

LASERFLUX

Laser cleaning solutions





*The future
of industrial
cleaning*


Clean faster
and deeper
with laser


5 key arguments

 No flying debris =
no shielding and clean-up

 No physical wear
of workpieces

 Ecological:
no consumables
and no waste

 Low maintenance
machine

 Deep cleaning:
clean up to a
molecular level

What is Laser Cleaning

How does it work?

Laser cleaning equipment is designed to make a laser beam pulsate instead of having a continuous beam (as seen in laser cutting technology). Thanks to these pulses we can concentrate a lot of energy. This leads to the ablation, evaporation and release of the contamination.

The fun aspect of this way of cleaning is that we can differentiate the contamination and substrate on a molecular level. This makes for a perfectly clean part or surface without concerns of protecting the environment or surroundings from debris.

Which kind of contaminations are suited for laser cleaning removal?

- > Rust and other oxidation layers
- > Paint and coatings
- > Teflon and other antistick coatings
- > Varnish
- > Glue
- > Grease and oil
- > Plastic remains e.g. PE, rubber, PVC, ...
- > Food remains
- > Mold release agent
- > Ink
- > Weld slag

Suitable materials?

By adjusting the power output, the duration of the pulse, the pattern of the laser beam and some more parameters, we can find the optimal settings for cleaning a wide range of materials like:

- > Steel (also chrome coated)
- > Stainless steel
- > Cast iron
- > Aluminum
- > Woods
- > Plastics
- > Composites
- > Stone (non-porous)
- > Types of glass
- > ...

Applications?

Lasercleaning wordt onder andere gebruikt voor het reinigen van:

- > Extrusion molds
- > Injection molds
- > Baking trays and industrial ovens
- > De-rusting of tubes and construction elements
- > Preparation for welding and painting
- > Restoration of monuments, statues and buildings
- > Cleaning of storage tanks
- > Cleaning of reactor vessels
- > Paint stripping of Oldtimers
- > ...

Our activities:

Rental

Do you prefer to do the cleaning work by yourself or do you have a team of technicians who are comfortable working with machines? Then you might consider just renting one of our devices.

Power	Daily rate	Weekly price	Monthly price
70W	€ 400	€ 1400	€ 4200
300W	€ 675	€ 2000	€ 6000
1000W	€ 1500	€ 5250	€ 15750

Including:

- > Short training
- > Personal protective equipment

Service (hourly rate)

You don't have a permanent need for a laser cleaning machine? Or you want to evaluate if laser cleaning is the right solution for your application? Then our mobile cleaning service is perfect for you. We come to your project or company and perform the cleaning on site at a fixed hourly rate.

If you prefer to have us collect the parts and do the cleaning on our premises? No problem! Within days, or even 24 hours, the parts can be back at your doorstep.

Sales of manual and automated laser cleaning machines

Laserflux has a range of laser cleaning machines with different power outputs, wavelengths and pulse energy levels. Our compact machines (100W – 300W) are suited for working in tight spaces, quick on-site cleaning or decontamination of smaller parts and surfaces. Our larger range of devices (500W and 1000W) are suitable for cleaning large surfaces in an industrial context. All our machines can be built into a production line for a fully automated cleaning process. The choice is yours!

Safety

Laser cleaning is a very safe cleaning technique. The operator of the device, just like the possible spectators, should wear the correct laser safety glasses. The environment needs to be organized in such a way that passers-by cannot look into the laser light or reflections. Fire-retardant clothing and gloves are recommended.



Mobile laser cleaning machine

LMX100/200/300

The LMX 100/200/300 is a compact mobile laser cleaning machine. Weighing 25 kilograms (depending on the chosen power output) this device allows itself to be easily moved or lifted onto scaffolds. This compact machine reaches cleaning speeds up to 5m² per hour, which is more than sufficient for many applications. The compact laser pistol is very agile and allows you to clean hard to reach spots without getting tired. We offer this design with a 100W, 200W or 300W laser power output.



MAINTENANCE

This machine is very maintenance-friendly. The LMX100/200/300 is air-cooled and barely has any moving parts. Only the protection glass is to be replaced sporadically. The maintenance of the laser source, with normal use and environment, should be done after 100,000 working hours or every seven (7) years, whichever comes first.

LASER GUN

The laser cleaning gun of the LMX100/200/300 is an extra compact design thanks to the multidimensional mirror technology. Weighing 2 kg the laser cleaning gun is easily maneuverable to reach the smallest corners of a mold and makes it possible to reach any space of a machine or engine room. The focal length is easy to adjust so that you can approach your workpiece from the most practical distance.



