

RESTORATION – CONSERVING TREASURES USING LIGHT



25 years of experience in the field of restoration by means of hand-held laser systems

Laser cleaning technology is a gentle and efficient tool for restoration and facade cleaning. Stone and metal surfaces can also be cleaned of stubborn environmental dirt and weathering using cleanLASER.

Due to the extremely short impact time of the laser beam, the base material undergoes no material stress, and mechanical and chemical damage can be avoided.

The hand-held processing optics is guided over the material to be processed like a flashlight without direct contact. The interaction of manually guided laser technology and the trained conservator enables the best possible result.

BENEFITS

- Mobile, portable, handy
- Gentle cleaning by light only
- No abrasion by means of blasting media
- No mechanical or chemical agents
- No damage through humidity
- Easy to operate
- Highly precise
- Low-maintenance
- Eco-friendly as well as cost-efficient
- Awarded the German Environmental Prize by the German Federal Environmental Foundation (DBU)



Wall frescoes and relief paintings in the Egyptian Valley of the Kings are gently relieved of the soot and dirt of the millennia (Photo: Neferhotep e.V.). The restorers appreciate the laser's flexibility and processing speed as well as its dosability.

SCULPTURES AND ORNAMENTS



The laser beam reaches even into fine recesses

The gentle laser process is particularly suitable for the restoration of sculptures and ornaments, using light alone to clean them. The laser systems are precisely dosable, compact and process-safe. The handling is easy and can be done by the conservator him/herself.

The fiber optic cable is much more flexible than the piping of other methods, thus facilitating the work.



Removing the dirt of the millennia without damaging the material (Ulm Cathedral)



The cleanLASER enables even this delicate alabaster sculpture in Bonn Cathedral to be cleaned contact-free

METALS – SPARKLINGLY CLEAN



The CleanLASER allows, for example, the removal of substance-damaging salt deposits and corrosion without destroying the naturally evolved protective passivation of bronze or other metals. (Photos: Wolfmeyer zu Barkholz)



STONE FACADES AND BUILDINGS

Gentle cleaning for the eternity



Sandstone facade of the Driehaus Museum in Chicago before, during and after the laser treatment: The original patina, texture and coloration of the stone remain intact due to the laser cleaning. The removal of the soot encrustation thereby allows the natural oxidation of the stone. Some darkening of the stone has taken place since the completion of the laser treatment, giving it an age-appropriate aesthetics.



Sandstone facade of St. Peter's Church in Erfurt after laser treatment

Sandstone, marble, granite, terracotta and plaster are ideally suited for the removal of contamination using cleanLASER. Thereby, neither the stone is damaged, nor the building physics are affected.

In many cases, even colored and pigmented surfaces can be freed from the soot and dust of the centuries with the finely dosable laser light.



Large-scale project on the exterior facade of the city hall in Ottawa, Canada



cleanLASER in action at the Jefferson Memorial in Washington: Sustainable removal of the dark biofilm on the historic marble with the CL 100



Philadelphia City Hall sparkles in the "new old" splendor

EQUIPMENT

Portable und mobile laser systems



The backpack laser in action - it can be used as a backpack or like a "cleaning vacuum cleaner" (Photo: DBU)



Portable CL 100 in a robust housing with easy-to-use processing optics

Cleaning with laser light - safe, flexible and precisely dosable

LASER SYSTEMS

The available options are

- Portable laser systems, particularly compact and low-weight, some battery-powered if required: Backpacklaser, lightCASE
- High-performance mobile systems for large-area applications (beam transmission through fiber-optic cable up to 50 m long for best possible flexibility)

The precise dosing of the laser power (0 to 100%) and the laser intensity, which is a unique feature of laser systems for restoration, as well as exchangeable optics, provide the conservator with all the options for gentle processing. The flexible line width of the laser beam allows hard structures to be thinned out in a targeted way, so that the restoration work can be carried out in a controlled manner as if using a brush.

The laser systems are available for sale, for rental or in cooperation with our competent service partners. Please also ask for our attractive leasing offers.



Portable lightCASE, here with trolley and battery operation

PLEASE CONTACT US - WE ARE HAPPY TO ADVISE!