SENFENG

HOW TO SELECT YOUR LASER CLEANING MACHINES

www.senfenglaser.com

Provide Global Customers with Metal Forming Automation Solutions

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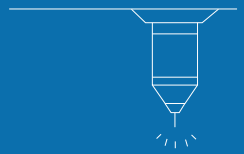

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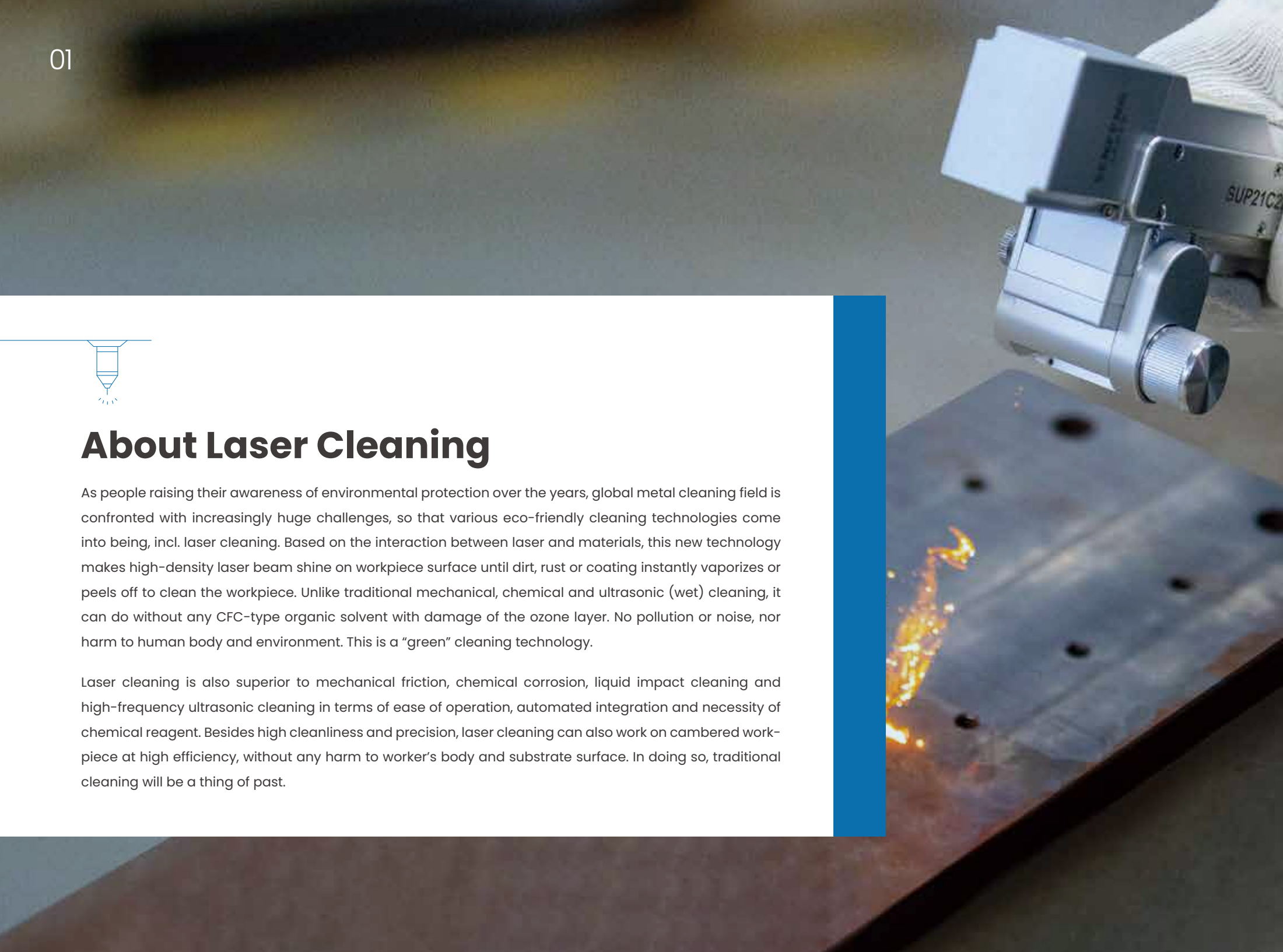

About Laser Cleaning

As people raising their awareness of environmental protection over the years, global metal cleaning field is confronted with increasingly huge challenges, so that various eco-friendly cleaning technologies come into being, incl. laser cleaning. Based on the interaction between laser and materials, this new technology makes high-density laser beam shine on workpiece surface until dirt, rust or coating instantly vaporizes or peels off to clean the workpiece. Unlike traditional mechanical, chemical and ultrasonic (wet) cleaning, it can do without any CFC-type organic solvent with damage of the ozone layer. No pollution or noise, nor harm to human body and environment. This is a “green” cleaning technology.