Mobile laser cleaning machine

LMX500/1000/2000

Time to bring out the big guns. These mobile machines have a laser power output of 500W, 1000W or 2000W and are the most powerful laser cleaning machines in the world.

Specially designed to deal with large surfaces or thick layers of contamination, the LMX 500/1000/2000 was designed to travel from project to project with ease. Can move through a door opening and through narrow spaces between industrial equipment. The fiber cable can be up to 50 meters long so often the machine doesn't even need to be moved at all.



MAINTENANCE

Even this heavyweight machine needs little maintenance! As with the lower power models every now and then we need to replace the protective glass in the laser pistol when it gets too dirty. The cooling liquid has to be replaced after 1000 working hours. The laser source (the core element of the machine) needs an overhaul after 100,000 working hours or every seven (7) years, whichever comes first.



LASER GUN

The laser gun is a fine piece of engineering. The gun only weighs a few kilograms, making it the lightest on the market. On top it has a rotating hand grip to assure an ergonomic position at any time. The gun is equipped with a dead man switch and the necessary warning indicators. Extra lighting is also integrated in the handle. Both the lenses as well as the protective glasses are easily replaceable thanks to a fast switch cassette system. Typically the gun has a focus range of 10 cm. This means that within an area of ten centimeters the laser is in focus. That area is usually 20 cm away from the laser gun but we can change that by switching lenses.



PRACTICAL

- > Very maneuverable and stable machine with useful handles around the machine
- > 20m fiber cable length integrated in the machine casing
- > Wireless touch panel with physical buttons for operating with gloves
- > Electric powered wheels
- > Integrated connection for smoke extraction



ROBUST

- > Spring loaded wheels for shock absorbing
- > Bumpers around the machine
- > Hoisting brackets
- > Transport brackets
- > Stainless steel housing



POWERFUL

- > 500 – 2000W laser power
- > Integrated water cooling
- > Pulse power up to 10 MW
- > Adjustable pulse length up to 100 ns
- > Dozens of preprogrammed laser patterns



SAFE

- > Warning LEDs around the whole machine
- > Emergency buttons and dead man switch both on the gun and on the machine
- > PPE's integrated in the machine
- > Storage compartment in the machine for hoses, extension cables and tools
- > Automatic braking system

In-line laser cleaning machine



Our laser cleaning technology is designed to be easily integrated into an existing production line. An automated in-line laser cleaning installation provides significant cost savings thanks to the maintenance friendly and speedy cleaning in comparison to the alternative industrial cleaning techniques.

An automated laser cleaning installation has a small footprint and is totally shielded, making it safe for passers-by. The extraction of the evaporated contaminant and any dust particles is integrated in the machine. The air is filtered and can be blown back into the workspace.



OPTIONS

Wireless touch panel

Sometimes you want to adjust the laser settings during cleaning. Then it can be useful to be able to adjust these settings right next your workpiece instead of going back to and forth to the machine.

Extra cooling

In case you need to continuously work in a hot environment we have a possibility to opt for an extra cooling unit. This is also completely integrated within the machine.

Lifting package

Or sometimes you want to be able to lift the machine with a forklift or crane in a safe way. For this we have the option of using detachable hoisting brackets. Furthermore we can also provide extra brackets on the sides to secure the machine for transport.

Electric drive

Maybe you have to cover longer distances in the factory or projects? Then the electric drive option for our mobile units is a useful feature. The motor and batteries are incorporated in the bottomplate of the machine so you don't lose storage space on the inside. We recommend this option.

Additional lighting

Laserflux biedt de optie van een superheldere (600 Lumen) Laserflux offers a super bright (600 lumens) and wireless LED hand lamp with magnetic attachment with which you can clean in perfectly lit conditions. The charging station is integrated in the storage space of the mobile laser cleaning unit and ensures autonomy of 8 hours.

Extra-long fiber cable

Standard we offer ten or twenty meters of fiber cable that can be neatly stored in the mobile unit. In some cases this is not enough. You may need to work at a considerable height, or in a ships engine room where the unit has to stay on deck? Then we can provide cable lengths of up to 100 meters.

Protection kit

You are working with laser equipment. Necessary shielding needs to be foreseen so that accidental passers-by cannot look into the laser light. For this scenario we have a set of four laser certified shielding panels that can be easily deployed but also compactly stored. These come in a handy box on wheels with extra laser safety glasses that can be given to the clients or people who want to watch the cleaning process. The box also comes with two warning signs to inform your surroundings. Finally there is a useful signal tape included in the set.

