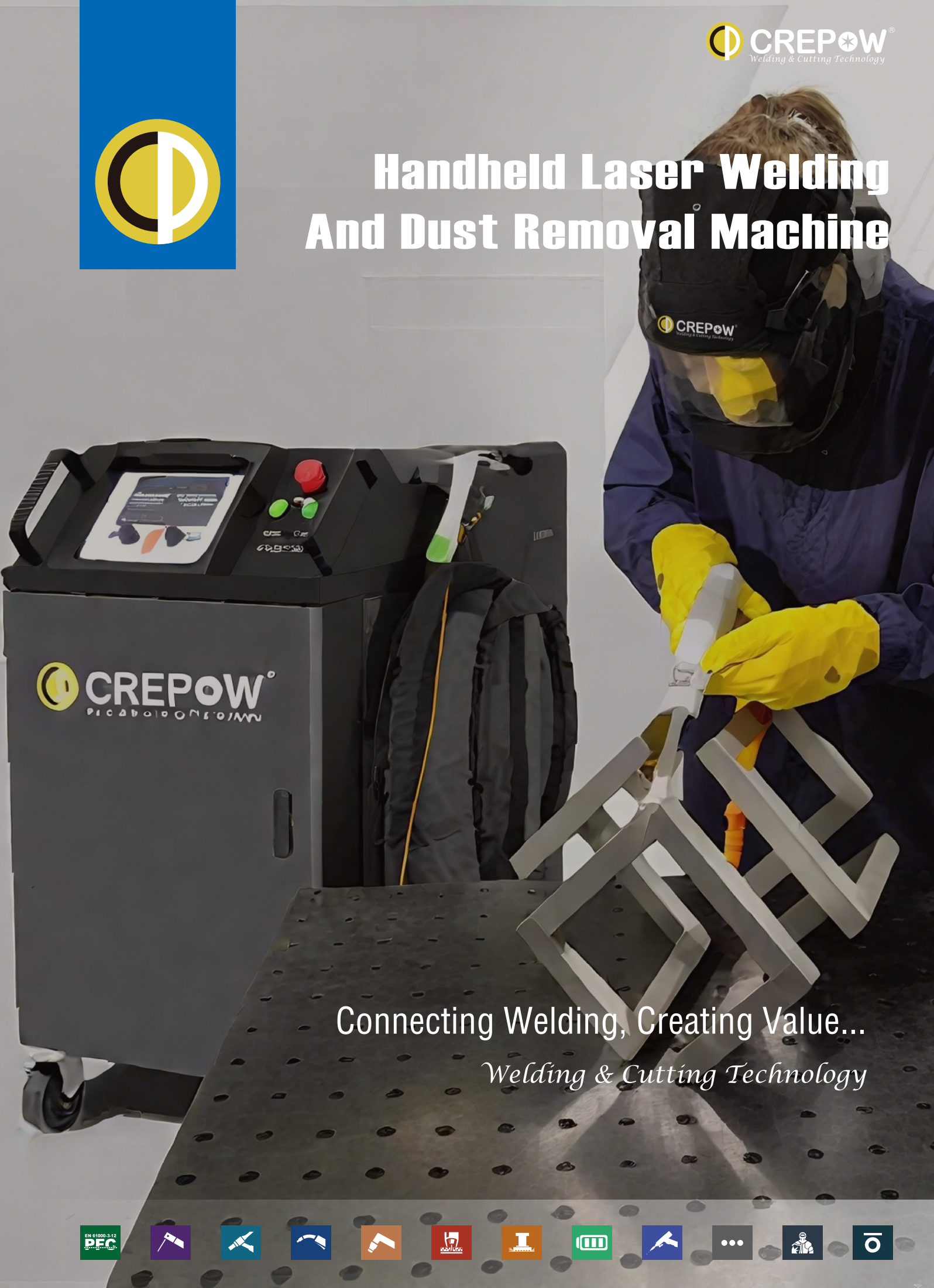
CREPOW
Welding & Cutting Technology

Handheld Laser Welding And Dust Removal Machine



Connecting Welding, Creating Value...

Welding & Cutting Technology

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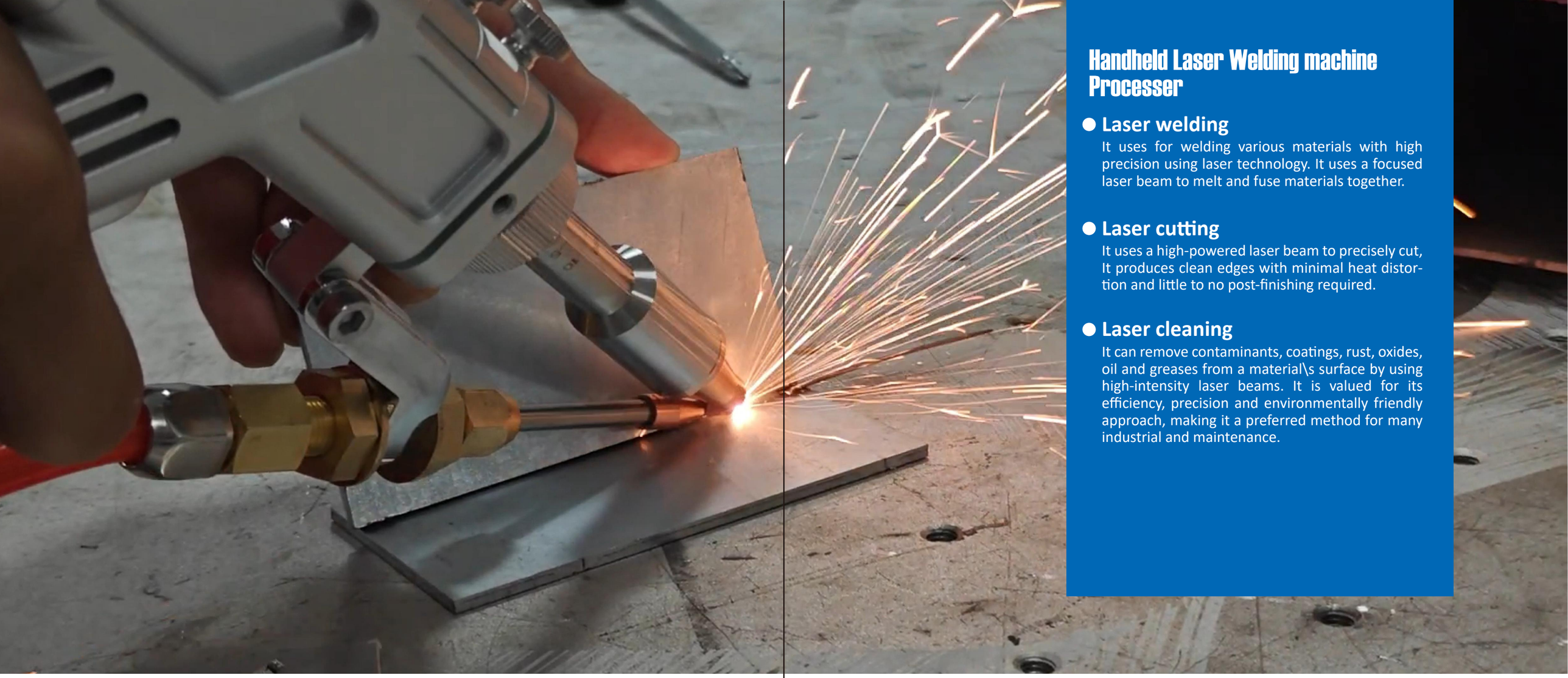
Handheld Laser Welding Machine

