

# 4 in 1

Laser welding

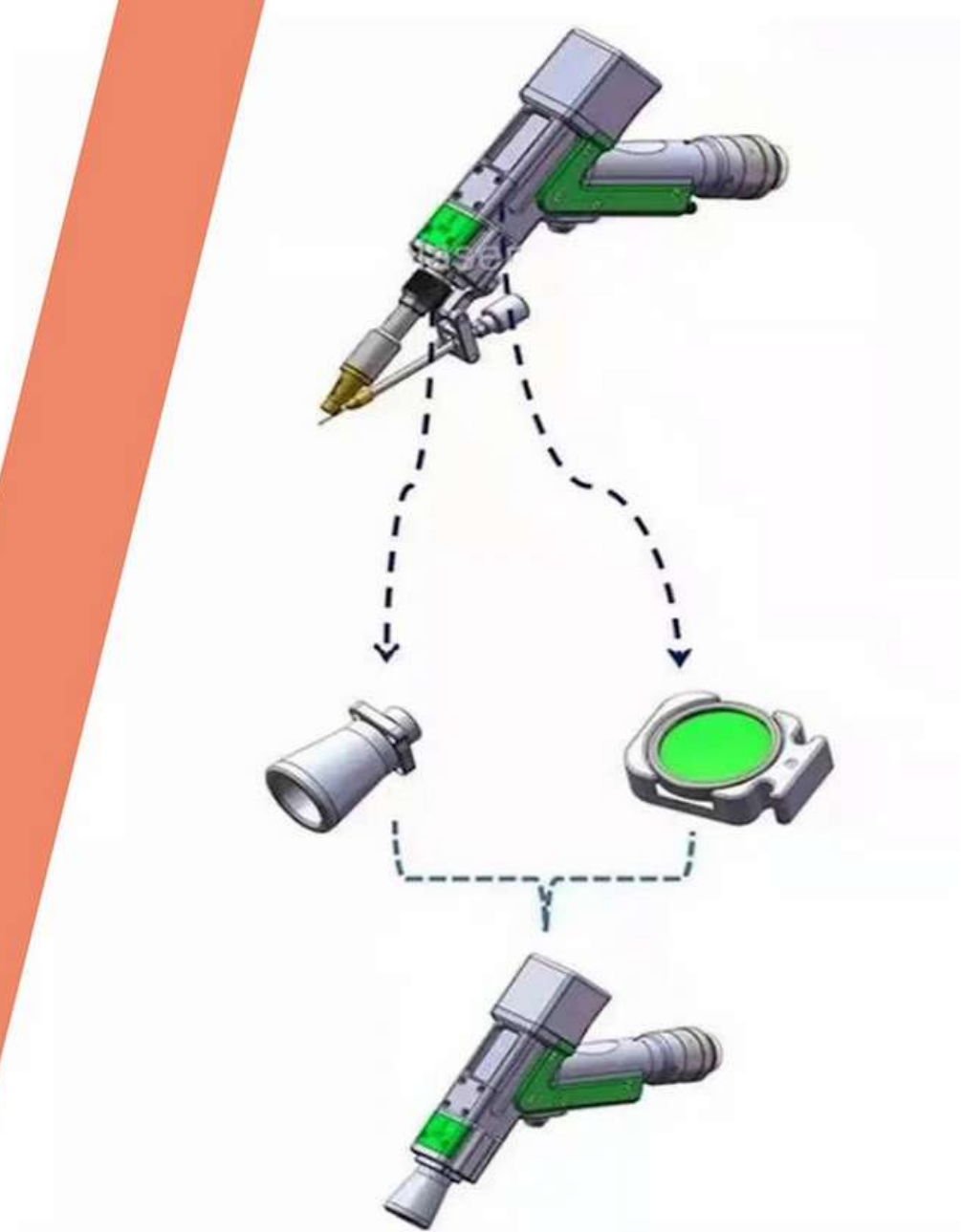
Laser cutting

Remote cleaning

Weldseam cleaning



Laser welding-cleaning-cutting ▪ Handheld



- Temperature monitoring
- Thicker protective lens
- Insert tool design

**Easy exchange**  
Between cutting & welding & cleaning

Our laser welding will bring you the faster welding speed,  
beautiful welding seam-no need polish, better welding quality

