±4
Power consumption	W (20°C)	2200
Energy per pulse	mJ	10
Productivity	M ² /h	≤20
Beam width	mm	1~100
Power stability	% (T>5h)	<5
Repetition Frequency	KHz	20~50
Pulse width	ns	20000~50000
Focal depth	mm	10
Scan speed	Mm/s	0~7000
Power tuneable range	%	5~100
Operation Voltage	V AC	220
Case dimensions	mm	600x1000x1000
Set weight	kg	226
Fiber cable length	m	10
Cooling method		Water; antifreeze
Auxiliary cooling		Air (gas)
Operating temperature	°C	5~40
Operating humidity	%	10~95
Storage temperature	°C	-10~60
Option		Manual



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Technical data for HL ML-MF-500I-LC cleaning machine

TYPE	UNIT	ML-MF-500I-LC
Average output power	W	500
Laser source producer		IPG PHOTONICS (GERMANY)
Laser source type		Fiber laser
Central wavelength	nm	1064±4
Power consumption	W (20°C)	3800
Energy per pulse	mJ	50
Productivity	M ² /h	≤50
Beam width	mm	1~100
Power stability	% (T>5h)	<5
Repetition Frequency	KHz	20~50
Pulse width	ns	20000~50000
Focal depth	mm	15
Scan speed	Mm/s	0~7000
Power tuneable range	%	5~100
Operation Voltage	V AC	220
Case dimensions	mm	600x1000x1000
Set weight	kg	275
Fiber cable length	m	10
Cooling method		Water; antifreeze
Auxiliary cooling		Air (gas)
Operating temperature	°C	5~40
Operating humidity	%	10~95
Storage temperature	°C	-10~60
Option		Manual



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Machine visualization