Mobile extraction unit

In case you find yourself in a dust free environment, you can opt for a mobile extraction unit. This installation is provided with wheels and a HEPA-filter. This will filter the smallest dust particles. The suction tube can be clicked onto the laser gun without impairing your view. Electric connections are foreseen on our mobile laser cleaning machines. This extraction unit options is often used in pharmaceutical industry, food industry or for within enclosed or confined spaces like a ships engine room.

	LMX100	LMX200	LMX300
Dimensions (L x W x H)	900 x 400 x 500 mm	900 x 400 x 500 mm	900 x 400 x 500 mm
Free height bottom	100 mm	100 mm	100 mm
Weight	30 kg	40 kg	40 kg
Colour	White / SS	White / SS	White / SS
Cover material	Stainless Steel	Stainless Steel	Stainless Steel
Cover thickness	1,5 mm	1,5 mm	1,5 mm
Laser power	100 W	200 W	300 W
Laser peakpower	0,3 MW	0,5 MW	0,5 MW
Integrated cooling type	Not applicable	Not applicable	Not applicable
Cooling autonomy (standard cooling)	Unlimited	Unlimited	Unlimited
Cooling autonomy (extra cooling)	Not applicable	Not applicable	Not applicable
Screen	8" touch panel	8" touch panel	8" touch panel
Standard pistol cable length	5 m	5 m	5 m
Maximum pistol cable length	8 m	8 m	8 m
Electrical cables length	25 m	25 m	25 m
Power supply	1 x 230 V	1 x 230 V	1 x 230 V
Power connector	Standard socket	Standard socket	Standard socket
Central braking system	Not applicable	Not applicable	Not applicable

Laser Pistol

	LMX100	LMX200	LMX300
Dimensions (W x L x H)	120 x 480 x 120 mm	120 x 480 x 120 mm	120 x 480 x 120 mm
Weight	2 kg	2 kg	2 kg
Voltage	24 V	24 V	24 V
Material	HST Composite	HST Composite	HST Composite
Colour	White / Black	White / Black	White / Black
Handle rotation	Not applicable	Not applicable	Not applicable
Focus distance	150-250-300-360	150-250-300-360	150-250-300-360
Integrated leds	Yes	Yes	Yes
Average power	100 W	200 W	300 W
Puls duration	1-100 nS	20-500 nS	20-500 nS
Puls frequency min	2 kHz	2 kHz	2 kHz
Puls frequency max	500 kHz	4000 kHz	4000 kHz
Peak power	0,3 MW	0,5 MW	0,5 MW

	LMX500	LMX1000	LMX2000
Dimensions (L x W x H)	1700 x 803 x 1350 mm	1700 x 803 x 1350 mm	1700 x 803 x 1350 mm
Free height bottom	150 mm	150 mm	150 mm
Weight	300 kg	370 kg	450 kg
Colour	White / SS	White / SS	White / SS
Cover material	Stainless Steel	Stainless Steel	Stainless Steel
Cover thickness	2 mm	2 mm	2 mm
Laser power	500 W	1000 W	2000 W
Laser peakpower	1 MW	1 MW	1 MW
Integrated cooling type	Liquid cooled	Liquid cooled	Liquid cooled
Cooling autonomy (standard cooling)	Unlimited	8 h	8 h
Cooling autonomy (extra cooling)	Not applicable	Unlimited	Unlimited
Screen	10" touch panel inch	10" touch panel inch	10" touch panel inch
Standard pistol cable length	20 m	20 m	10 / 20 m
Maximum pistol cable length	100 m	100 m	100 m
Electrical cables length	25 m	25 m	25 m
Power supply	3 x 230 V	3 x 400 V	3 x 400 V
Power connector	16 A	16 / 32 A	16 / 32 A
Central braking system	Yes	Yes	Yes

Laser Pistol

	LMX500	LMX1000	LMX2000
Dimensions (W x L x H)	162 x 590 x 270 mm	162 x 590 x 270 mm	162 x 590 x 270 mm
Weight	4,2 kg	4,2 kg	4,2 kg
Voltage	24 V	24 V	24 V
Material	HST Composite	HST Composite	HST Composite
Colour	White / Black	White / Black	White / Black
Handle rotation	360	360	360
Focus distance	150 - 250 mm	150 - 250 mm	150 - 250 mm
Integrated leds	Yes	Yes	Yes
Average power	500 W	1000 W	2000 W
Puls duration	25-100 nS	25-101 nS	25-102 nS
Puls frequency min	5 kHz	5 kHz	5 kHz
Puls frequency max	50 kHz	50 kHz	100 kHz
Peak power	1 MW	1 MW	1 MW

*Interested?
More information?
Free demonstration?
Quotation?
Questions?*

Contact us.

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