Handheld Laser Dust Removal Machine



Handheld Laser Welding machine Processer

- **Laser welding**
  It uses for welding various materials with high precision using laser technology. It uses a focused laser beam to melt and fuse materials together.

- **Laser cutting**
  It uses a high-powered laser beam to precisely cut, It produces clean edges with minimal heat distortion and little to no post-finishing required.

- **Laser cleaning**
  It can remove contaminants, coatings, rust, oxides, oil and greases from a material\s surface by using high-intensity laser beams. It is valued for its efficiency, precision and environmentally friendly approach, making it a preferred method for many industrial and maintenance.

Handheld Laser Welding Machine

Handheld laser welding machines are compact, it uses for welding various materials with high precision using laser technology. It uses a focused laser beam to melt and fuse materials together. Shield gas can be Argon or Nitrogen.

Air-cooled handheld laser welding machines are typically better for portability and simpler applications.
Water-cooled handheld laser welding machines excel in high-performance, continuous-duty environments where superior cooling is necessary.

CE

Handheld Laser Welding Machine Features

Simple Operation
Simple and easy to learn for beginners without welding skills, it allows beginners to make welds like seasoned pros. It saves labor cost on skillful welders.

High Safety
It is safe for operator without arc radiation.

High Precision
Laser welding provides a focused, narrow beam that allows for precise control over the weld, resulting in high-quality and aesthetically pleasing welds.

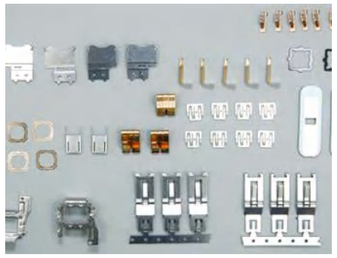
Minimal Heat-Affected Zone (HAZ)
The concentrated laser beam minimizes the heat spread to surrounding areas, reducing distortion and thermal damage.

Low Post-Weld Cleanup
Less spatter and contamination mean reduced need for post-weld cleaning and finishing.

Variety of Processes
Processes of one machine includes Welding, cutting and cleaning.

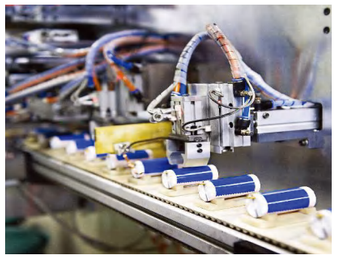
What are the Handheld Laser Welding machine applications?

Metal Processing

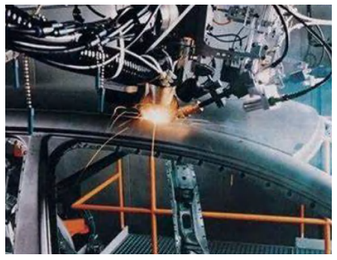


Electronics Welding

Construction Industry



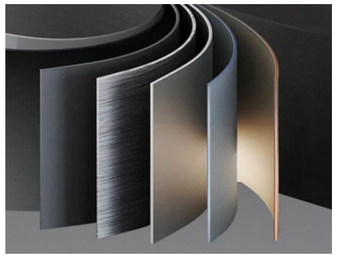
New Energy Industry



Automotive Manufacturing and Repair

Metal workshop

What are the Handheld Laser Welding machine welding Metal types?



Stainless Steel

Aluminum Alloy

Carbon Steel

Aluminum Sheel

Other Metals

What are the Laser Safe Modular Enclosures?

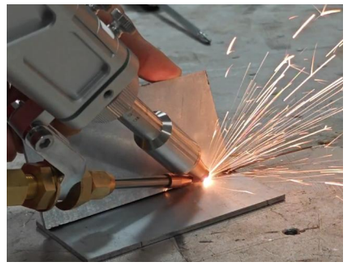
Laser safety cabins

Welding Tables

Welding Goggles

PPE and Welding Fume Extraction

Application Cases



Laser welding

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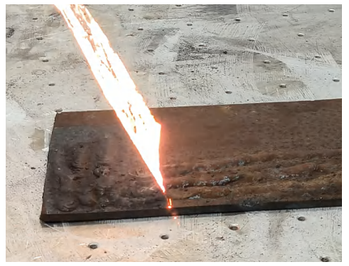
Laser cutting

It uses a high-powered laser beam to precisely cut, It produces clean edges with minimal heat distortion and little to no post-finishing required.