Laser cleaning is also superior to mechanical friction, chemical corrosion, liquid impact cleaning and high-frequency ultrasonic cleaning in terms of ease of operation, automated integration and necessity of chemical reagent. Besides high cleanliness and precision, laser cleaning can also work on cambered work-piece at high efficiency, without any harm to worker’s body and substrate surface. In doing so, traditional cleaning will be a thing of past.

4

Laser Cleaning Crafts

Laser Cleaning

Taking laser beam as its heat source, laser cleaning is widely hailed as a green technology because it is featured by environmental protection, high efficiency, no need for chemical reagent, fast cleaning speed, high cleanliness, low heat input as well as ability to clean cambered workpiece.

Pulsed Laser Cleaning

It makes use of pulsed laser generator to generate laser beam with high energy density and short pulse width, then, shine on workpiece surface until dirt instantly vaporizes or peels off. This sort of craft has features of non-contact, zero damage, high efficiency and environmental protection.

CW Laser Cleaning

For it, CW laser generator can emit high-density laser beam to shine on workpiece surface until dirt instantly vaporizes or peels off. This non-contact craft can perform well at high efficiency but low costs.

Automatic Laser Cleaning

Laser cleaning craft works with high-precision machine tool or robot, intelligent control system, smoke dust collector and outer protective guard to enable remote control, dust disposal, real-time monitoring and automatic cleaning. It is eco-friendly, safe, efficient and stable. In addition to easy operation, it can also be custom-made by customers as needed.

SENFENG Laser Welding & Cleaning Technical Center

SENFENG, one of the earliest companies founding laser welding & cleaning centers in China, has stood at the forefront of science and technology and clung on to customer-oriented demands to carry out automatic application tests and feasibility study on various materials, cleaning modes and different fields. Our cooperative partners will get free proofing, cleaning craft verification and many other cleaning solutions. We are committed to being an internationally famous laboratory and guiding laser cleaning field to move towards innovative development.

At present, there are two kinds of products in SENFENG, namely, handheld and automatic laser cleaning type, including dozens of different machines. Therein, the former is classified as knapsack-type, push-pull, air-cooling and liquid-cooling machines. The latter, besides robot-assisted laser cleaning machine, can also be used for special purposes, such as, aerospace, automobile production, large-scale integrated circuit, military project, hi-end machine tool, railway track, eco-friendly cultural relic repair and premium mold. Our aim is to make laser cleaning machines be applied in industrial production.

SENFENG Laser Welding & Cleaning Testing Laboratory

In this laboratory, there are tensile machine, metallographic microscope, metallographic sample polishing machine, metallographic sample pointing machine, friction wear testing machine, Vickers hardness tester, temperature detector, surface roughometer and digital microscope used to support laser welding & cleaning testing demands. We also issue professional testing reports and provide all new and regular customers with highly stable laser cleaning machines that enable excellent cleaning effects.

Laser Cleaning Machines

SF-BHC
Portable Knapsack-type Pulsed Laser Cleaning Machine

This is a new generation of hi-tech surface treatment product. Its cleaning head is very minute and only weighs 700g. With built-in power battery, the product is easy to operate and as small as A3 paper. Worker will feel no tired after long work. It has no harm to substrate and needs no consumables when it efficiently removes resin, greasy dirt, stain, rust, coating, cladding layer and paint. In industrial machining field, complex-shaped workpieces will be precisely cleaned at high degree of cleanliness but much lower costs. The machine can work for 50,000h in total.

4 Competitive Strengths

- Mini-size laser cleaning head
- Built-in power battery
- 8 kinds of cleaning modes
- Work at high efficiency

Small in size but efficient in work

Technical Parameters

Laser power	50-100W
Cleaning mode	Laser, non-contact
Cleaning materials	Remove oil, rust, paint, etc.
Models we recommend	SF50BHC, SF100BHC

* Machine appearance, function description and technical parameters on this page are derived from SENFENG's Technical R&D Center based on our self-developed machines. For reference only, in kind prevail!