### Applicable industry

1. Hardware & hardware tools
2. Machine cabinet/body
3. Kithenware equipment
4. Steel storage rack
5. Stainless steel advertising letter
6. Metal door & windows
7. Sheet metal welding

### Applicable materials

1. Stainless steel
2. Galvanized sheet
3. Aluminum alloy
4. Titanium alloy
5. Carbon steel

# Welding

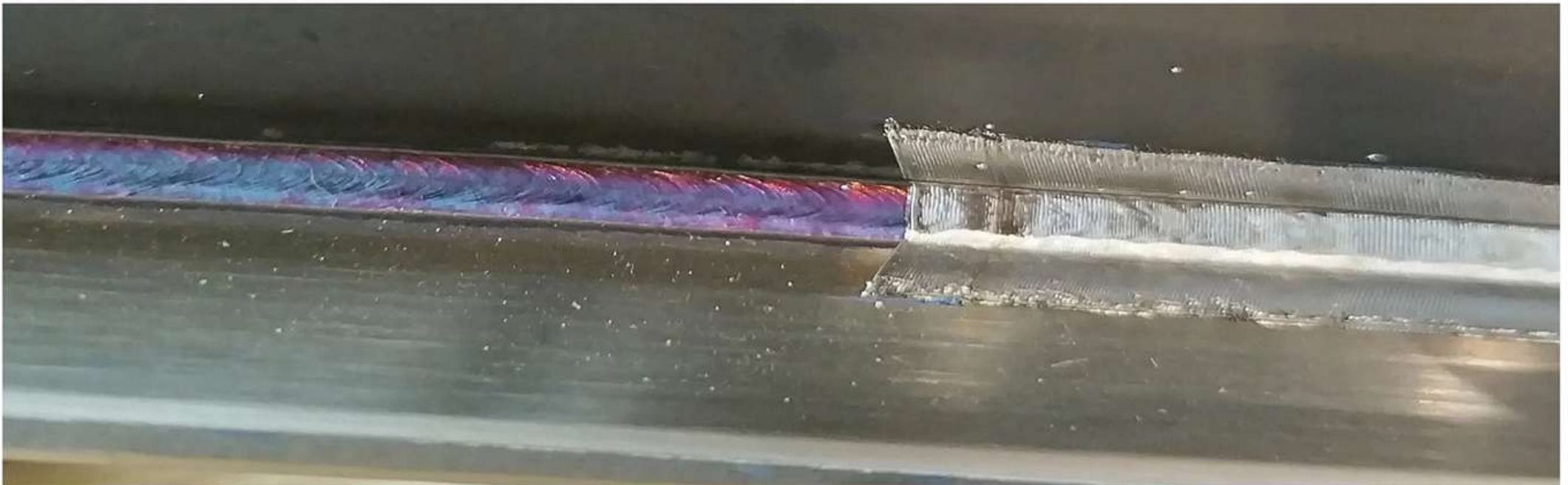




Remote cleaning commonly used for rusty removal and part of coating or painting removal, the cleaning width can reach 80mm

Weldseam cleaning is a new function with professional cleaning nozzle the cleaning width is 10mm

## Laser cleaning



Shift laser welding to laser cutting, what you need to do is changing the welding nozzle to cutting nozzle