Laser cleaning

It can remove contaminants, coatings, rust, oxides, oil and greases from a material\surface by using high-intensity laser beams. It is valued for its efficiency, precision and environmentally friendly approach, making it a preferred method for many industrial and maintenance.

Advantages and Benefits Handheld Laser Welding Machines vs Inverter Welding Machines

Description	Laser Welding machine	Traditional Welding machine
Speed	Fast-over 4 times faster than TIG	Average
Quality	Consistent, high quality results	Depending on user's experience and skills
Learning curve	Quick and easy	Steep
Part set-up	Minimal and fast	Critical and time-consuming
Material Flexibility	Wide range with no set-up	Limited with consumables changes
Heat affected zone	Small	Large
Distortion & deformation	Very low	High
Wobble welding	Yes up to 5mm	No
Pre-cleaning	Yes, removes rust, oxides, oil and greases	No
Post-weld finish	Yes, removes rust, oxides, oil and greases	No

HLW A700-RL

Product Features

- The machine features a simple and user-friendly design, allowing for easy operation.
- Simple operation; non-professionals can be operational after just 2 hours of training.
- Equipped with electrical components from renowned brands.
- Welding speed is 2 to 5 times faster than traditional welding.
- Equipment boasts a long service life of up to 100,000 hours.
- Triple safety protection ensures modular control and secure maintenance.

Model	HLW A700-RL
Wavelength (nm)	1060-1080
Laser Power (W)	700
Fiber Length (m)	10
Head Weight (kg)	0.7
Cooling Method	Air Cooling
Operating Environment	-20℃~45℃， Humidity＜ 70%
Power Requirements	220V
Maximum output power(W)	750
Overall Dimensions (nm)	520*232*410
Total Weight (kg) ±20	25
Safety Level	Class IV
Total Power Protection Level	IP54

HLW A1000/A1500-MAX

Product Features

- The machine features a simple and user-friendly design, allowing for easy operation.
- Simple operation; non-professionals can be operational after just 2 hours of training.
- Equipped with electrical components from renowned brands.
- Welding speed is 2 to 5 times faster than traditional welding.
- Equipment boasts a long service life of up to 100,000 hours.
- Triple safety protection ensures modular control and secure maintenance.

Model	HLW A1000 - MAX	HLW A1500 - MAX
Wavelength (nm)	1060-1080	1060-1080
Laser Power (W)	1000	1500
Fiber Length (m)	10	10
Head Weight (kg)	0.7	0.7
Cooling Method	Air Cooling	Air Cooling
Operating Environment	Temperature: 10-35°C, Relative Humidity: 30%≤RH≤85%	Temperature: 10-35°C, Relative Humidity: 30%≤RH≤85%
Power Requirements	220V±5%，50Hz	220V±5%，50Hz
Total Power	7	7
Overall Dimensions (nm)	540*353*532	790*376*623
Total Weight (kg) ±20	35	67
Safety Level	Class IV	Class IV
Total Power Protection Level	IP54	IP54

HLW 1500W/2000W/3000W - MAX

Model	HLW1500W-MAX	HLW2000W-MAX	HLW3000W-MAX
Laser Power (W)	1500	2000	3000
Operating mode	Continuous/Modulated	Continuous/Modulated	Continuous/Modulated
Central Emission Wavelength (nm)	1070-1090	1070-1090	1070-1090
Pulse Frequency (Hz)	50-5000	50-5000	50-5000
Cooling Method	Water Cooling	Water Cooling	Water Cooling
Output Fiber Length (m)	10 (Vulnerable 8)	10 (Vulnerable 8)	10 (Vulnerable 8)
Output Power Stability	<3%	<3%	<3%
Power Requirements	AC 200-240V (Single Phase)	AC 200-240V (Single Phase)	380v
Beam Quality	1.1	1.1	1.1
Focus Beam Diameter (mm)	0.3-1.5 (Adjustable)	0.3-1.5 (Adjustable)	0.3-1.5 (Adjustable)
Net weight(kg)	150	180	200
Dimensions(mm)	950*750*800	950*750*1030	1260*750*1260

HLW-1500W-VIDDA

Working Principle

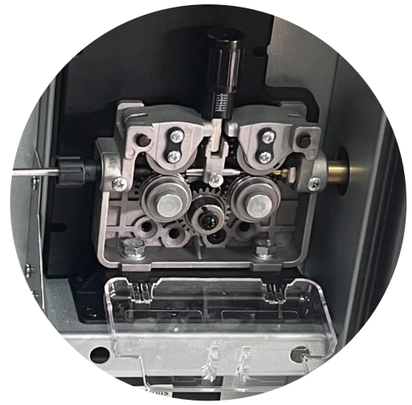
The light from the laser is transmitted through the optical fiber to the handheld laser welding gun,where it emits the laser. The laser transforms into heat, which is then transferred to the surface of thework-piece, causing it to melt or the welding wire to melt. This, aided by an inert gas for cooling, resultsin the formation of a welded joint, firmly bonding the two objects together.

Characteristics Advantages

- Simple and easy to learn, no welding certificate required, no need for professional welders.
- No need for a face shield, no arc radiation.
- Smooth and aesthetically pleasing welds, minimal or no need for grinding.
- By controlling laser energy, welds remain non-deformed or have minimal deformation.
- Low operating cost, low consumption of electricity, gas, and consumables like lenses.
- Fiber optic cable extends up to 10 meters,extendable to 15 meters as require.
- Multiple welding processes available, fillet welding, groove welding, circular welding, and more.
- The welding speed for metals such as stainless steel, mild steel, and galvanized sheet.
- For aluminum alloy welding with aluminum wire, the welding speed is 1.2 - 2 meters per minute.

