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## PRODUCT INTRODUCTION

- Laser cleaning technology refers to the use of high-power density laser beams to irradiate the surface of the work piece, so that the dirt, rust, or coating on the surface will be evaporated or peeled off instantly, thereby achieving a clean process.
- This cleaning equipment is a new generation of surface treatment high-tech products, easy to install, operate and realize automation.
- Simple operation, no chemical reagents, no media, no dust, no water can be cleaned when the power is turned on, and it can remove the surface of the object, paint, stains, dirt, rust, coating, etc.

## TECHNICAL PARAMETER

Laser head	Continuous
Laser wavelength	1080±5
Fiber length	10 meters
Fiber core diameter	50μm
Swing frequency	1-110HZ 50HZ is recommended
Weight of the cleaning head	0.7KG
Gas	Compressed air
Temperature range of the working environment	-10—40℃
Cooling method	Water cooling
Overall dimensions	954X715X1080mm
Total weight	220KG
Power supply	Standard configuration of 380V 50/60HZ
Consumables	Protective lens about 1 piece/week
Total power	7/9/12KW

## ADVANTAGES OF FIBER LASER CLEANING

#### Laser Device: Raycus Laser Device

- Laser device is easy to install, operate and automate. The operation is simple. It can clean without chemical reagents, media, dust, and water and can remove resin, paint, oil, stain, dirt, rust, coating, plating, and oxide layer on the surface of the object.

#### Cleaning head

- Professional laser cleaning optical design, high-pass light rate and large focal depth field lens, meet the long-term operation of high-power laser cleaning
- The width of the cleaning optical path can be adjusted, and can be set from 0 to 300mm according to the cleaning product

#### Cleaning system

- It can control the peak power, scanning width and frequency on the front panel of the system, and appropriate technologies can be selected.
- The operation interface is simple and easy to operate, and it has the function of technology storage, which provides convenience for the operators.
- It has a real-time monitoring function, which can monitor the status of the laser and water cooler to ensure normal operation.

#### Water cooler

- Dual temperature and dual control water tank, a full range of environmentally friendly refrigerant systems, in line with international standards
- One-button intelligent control system, ISO9001 quality management system, fault code query system
- All-in-one design, easy maintenance.

### ADVANTAGES OF FIBER LASER CLEANING

#### Host Machine Control System

- Clear and simple interface page.

#### Maintenance-free

- Stable laser cleaning system, low operating cost, almost no maintenance.
- The water-cooling system and the power distribution system are isolated and located in separate spaces, which meet safe use standards.

- The machine has a dual-channel cooling function, and the water cooler is equipped with a separate closed cooling channel to ensure that the heat of the water cooler will not affect the inside of the whole machine. The inside of the whole machine is cooled through a dual cooling fans to ensure the air inside the equipment is cooled in a circular way.
- The intelligent water tank for hand-held cleaning and welding has features of dual temperature and dual control, flow and over-temperature alarm, compressor thermal protection, high efficiency, and excellent environmental performance. The cooling capacity is up to 5200W.

### Comparison of fiber laser cleaning and traditional cleaning methods

Items	Fiber laser cleaning	Chemical cleaning	Mechanical grinding	Dry ice cleaning	Ultrasonic cleaning
Cleaning method	Laser;Non-touchable	Chemical detergent; Touchable	Sand paper; Touchable	Dry ice;Non-touchable	Detergent;Touchable
Damage to Workpiece	No	Yes	Yes	No	No
Cleaning efficiency	High	Low	Low	Middle	Middle
Consumption	Electricity only	Chemical detergent	Sand paper; grinding wheel,etc	Dry ice	Special detergent
Precise cleaning	High precision	Low precision	Low precision	Low precision	Cleaning range can not be designated
Safety/ environment friendly	No pollution	Chemical pollution	Environmental pollution	No pollution	No pollution
Manual operation	Easy to operate; handheld or automation	Complex cleaning procedures	Consumes labor cost, work hard	Easy to operate; handheld or automation	Easy to operate,but need to add consumables manually
Cost	No consumables,low maintenance costs	Initial investment is low, Consumables cost is extra high	Initial investment is high, consumables cost is low	Initial investment is middle, consumables cost is high	Initial investment is low, consumables cost is middle

### CLEANING CAPABILITY

Fiber laser cleaning machine is not only a laser rust removal tool, but it also used for laser paint removal, laser degreasing, laser removal of oxide layer, laser cleaning screw, laser weld-cleaning.

- Rust removal
- Clean rubber mold
- Clean metal parts
- Clean auto parts

- Rust removal
- Laser paint removal

#### **APPLICATION INDUSTRY**

- Shipbuilding industry
- Auto parts
- Rubber mold/tire mold
- Tracks
- High-end machine tools
- Other industries