Laser Cleaning Machines

SF-HC
Portable Pulsed Laser Cleaning Machine

This bran-new hi-tech surface treatment product is easy to be installed and operated. We can offer handheld pulsed laser cleaning machine and portable handheld pulsed laser cleaning machine.

It can work as usual even when there is no chemical reagent, medium, nor cleaning water. With it, paint, stain, filth, rust and coating will be removed efficiently without any harm to workpiece surface.

4 Competitive Strengths

- Technically mature laser cleaning head
- Air cooling, no worry about high temperature
- Mini size but firm in structure
- Precise cleaning with favorable effects

Small in size, hassle-free at work

Technical Parameters

Laser power	200-300W
Cleaning mode	Laser, non-contact
Cleaning materials	Remove oil, rust, paint, etc.
Models we recommend	SF200HC, SF300HC

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Laser Cleaning Machines

SF-HC
Handheld Pulsed Laser Cleaning Machine

This bran-new hi-tech surface treatment product is easy to be installed and operated. It can work as usual even when there is no chemical reagent, medium, nor cleaning water. With it, paint, stain, filth, rust and coating will be removed efficiently without any harm to workpiece surface.

Easy to operate and no harm to workpiece

4 Competitive Strengths

- Technically mature laser cleaning head
- 8 kinds of cleaning modes
- Easy to operate and work at high efficiency
- 10 safety alarm systems

Technical Parameters

Laser power	500-1000W
Cleaning mode	Laser, non-contact
Cleaning materials	Remove oil, rust, paint, etc.
Models we recommend	SF500HC/SF1000HC

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Handheld Laser Cleaning Machines

SF-HC
Handheld CW Laser Cleaning Machine

It makes use of high-density laser beam to shine on workpiece surface until dirt, rust or coating instantly vaporizes or peels off.

The machine is easy to operate and needs no chemical reagent, medium nor cleaning water, except for power on when it removes paint, stain, dirt, rust and coating from object surface.

Easy to clean at high efficiency

4 Competitive Strengths

- Technically mature laser cleaning head
- Cleaning head under real-time temperature monitoring
- Easy to operate and work at high efficiency
- Invoke technical parameters in real time

Technical Parameters

Laser power	1500-3000W
Cleaning mode	Laser, non-contact
Cleaning materials	Remove oil, rust, paint, etc.
Models we recommend	SF1500HC, SF2000HC, SF3000HC

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Laser Cleaning Machines

SF-HCR
Robot-assisted Pulsed Laser Cleaning Machine

Through teaching demonstration or offline programming, the machine can remove paint, stain, dirt, rust and coating from object surface, with no need for chemical reagent, medium nor cleaning water.

To fit for different scenarios, its biaxial swing cleaning head can support 8 kinds of cleaning modes under straight, circular and other laser spots. As a result, its cleaning is uniform at high efficiency.

4 Competitive Strengths

- Biaxial swing cleaning head
- 8 kinds of cleaning modes
- Easy to operate
- Keep cleaning effects favorable and stable

Automatic work at high work efficiency

Technical Parameters

Laser power	200-1000W
Cleaning mode	Laser, non-contact
Cleaning materials	Remove oil, rust, paint, etc.
Models we recommend	SF200HCR, SF300HCR, SF500HCR, SF1000HCR

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Laser Cleaning Machines

SF-HCR
Robot-assisted CW Laser Cleaning Machine

Through teaching demonstration or offline programming, the machine can remove paint, stain, dirt, rust and coating from object surface, with no need for chemical reagent, medium, nor cleaning water.

With single-swing cleaning head at high depth of focus and F400/F600/F800 focusing lens, the machine can apply to various cleaning scenarios at high efficiency. Its cleaning width reaches up to 300mm.

4 Competitive Strengths

- Single-swing cleaning head at high depth of focus
- Stable output of laser beam
- One-key control
- Clean at large format

Precise cleaning within 360°

Technical Parameters

Laser power	1500-3000W
Cleaning mode	Laser, non-contact
Cleaning materials	Remove oil, rust, paint, etc.
Models we recommend	SF1500HCR, SF2000HCR, SF3000HCR