Model	HLW-1500W-VIDDA
Wavelength (nm)	1080±10
Cable length	10m or Customized
Output connectors	QBH or Customized
Output core diameter	20um or Customized
Indicator light	Red
Working mode	Continuous or modulated
Direction of polarization	Random
Power adjustment range	10%~100%
Output Power Stability (25°CC)	< 3% (2h)
Maximum modulation frequency	5kHz
Weight(kg)	185KG
Dimensions(mm)	115*105*106
Voltage	220+20VAC,PE,50HZ
Power consumption	5.0kW
Control mode	R5-232/AD
QBH water-cooled refrigeration capacity requirements	≥250W(QBH Water conditions)
QBH ventilatory flow	≥5.0L/min
Output head trachea size	ϕ6mm
Stored at temperature	-20-+60C
Operating temperature	-10-40C
Relative humidity	10-90%

HLW A800-GW



High quality, more stable

Adopting high-quality fiber laser with excellent beam quality,it can operate continuously and stably for 24 hours. The entire machine is guaranteed for one year, and the fiber laser is guaranteed for two years (excluding equip-mentvulnerable parts and consumables)

Integration

This product integrates the laser welding machine and wire feeder into one, double-drive single-pressure handle mechanism for more stable wire feeding, compact structure, light weight, can be equipped with a remote control box, intelligent control, easy to operate.

Energy saving maintenance-free

Low power consumption, more energy saving,Real air cooling, no freon addition, mainte-nance-free, more green.

Model	HLW A800-GW
Power supply	220V±10% 50Hz/ 60Hz
Input power	3KW
Laser generator brand	GW
Output laser power	800W
Laser type	Fiber laser
Working mode	Continuous /Pulse/self-setting pulse
Laser wave length	1070nm± 10
Output light spot quality	BPP≤1.5 50 micron fiber output
Welding wire diameter	0.8/1.0/1.2
Adjust frequency(HZ)	3000
Fiber core diameter	50-100um
Cooling method	Air cooling
Core diameter	50um/10m
Shield gas	Argon, Nitrogen
Welding gap requirements	≤2.0mm
Welding thickness	SS≤2.0mm,AL≤2.0mm,CS≤2.0mm
Working temperature(℃)	10-45
Application material	Carbon steel/Stainless steel/Aluminum/Copper/Galvanized sheet
Welding gun head	SUP Laser
Dimensions (mm)	680*360*680
Net weight (kg)	38

HLW A1500-GW

Legerity and portable

This machine is compact and lightweight,easy to operate, and can be flexibly equipped with a wire feeder, gas cylinder,and other integrated car modes. It supports wireless remote control boxes.

Energy saving

This machine is air-cooled, without Freon, low power consumption,maintenance free, energy saving and environmental protection.

Superior Performance

Adopting high-quality fiber laser with excellent beam quality, it can operate continuously and stably for 24 hours. The entire machine is guaranteed for one year, and the fiber laser is guaranteed for two years(excluding equipment vulnerable parts and consumables)

Interconnected operationt

The wire feeder communicates with the power source through 485 communication protocol and 10m communication lines. The parameters in power source can be changed through the wire feeder.

Stable wire feeding

Equipping with measuring feedback motor indouble-drive and single-pressure handle design.

Model	HLW A800-GW
Power supply	220V±10% 50Hz/ 60Hz
Input power	4.5KW
Laser generator brand	GW
Output laser power	1500W
Laser type	Fiber laser
Working mode	Continuous /Pulse/self-setting pulse
Laser wave length	1075nm± 10
Output light spot quality	BPP≤1.5 50 micron fiber output
Welding wire diameter	0.8/1.0/1.2/1.6
Adjust frequency(HZ)	3000
Fiber core diameter	50-100um
Cooling method	Air cooling
Core diameter	50um/10m
Shield gas	Argon, Nitrogen
Welding gap requirements	≤5.0mm
Welding thickness	SS≤5.0mm,AL≤4.0mm,CS≤5.0mm
Working temperature(℃)	10-45
Application material	Carbon steel/Stainless steel/Aluminum/Copper/Galvanized sheet
Welding gun head	SUP Laser
Dimensions (mm)	680*360*490
Net weight (kg)	43

HLW 1500W-GW/2000W-GW/3000W-GW

Parameter guidance

Built-in expert synergic parameters,including four materials of stainless steel, carbon steel,aluminum and galvanized sheet, with thickness need from 0.8mm to 8mm.

New appearance

Compact structure, strong practicality, light in weight and easy to move.

Energy saving

It is more economical.With the 976nm pumping scheme,the photoelectric conversion effciency is more than 42%.Compared to 915nm pumps with the photoelectric conversion effciency of about 30%, the 1kw-3kw laser saves electricity 20,000kW·h.

Interconnected operation

The wire feeder communicates with the power source through 485 communication protocol and 10m communication lines. The parameters in power source can be changed through the wire feeder.

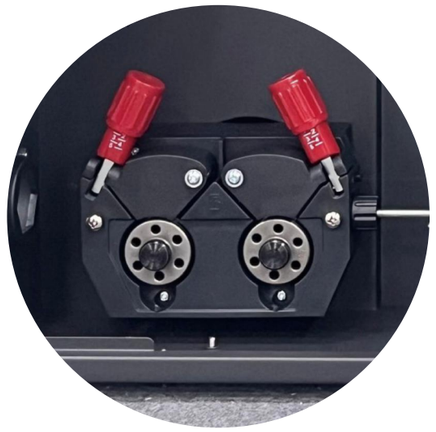
Stable wire feeding

Equipping with measuring feedback motor in double-drive and single-pressure handle design.