*Laser cutting*

# Cleaning

# Comparison

# Welding

Items	Chemical Cleaning	Mechanical Grinding	Dry Ice cleaning	Ultrasonic Cleaning	Laser Cleaning
<b>Cleaning method</b>	Chemical agent	Mechanical/sandpaper, contact	Dry ice, non-contact	Cleaning agent, contact	Laser, non-contact
<b>Workpiece damage</b>	With damage	With damage	No damage	No damage	No damage
<b>Cleaning efficiency</b>	Low	Low	Medium	Medium	High
<b>Cleaning effect</b>	Uneven/Common	Uneven/Common	Uneven/Excellent	Uneven, Excellent, small range	Very good, high cleanliness
<b>Cleaning accuracy</b>	Uncontrollable	Poor accuracy and uncontrollable	General accuracy & uncontrollable	Poor accuracy Unspecified range cleaning	Precise controllable and high precision
<b>Safety/ Environmental</b>	Serious pollution	General pollution	No pollution	No pollution	No pollution
<b>Manual operation</b>	Complex process, high requirements for operators & protection	Heavy physical strength, need safety protection	Easy operation, handheld or automated	Easy operation, but needs add consumables manually	Easy operation, handheld or integrated automation
<b>Consumables</b>	Chemical agent	Sandpaper, grinding wheel, oil stone, etc.	Dry ice	Special cleaning fluid	Just electrical power
<b>Cost investment</b>	Low initial investment and extremely high cost of consumables	High initial investment, high labor cost & consumables	Medium initial investment, high consumables cost	Low initial investment and medium consumables cost	High initial investment, no consumables, low maintenance cost

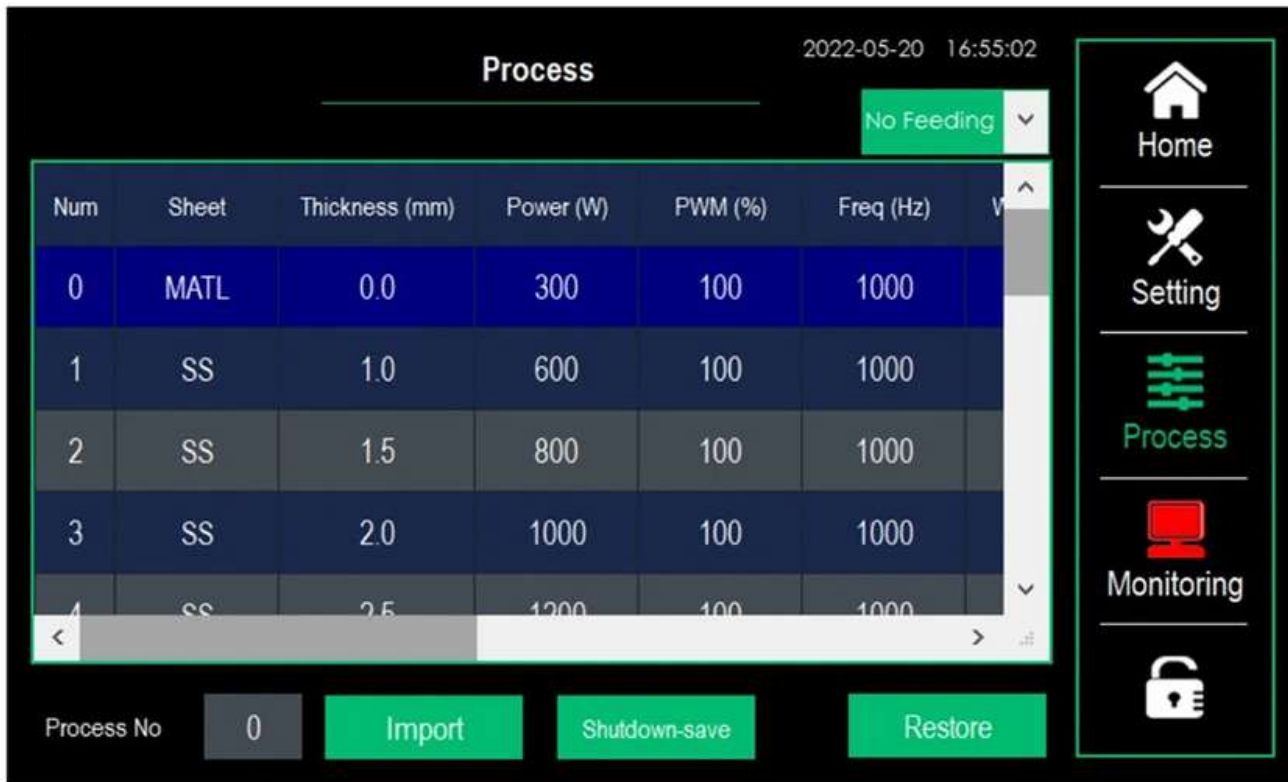
## Fiber laser welder VS YAG laser welder