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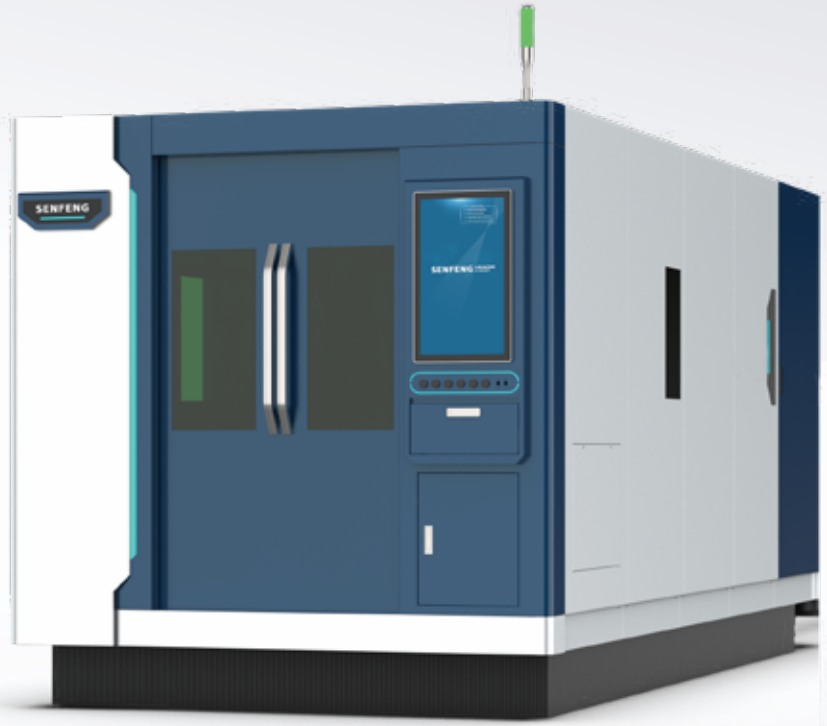
Laser Cleaning Machines

Automobile Parts Laser Cleaning Machine

The machine is used to clean various spare parts of automobile like gear, brake pad, brake disc, brake caliper and engine. It usually works at variable speed and matches with other production lines. In addition, to protect ambient working environment, this machine can also collect and dispose smoke dust automatically during laser cleaning.

4 Competitive Strengths

- Single-swing cleaning head at high depth of focus
- Stable output of laser beam
- One-key control
- Clean at large format



Precise cleaning at large format

Technical Parameters

Laser power	200-1000W
Cleaning mode	Laser, non-contact
Cleaning materials	Remove oil, rust, paint, etc.
Models we recommend	SF200SHC, SF300SHC, SF1000SHC

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Laser Cleaning Machines

Tyre Inner Liner Laser Cleaning Machine

This self-developed machine is ideally fit to clean silent tyre, self-seal rubber tyre, as well as its inside dead angle by swinging at pitching angle. For tyre, its inner wall surface will not be damaged but surface adhesive force is about to be increased. It can work with other production lines, dock with MES system and identify tyre barcode automatically.

Automatic work at high efficiency

4 Competitive Strengths

- Easy to operate and eco-friendly
- Take precise control and no harm to substrate
- Work efficiently and no worry about high temperature
- Raise frictional coefficient of tyre inner liner

Technical Parameters

Laser power	200-1000W
Cleaning mode	Laser, non-contact
Cleaning materials	Remove oil, rust, paint, etc.
Models we recommend	SF200SHC, SF300SHC, SF500SHC, SF1000SHC

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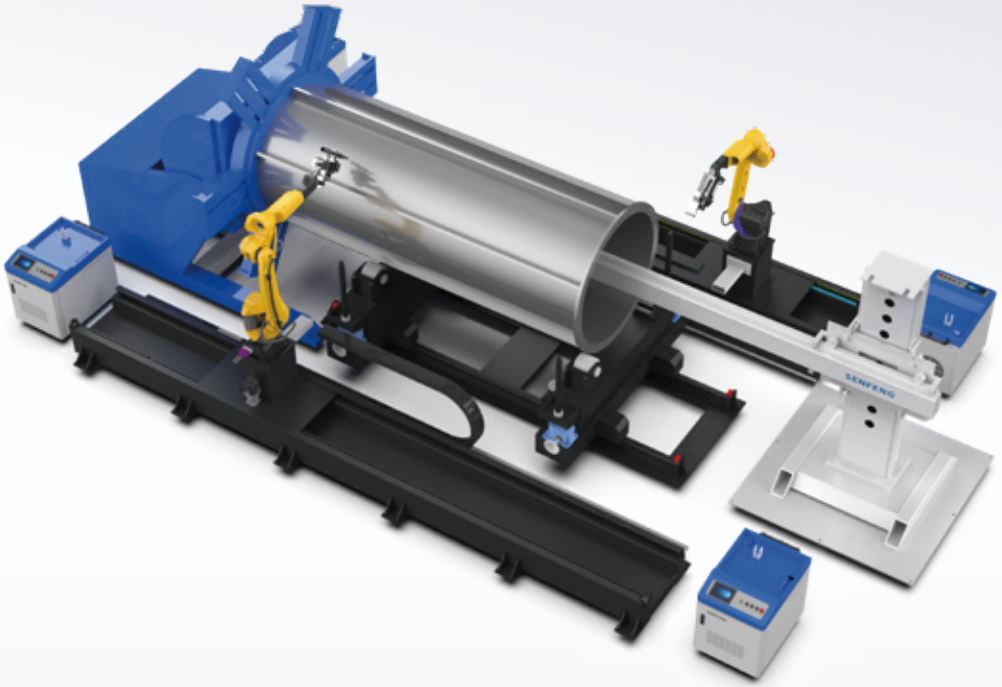
Laser Cleaning Machines