Model	HLW1500W-GW	HLW2000W-GW	HLW3000W-GW
Power supply	220V±10% 50Hz/ 60Hz	380V±10% 50Hz/ 60Hz	380V±10% 50Hz/ 60Hz
Input power	5.9KW	7.5KW	11.5KW
Laser generator brand	GW	GW	GW
Output laser power	1500W	2000W	3000W
Laser type	Fiber laser		
Working mode	Continuous /Pulse/self-setting pulse		
Laser wave length	1075nm± 10		
Output light spot quality	BPP≤1.5 50 micron fiber output		
Welding wire diameter	0.8/1.0/1.2/1.6		
Adjust frequency(HZ)	3000		
Fiber core diameter	50-100um		
Cooling method	Water cooling		
Cooling hydraulics(bar)	5-6		
Core diameter	50um/10m		
Shield gas	Argon, Nitrogen		
Welding gap requirements	≤5.0mm		
Welding thickness	SS≤5.0mm,AL≤4.0mm,CS≤5.0mm	SS≤8.0mm,AL≤5.0mm,CS≤7.0mm	SS≤10.0mm,AL≤6.0mm,CS≤8.5mm
Working temperature(℃)	5-45		
Application material	Carbon steel/Stainless steel/Aluminum/Copper/Galvanized sheet		
Welding gun head	SUP Laser		
Dimensions (mm)	750*600*1000	750*600*1000	950*600*1150
Net weight (kg)	130	147	180

HLW-WF-MAX-A

Multifunctional automatic wire feeder



Features

Touch display, four-wheel dual-drivewire feeding mechanism, wire feedingspeed continuously adjustable from15-600cm/min, supporting continuouswire feeding mode and pulse mode.

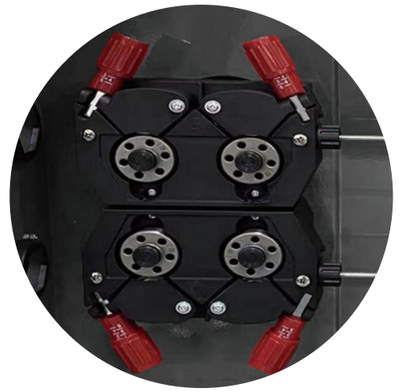
Support wire diameter

0.8/1.0/1.2/1.6mm
2.0/2.5mm can be customized

Model	HLW-WF-MAX-A
Rated input	220±5%50/60hz
Maximum power and current	60W/2.5A
Rated wire feed speed	15~600cm/min
Applicable welding wire	0.8/1.0/1.2/1.6mm(standard)
	2.0/2.5mm(custom made)
Applicable wire spool	Shaft diameter:MIN50mm
	outer diameter:MAX300mm
	width:MAX105mm
	weight: ＜20kg
Product Size	13.2kg
Product Name	560mm*250mm*350mm

HLW-WF-MAX-D

Multifunctional double wire automatic wire feeder



Features

Touch display, wire feeding speed iscontinuously adjustable from15-600cm/min, supports continuouswire feeding mode, pulse mode, singlewire mode, double wire mode,supports double wire synchronousadjustment.

Support wire diameter

0.8/1.0/1.2/1.6/2.0mm

Dual wire

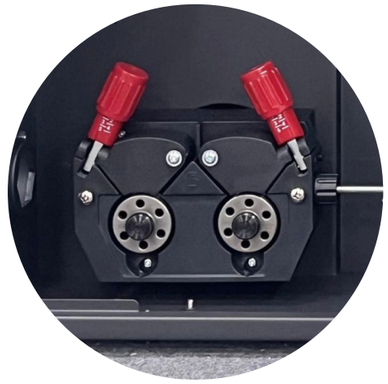
Support wire diameter

1.6/2.0mm
2.5mm can be customized

Model	HLW-WF-MAX-D
Rated input	220±5%50/60hz
Maximum power and current	150W/6.5A
Rated wire feed speed	15~600cm/min
Applicable welding wire	0.8/1.0/1.2/1.6mm(single wire feed)
	1.6/2.0/2.5 mm (double wire feed)
Applicable wire spool	Shaft diameter:MIN50mm
	outer diameter:MAX300mm
	width:MAX105mm
	weight: ＜20kg
Product Size	30kg
Product Name	575mm*250mm*670mm

HLW-WF-VIDDA

Multifunctional automatic wire feeder



Features

Touch display, four-wheel dual-drivewire feeding mechanism, wire feedingspeed continuously adjustable from15-600cm/min, supporting continuouswire feeding mode and pulse mode.

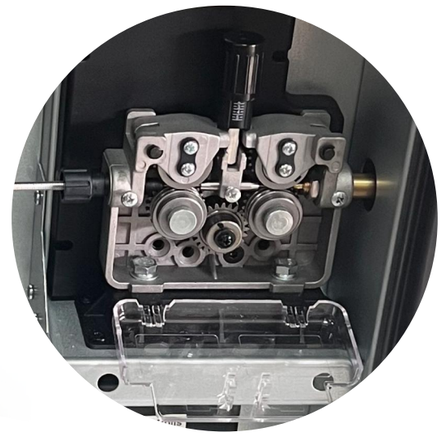
Support wire diameter

0.8/1.0/1.2/1.6mm
2.0/2.5mm can be customized

Model	HLW-WF-VIDDA
Rated input	220±5%50/60hz
Maximum power and current	60W/2.5A
Rated wire feed speed	15~600cm/min
Applicable welding wire	0.8/1.0/1.2/1.6mm(standard)
	2.0/2.5mm(custom made)
Applicable wire spool	Shaft diameter:MIN50mm
	outer diameter:MAX300mm
	width:MAX105mm
	weight: ＜20kg
Product Size	13.2kg
Product Name	560mm*250mm*350mm

HLW-WF-GW

Wire feeder for laser welder



Product Features

- High-precision wire feeding motor4 Rolls.
- Single-pressure handle.
- Interactive interface LCD screen and accurate speed regulation.

Model	HLW-WF-GW
Parameters	
Motor powera(W)	50
Rated voltage(V)	24
Wire feed speed (m/min)	0.25-6
Wire feed diameter (mm)	0.8-1.6
Welding wire material	Carbon steel, Stainless steel, Aluminum,Silicon bronze
Input power	230V,50HZ
Spool weight (kg)	5-20
Dimensions(mm)	600*250*380
Net weight (kg)	13.5
Protection class	IP21S

Instruction of SCL-1500 water cooler

Working conditions

- Temperature” 0-45 ℃
- Relative humidity:≤90%
- Altitude: ≤3000m

Water quality requirements and risk warnings

The secondary refrigerant must be softened water, such as purified water, distilled water, high-purity water, etc Recommended water quality parameters: PH 7.2-8.1, CONDUCTIVITY 10-500Us/cm, chloride concentration less than 50mg/L.

