

3D Puse Laser cleaning Barebone

3 D A U T O F O C U S L A S E R C L E A N E R

Barebone + Laser = Puse Laser Cleaner



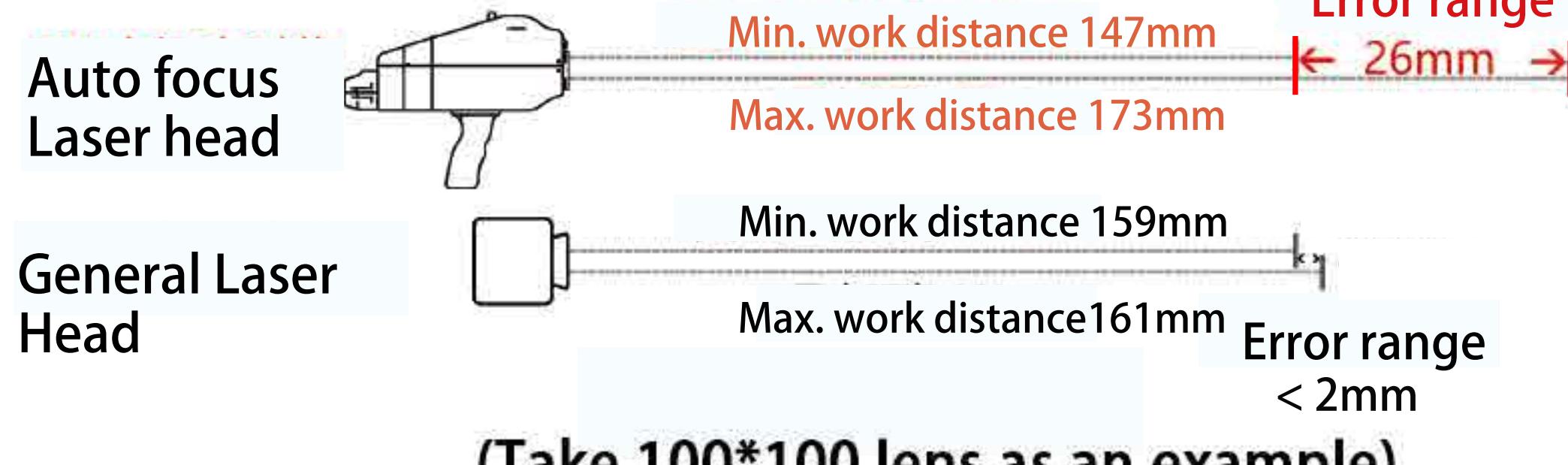
4 Breakthroughs

01 Longer Valid Clean Time

The focal length of general laser cleaning machines is less than 2mm, which easily exceeds the effective range during the cleaning process, resulting in failure to emit light, which prolongs the cleaning time. However, the variable focal length of the 3D cleaning head, combined with autofocus technology, can effectively clean within the focal length, ensuring effective light emission throughout the cleaning process.

The effective cleaning time is dozens of times that of ordinary laser cleaning!

Valid Cleaning Distance



(Take 100*100 lens as an example)

02 Easier operation

Generally, laser cleaning machines need to keep the distance between the laser head and the cleaning surface constant at all times. If there is a slight deviation, it will not be able to clean effectively, and the operation is very laborious. However, the barebone system uses auto-focus technology with the 3D cleaning laser head to automatically adjust the focal length position after detecting the position of the workpiece. Even if the hand shakes and the distance changes, it can still be effectively cleaned, making the operation easier.

03 Higher efficiency in rust and oil removal

General Laser cleaner

Laser Spot 0.1mm^2 •

The clean area per unit time is

Auto focus laser cleaner

The spot can be enlarge to $0.3\sim0.5\text{mm}^2$ •

The clean area per unit time is

The general 2D cleaning spot size is about 0.1mm^2 ; 3D automatic zoom cleaning can adjust the defocus value to make the spot larger than 0.3mm^2 . During cleaning, the actual cleaning area is dozens of times that of ordinary cleaning machines.

04 Cleaning, marking and deep engraving in one



The auto-focus laser cleaning system supports dual-mode switching between marking and cleaning, and can be used as a mobile deep-engraving marking machine. With the 3D head, the "deep engraving" function can be expanded, and the marking depth can be from 0.1~20mm.

Customers can switch with one click according to their needs, and the operation is simple;

Laser model selection

| | |
|-----------------------------|----------|
| Single mode | 200/300W |
| Single mode +Shaping | 200/300W |
| Multi-mode 5mJ | 200/300W |

Gaussian light, low thermal effect, suitable for general cleaning

Flat head light, will not damage the workpiece substrate, more suitable for precision mold cleaning

High thermal effect, little damage to workpiece, suitable for mold cleaning

3D Auto Focus Laser Head



10mm entry aperture, speed up to 10000mm/s

Aux. red light, easy to find focus

Valid focal length is from 2mm to 20-50mm

More responsive focusing and faster scanning.

2D Laser Head Selection



Horizontal light output, suitable for cleaning non-standard workpieces or complex working environments (such as curved surfaces, corners, slits, etc.);
Upgradable a non-damaging the substrate, suitable for precision mold cleaning



Vertical light output, compact and light, suitable for standard workpiece cleaning
Upgradable a non-damaging the substrate, suitable for precision mold cleaning



Built-in shaping equipment, changing the beam mode, non-destructive to the substrate, suitable for precision mold cleaning.
Cleaning can be combined with automatic cleaning, scanning is faster

Product Details

PRODUCT DETAILS



- ① Head fixing bracket
- ③ Start switch
- ② 3-color indicators
- ④ emergency stop switch



- ① Green : Workpiece is in the variable focal length;
- ② Red : Laser cleaning in progress;



- ① Dual red aux. beams, easy to focus;
- ② Distance sensor for auto focus;



- ① Blue: Auto focus switch;
- ② Red: Laser safety lock;



- ① Pull rod design, easy to move;
- ② Use DC current, no risk of leakage;



- ① Touch panel, neat and easy operation;
- ② Dual system mode, one-key switching;



- ① Support marking and deep engraving;
- ② Deep carving depth 0.1-20mm



- ① 5m optical cable, longer use distance
- ② Cable storage rack for easy storage

Sample Examples

THE SAMPLES SHOW



Oil cleaning



**Metal surface
paint cleaning**



Rust removal



Weld cleaning



Tire mold cleaning



Grease cleaning



**Metal surface
oxidation cleaning**



**Track rust removal
and cleaning**



Screw cleaning

Specifications

SPECIFICATION

AUTO FOCUS CLEANING SYSTEM SPECIFICATIONS

| | |
|----------------------|--|
| Scan head | Handheld 3D laser head; 2D laser head (Optional) |
| Speed | >8000mm/s |
| Cleaning speed | 100*100mm (Optional) |
| 2D/3D mode | Switching to 2D mode with aux. focus red beam; 3D with autofocus |
| Zoom range | 27mm (Variable) |
| Clean Path | Wave, standard, deorderty line type, import path |
| Clean mode | Rust, paint, oil, stain removal |
| Optical cable length | 5m |
| Power cable length | 5m (Extend to 10m is possible) |
| Power requirement | AC 110V~220V |
| Power consumption | <600W |
| Cooling method | Fan cooled |
| Dimension | Laser head: 299*83*223mm |
| | Cabinet: 499*230*678.5mm |
| Weight | Laser Head: 1.9kg |
| | Cabinet: 36kg |

Laser head size

