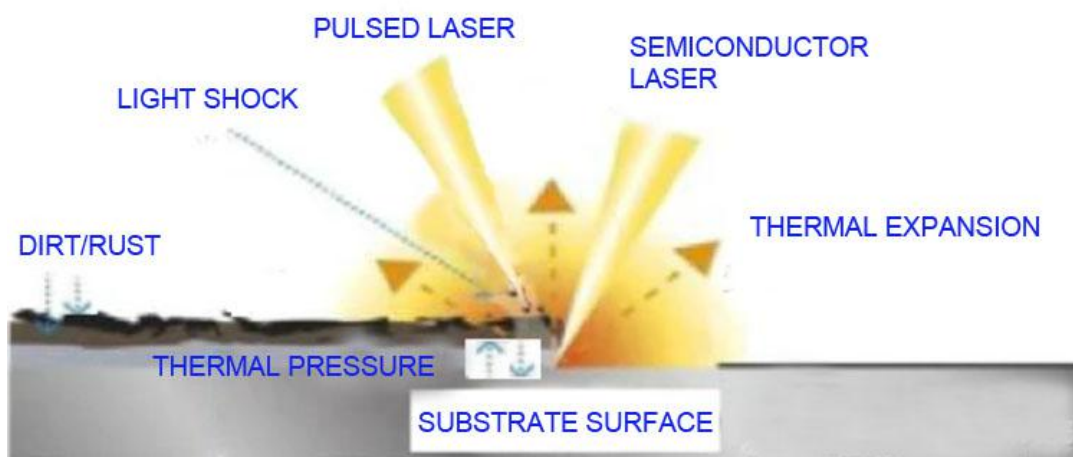


Hybrid Laser Cleaning Machine



The principle of hybrid laser cleaning:

The advantage of hybrid laser cleaning is that the continuous laser and pulsed laser are functionally Hybrid at the same time to form a processing characteristic of $1+1>2$. The principle is mainly through the semiconductor continuous laser as the heat conduction output, so that the attachment to be cleaned absorbs energy to generate vaporization and plasma cloud, and forms a thermal expansion pressure between the metal material and the attachment, reducing the bonding force between the two layers. When the pulsed laser outputs a high-energy pulsed laser beam, the generated vibration shock wave will cause the attachments with weak binding force to be directly separated from the metal surface, thereby realizing rapid laser cleaning.



Advantages of hybrid laser cleaning:

1. Apply to the cleaning of thicker coating materials. Due to the large energy output of a single laser with multiple pulses, the high cost of high-power pulsed lasers limits the laser cleaning of thick coating materials, and the use of pulsed laser-semiconductor Hybrid Laser cleaning can quickly and effectively improve the cleaning quality, and the substrate is not easy Causes damage, so it is suitable for cleaning thicker coating materials.
2. Apply to laser cleaning of high reflective materials such as aluminum alloy. Single laser cleaning aluminum alloy and other surface oxide layers has problems such as high reflectivity. However, pulse laser-semiconductor laser combined cleaning, due to the thermal transmission of semiconductor laser, increases the energy absorption rate of the metal surface oxide layer, making the pulse laser The beam can peel off the oxide layer faster, thereby more effectively improving the removal efficiency.

Technical data:

Model	QA-LC200	QA-LC1000C
Laser source	Pulsed Fiber Laser	Continuous Fiber Laser
Laser Power	500W	1000W
Fiber cable L	8M	8M
Wavelength	1060nm	1080nm
Frequency	1-4000KHz	1-20 KHz
Clean speed	$\leq 25 \text{ M}^2 / \text{Hour}$	$\leq 40 \text{ M}^2 / \text{Hour}$
Cooling	Water cooling	Water cooling
Dimension	523×483×133mm	483 × 484 × 133mm
Weight	28Kg	36Kg
Beam width	10-170mm	10-170mm
Optional	Manual/Auto	Manual/Auto
Temperature	10-40 °C	10-40 °C
Power	< 1KW	< 6KW
Voltage	Single Phase 220V, 50/60HZ	Single Phase 220V, 50/60HZ

Application scope:

Hybrid Laser cleaning can be applied to the cleaning of thick coatings and strong adhesion attachments. It can remove resin, paint, oil, stains, dirt, rust, coatings, coatings and oxide layers on the surface of objects, and it is widely used in the industry, covering ships , Auto repair, rubber molds, high-end machine tools, track and environmental protection, etc.

Train axle wheel set:



YouTube Videos:

<https://youtu.be/47nwmnrMmzA>

https://youtu.be/ZMliAVhqK_M

<https://youtu.be/1w7jBjJ-Ax4>