If the water quality is not as above required, the risks could be as below,

- Tap water or impure water will form scale after high temperature heating, and the scale will affect the internal purity of the laser head and cause the laser head to burn out.
- Microorganisms will breed in the water tank, which will attach to the plate changer and laser through the water circulation, affecting the heat exchange effect. As the microorganisms continue to multiply, it will cause plate replacement and laser blockage, resulting in laser high temperature alarm.
- If the tap water is acidic or alkaline, it may corrode the cold plate of laser, and the solid oxides generated by the reaction will seriously block the internal channel of the plate, resulting in high system pressure and even water leakage.

Antifreeze requirement

- It is allowed to add a volume ratio of ≤30% ethylene glycol or a volume ratio of ≤20% ethanol.
- It is allowed to add preservatives and bactericides approved by the manufacture.
- It is strictly prohibited to use antifreeze with a volume ratio of >30%, it is strictly prohibited to use oil and oil-based liquids.
- It is strictly prohibited to use flammable and explosive liquids.
- It is strictly prohibited to use liquids with solid particles, especially liquids that are corrosive to aluminum and stainless steel.

Laser Generators

Adopting 976nm Pumping technology, E0 conversion eficiency> 40%, with higher beam qualty, high stabitly of laser output, higher integralion, moreopt mized structure, one-piece fully closed design, space-saving, more user-friendly use and maintenance

Product characteris:

- 976nm Pumping technology, E0 conversion efficiency>42%
- ABR technology for various high-reflective material
- PLUS series is optimized for thin and mid-thick sheet cutting process,better performance
- Customized delivery fiber core diameter for various application requirement
- IoT integration technology, remote service
- Real-time response time<5us, with power ramp-up & down

Product Feature

Premium components, superior performance and longer lifetime

Up to 3KW Output From CW Single Module Series

Better beam quality vs. multi module lasers
Greatly improved efficiency

Excellent Material Processing Performance

High speed in thin sheet cutting
Strong capability in thick material processing

Compact Design, Maintenance Free

Highly integrated system with modular design
Easy maintenance significantly reduce TCO

Smaller Size with Higher Stability

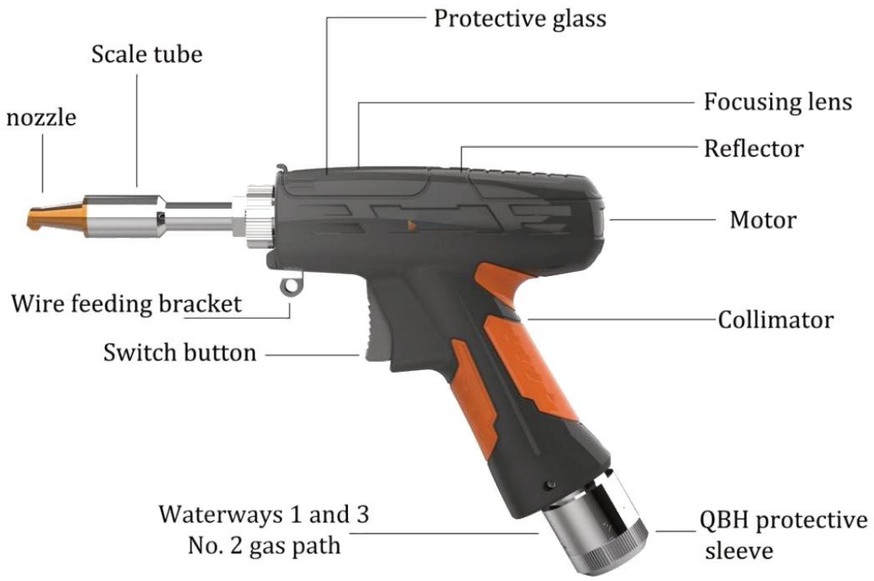
>60% reduction in volume
Higher flexibility when integrated in to system

High Level Vertical Integration

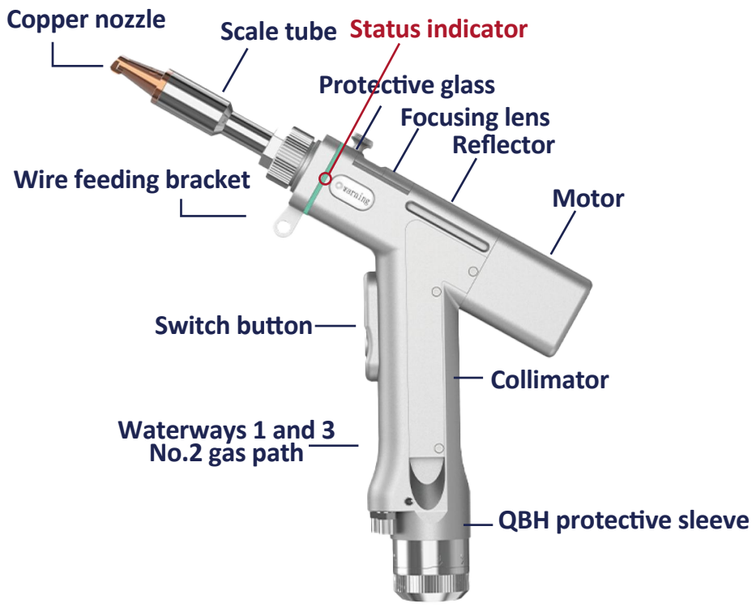
All key components are designed and produced in house
Strict quality control, high consistency and reliability

Handheld Laser Welding Heads

SUP21T (Handheld laser welding head (4-in-1) Power level 300W)



SUP23T (Handheld laser welding head (4-in-1) Power level 300W)



- **Safe -Foolproof**
  Independently Developed Safety Detection System With Built-In Real-Time Temperature Monitoring.

- **Save Time-Efficient And Convenient**
  The Focusing Mirror And Protective Mirror Are Drawer-Like, And The Collimating Mirror Is Integrated With TheQBH And Is Removable For Easy On-Site Replacement.