Pressure Vessel Laser Cleaning Machine

It is applied to cleaning outer walls of LNG interior container, incl. all wall surfaces, straight arms, two-end seal heads and weld seams.



3 Competitive Strengths

- Easy to operate and eco-friendly
- Take precise control and no harm to substrate
- Work efficiently and no worry about high temperature

▶ Automatic work at high efficiency

Technical Parameters

Laser power	200-1000W
Cleaning mode	Laser, non-contact
Cleaning materials	Remove oil, rust, paint, etc.
Models we recommend	SF200SHC, SF300SHC, SF500SHC, SF1000SHC

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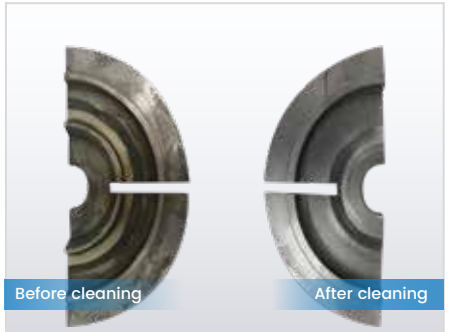
Laser Cleaning Samples

Clean oxidation layer from LNG pressure vessel

Clean oxidation layer from filter mesh

Clean paint from sheet metal



Clean rust from workpiece

Clean tyre mold

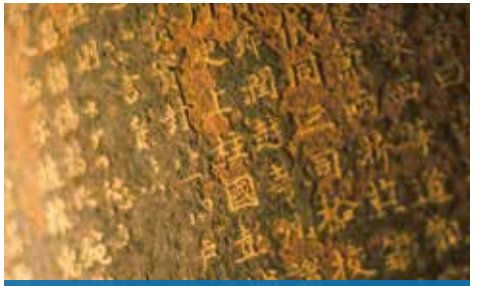
Clean brake disc of locomotive

Applicable Industry

Aerospace

Automobile parts

Military project


Cultural relic repair

Engineering machinery

New energy

Kitchenware and sanitary ware

Machinery production

Office furniture

Medical instrument

Railway track

Mold production

Quick-response Service

High Efficiency

Answer your repair calls for 24*7*365 days

Technical engineers can diagnose your machine within 10min, make repair plans within 1h and dispatch to your location within 1 workday after receiving your request for repair.

Craftsmanship Spirit

Provide custom-made solutions and make well-targeted plans as the case may be

Engineer certifications: Our all engineers take appointment with certificate after strict training

Train how to fix your FAQ: Collect FAQ and ask the certified engineers to train relevant customers

Online one-to-one guidance: Senior engineers guide customers to get problems solved through phone, video or other online means.

One time is enough: Commission the machine and settle similar matters only once

For Your Peace of Mind

Pre-arrival service: Train in technical theory, actual operation and troubleshooting at great length

Regular service: Reminder of maintenance, door-to-door and sales promotion service

Value-added service: Software & hardware upgrade, finance leasing and further extension of warranty period

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Pakistan Service Center
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India Service Center
Add: Plot no 4/09, survey no -519, TSIIC, ip nadergul, hyderabad

Vietnam Service Center
Add: K13 Ngã 3 NgọcHồi Xã Ngũ Hiệp Huyện Thanh Trì Hà Nội

Jordan Service Center
Add: Amman -Sahab -Alazraq highway

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