Different welding machine	Solid YAG laser welding	Continuous fiber laser welding
Laser power	600w	1000w
Electro-optical conversion efficiency	3%	40%
Energy consumption	20KW	3.5KW
Electricity fee/hour (0.3usd per kilowatt hour)	20*1*0.3=6USD	3.5*1*0.3=1.05USD
Xenon lamp cost /year	923USD	0
Laser crystal /year	1,846USD	0
Comprehensive usage fee/year (22 days per month, 8 hours per day)	15,441USD	2,217USD

## Fiber laser welder VS Argon arc welder

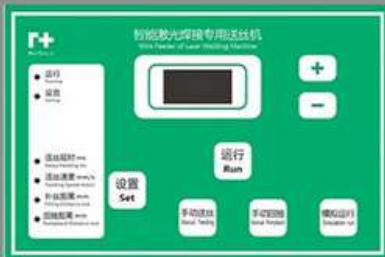
Different welding machine	Argon arc welding	Continuous fiber laser welding
Number of welders	2 welders (High requirement)	1 welder (Low requirement)
Welder's monthly salary/per welder	2000USD	1500USD
Number of polishing workers	1 worker	0
Polish workers' monthly salary	1500USD	0
Total monthly wages of workers	5500USD	1000USD
Total annual wages of workers	66000USD	18000USD



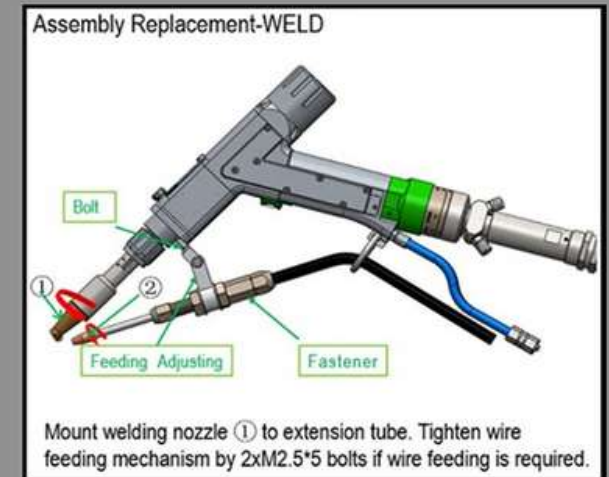


## Professional process package

No need set laser power, laser frequency, welding width, motor frequency one by one. Only need to select which material and its thickness on touch screen, then parameter setting will be coming out automatically



More stable wire feeding system  
Easy speed control  
Automatic feeding and withdraw



## Main interface of touch screen



More than 10-language for option such as English, Deutsch, Español, Polski, Français, Português, أريبيك, italiano, Tiếng Việt, 국인, 日本語, Русский, Arbic, Magyar, Tuerqi dili

4-in-1 laser, the 4 functions can be shifted on software directly-  
-Weld/Cut/ Remote Clean/  
WeldSeam Clean



# Models & spec

FAW-1000 (1000w)

FAW-1500 (1500w)

FAW-2000 (2000w)

FAW-3000 (3000w)

Series: Handheld FAW- series

Name : 4 in 1 laser welding machine

Welding width: 5mm max. welding width

Weldseam cleaning: 10mm max. width

Cleaning width: 80mm max. cleaning width

Cutting function: Cutting by handheld

Laser source: Raycus laser source as standard

Laser source option: JPT、MAX、 BWT

Cooling: Water chiller for cooling

Dispaly: 7" touch screen

Lauguage: More than 10 lauguages for optional

White/blue color cabinet: 96\*49\*68cm

White/gray color cabinet: 98\*58\*105cm

White/Red color cabinet: 118\*60\*121cm

**FAW-1000** 

For welding 0.5~2.5mm staineless steel

**FAW-2000** 

For welding 1-4.5mm stainless steel

**FAW-1500** 

For welding 0.5~3.5mm stainless steel

**FAW-3000** 

For welding 1-6mm stainless steel