- **Lightweight-Lightweight And Less Burdensome**
  Compared With The Previous Generation, The Weight IsFurther Reduced,The Operation Is More Flexible, TheHand Is Easier To Use, And The Grip Is More Comfortable.

- **Quality-Beautiful Welding**
  Stable Performance, Further Optimized OpticalStructure, High Welding Strength, Small Deformation,High Penetration.

- **Performance -Multiple Functions**
  Supports Handheld Continuous Welding, Spot Welding,Cleaning,Weld Bead Cleaning, Cutting,"Hand" And"-Self" Integration,Password Authorization, Real-TimeMonitoring Of All Interfaces,Convenient On-SiteMaintenance,And Remote Support.

 Description:Copper Nozzle Model:AS-12 Function:Welding Wire diameter:≤1.2mm Welding position:Flat corner welding Internal corner welding Outside corner welding	 Description:Copper Nozzle Model:BS-16 Function:Welding Wire diameter:1.6mm Welding position:Flat corner welding Internal corner welding Outside corner welding	 Description:Copper Nozzle Model:CS-12 Function:Welding Wire diameter:≤1.2mm Welding position:Outside corner welding	 Description:Copper Nozzle Model:ES-12 Function:Welding Wire diameter:≤1.2mm Welding position:Outside corner welding
 Description:Copper Nozzle Model:FS-16 Function:Welding Wire diameter:1.6mm Welding position:Outside corner welding	 Description:Copper Nozzle Model:AS-20 Function:Welding Wire diameter:2.0mm Welding position:Flat corner welding Internal corner welding Outside corner welding	 Description:Copper Nozzle Model:C Function:Welding Welding position:Outside corner welding	 Description:Cutting Tip C Model:C Function:Cutting	 Description:Scale tube Focus: F150 Application: 23T/21T

Handheld laser dust removal machine Advantage

- **Non-Contact Cleaning**
  The laser does not physically touch the surface, reducing the risk of damage, especially on delicate or sensitive material.
- **Non-Abrasive**
  Since it is a non-abrasive method, it preserves the integrity of the surface, avoiding wear and tear that can occur with mechanical cleaning methods.
- **Versatility**
  Effective on a wide range of materials, including metals, stone and composites. It can remove various types of contaminants likes rust, paint, and oxides.
- **Speed**
  Laser cleaning can be faster than traditional methods, especially for large or complex surfaces, improving overall productivity.
- **Cost-Effective**
  Although the initial investment may be high, the long-erm saving from reduced maintenance, no consumables, and lower labor costs can be significant.
- **Safety**
  When properly shielded, laser cleaning is safe for operators, reducing exposure to hazardous chemicals or particulates.

Handheld laser dust removal machine

Handheld laser dust removal machine is a portable cleaning technology that uses laser energy to remove dust, contaminants, rust, paint, oxides, and other unwanted materials from surfaces. It is a non-contact, non-abrasive method that offers precision and efficiency, making it suitable for a wide range of applications across various industries.

Handheld laser dust removals offer a portable, efficient, and precise solution for these applications, making them invaluable tools in industries requiring high standards of cleanliness and surface preparation.

Handheld Laser Dust Removal Machine applications

Automotive Industry

- Rust and Paint Removal
  Efficiently removing rust, paint, and coatings from car bodies, engines, and parts.
- Welding Preparation
  Cleaning surfaces before welding to ensure strong, clean joints.

Aerospace Industry

- Component Maintenance
  Cleaning turbine blades, engine parts, and other critical components to remove contaminants and oxides
- Surface Preparation
  Preparing surfaces for coatings or inspections.

Metalworking and Manufacturing

- Mold Cleaning
  Removing residues and contaminants from molds and dies used in injection molding and casting.
- Surface Treatment
  Preparing metal surfaces for painting, coating, or bonding by removing oxides and impurities.

Shipping Industry

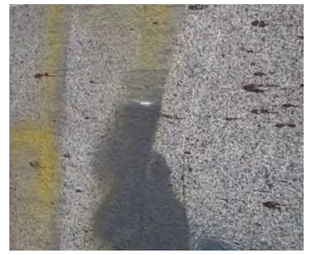
- Corrosion Removal
  Removing rust and corrosion from ship hulls, decks, and other metal structures.
- Surface Preparation
  Preparing surfaces for painting or coating to prevent future corrosion.

Cultural Heritage Restoration

- Artwork and Sculptures
  Removing dirt, soot, and old varnish from paintings, statues, and historical artifacts without damaging the original materials.
- Monuments and Buildings
  Cleaning stone, marble, and other architectural elements to restore their original appearance.

Construction and Maintenance

- Facade Cleaning
  Cleaning building exteriors, including glass, metal, and stone surfaces.
- Graffiti Removal
  Removing graffiti from various surfaces without damaging the underlying material.



Jewelry and Watchmaking

- Detail Cleaning
  Cleaning intricate designs and hard-to-reach areas in jewelry and watches.
- Restoration
  Removing tarnish and oxidation to restore the original luster of precious metals and gemstones.

Comparison of traditional dust removal and laser dust removal

Traditional dust removal is cost-effective for general-purpose and heavy-duty cleaning but may lack precision and pose environment and safety concerns.

Laser dust removal offers superior precision, versatility and environmental benefits, making it ideal for specialized applications.

Description	Traditional Rust removal	Laser Rust Removal
Mechanism	Physical/chemical abrasion	Laser ablation/vaporization
Precision	Limited	High
Surface damage	Possible	Minimal to none
Environmental impact	Chemical waste, pollution	Eco-friendly, minimal waste
Efficiency	Slower, multi-step process	Faster, single-step process
Versatility	Material/contaminant dependent	Works on most materials and contaminants
Cost	Lower initial cost, higher long-term cost	Higher initial cost, lower long-term cost
Safety	Exposure to chemicals/abrasives	Safer with proper precautions
Applications	General-purpose, heavy duty cleaning	Precision, delicate, specialize tasks
Maintenance	Regular maintenance required	Low maintenance

HLCX-1000W/1500W/2000W

Net weight 130 kg

Gross weight 175 kg

Model	HLCX-1000W	HLCX-1500W	HLCX-2000W
Laser source type	Fiber source	Fiber source	Fiber source
Laser Out Power	1000W	1500W	2000W
Laser wavelength	1070~1090nm	1070~1090nm	1070~1090nm
Laser Source	Raycus/Max/Kaiprin optional	Raycus/Max/Kaiprin optional	Raycus/Max/Kaiprin optional
Fiber optic cable length	10m (8m exposed)	10m (8m exposed)	10m (8m exposed)
Scanning width (mm)	Single Pendulum/Double Pendulum Optional; double pendulum 0-50, single pendulum 0-150		
Laser frequency	1-5000Hz	1-5000Hz	1-5000Hz
BPP(M2)	1.5	1.5	1.5
Whole machine power consumption	6KW	8KW	10KW
Electricity demand	220V	220V	220V/380V
Operating mode	continuous/modulation	continuous/modulation	continuous/modulation
Cooling method	Water Chiller Hanli	Water Chiller Hanli	Water Chiller Hanli
Continuous operating time	24 hours	24 hours	24 hours
Weight	180kg	180kg	200kg
Dimensions	950*750*800mm	950*750*800mm	950*750*1030mm

HLCX-3000W

Net weight 180 kg

Gross weight 265 kg

Model	HLCX-3000W
Laser source type	Fiber source
Laser Out Power	3000W
Laser wavelength	1070~1090nm
Laser Source	Raycus/Max/Kaiprin optional
Fiber optic cable length	10m (8m exposed)
Scanning width (mm)	Single Pendulum/Double Pendulum Optional; double pendulum 0-50, single pendulum 0-150
Laser frequency	1-5000Hz
BPP(M2)	1.5
Whole machine power consumption	10KW
Electricity demand	380V
Operating mode	continuous/modulation
Cooling method	Water Chiller Hanli
Continuous operating time	24 hours
Weight	230kg
Dimensions	1260*750*1260mm

Instruction of SCL-1500 water cooler

Working conditions

- Temperature" 0-45℃
- Relative humidity:≤90%
- Altitude: ≤3000m

Water quality requirements and risk warnings

The secondary refrigerant must be softened water, such as purified water, distilled water, high-purity water, etc Recommended water quality parameters: PH 7.2-8.1, CONDUCTIVITY 10-500Us/cm, chloride concentration less than 50mg/L.

If the water quality is not as above required, the risks could be as below,

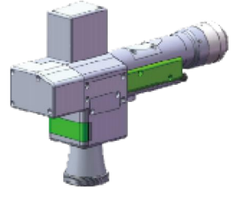
- Tap water or impure water will form scale after high temperature heating, and the scale will affect the internal purity of the laser head and cause the laser head to burn out.
- Microorganisms will breed in the water tank, which will attach to the plate changer and laser through the water circulation, affecting the heat exchange effect. As the microorganisms continue to multiply, it will cause plate replacement and laser blockage, resulting in laser high temperature alarm.
- If the tap water is acidic or alkaline, it may corrode the cold plate of laser, and the solid oxides generated by the reaction will seriously block the internal channel of the plate, resulting in high system pressure and even water leakage.

Antifreeze requirement

- It is allowed to add a volume ratio of ≤30% ethylene glycol or a volume ratio of ≤20% ethanol.
- It is allowed to add preservatives and bactericides approved by the manufacture.
- It is strictly prohibited to use antifreeze with a volume ratio of >30%, it is strictly prohibited to use oil and oil-based liquids.
- It is strictly prohibited to use flammable and explosive liquids.
- It is strictly prohibited to use liquids with solid particles, especially liquids that are corrosive to aluminum and stainless steel.

Handheld Cleaning Hair

FWH20-C11A



FWH20-DC30A

Advantages of Rust Removal Head

Scanning width: cleaning head scanning track width, 0.01 ~ 170.00mm (F500 field lens)
Scanning speed: cleaning head scanning track speed, 0 ~ 30,000mm/s
Power: laser output power 0 ~ 100%

- **High Integration**
  Highly integrated with two-dimensional scanning mirrors, optical lens components, cleaning control card, software, and human-machine interface, the system is stable, reliable, compact in structure, precise in optical path, good in sealing, exquisite in appearance, lightweight, and easy to install. Only the laser needs to be installed in the gun body and connected to the power supply for use.
- **High Efficiency**
  Using high-speed motors, the cleaning efficiency is high.
- **High Safety**
  It has multiple safety mechanisms, including fingerprint and password login, temperature protection, motor abnormal protection, and dropout protection, along with an idle automatic sleep function.
- **Long Distance**
  The cable can extend up to 30 meters, solving the problem of long-distance operations.

Laser Generators

Product Feature

Premium components, superior performance and longer lifetime

Up to 3KW Output From CW Single Module Series
Better beam quality vs. multi module lasers
Greatly improved efficiency

Excellent Material Processing Performance
High speed in thin sheet cutting
Strong capability in thick material processing

Compact Design, Maintenance Free
Highly integrated system with modular design
Easy maintenance significantly reduce TCO

Smaller Size with Higher Stability
>60% reduction in volume
Higher flexibility when integrated in to system

High Level Vertical Integration
All key components are designed and produced in house
Strict quality control, high consistency and reliability

Laser Safety Glasses

LP-ADY

- Optical Density: 740 - 780nm OD>5/780 - 820nm OD>6/ 820 - 1100nm OD>7
- LB-Rating: 740-780nm DIR LB5780-820nm DLB5+IR LB6/>820-1080nm DLB5+IR LB7
- Transmittance: 33%
- Available for: 755nm, 808nm, 980nm,1064nm etc.,
- Application: Alexandrite, Diodes, ND: YAG

LP-DTY

- Optical Density: 800 - 1700nm OD4+ / 900 - 1550nm OD6+
- LB-Rating: 800 - 1400nm DIRM LB4 / 900 - 1400nm DIRM LB6 / 1400 - 1700nm DI LB3
- Transmittance: 18%
- Available for: 980nm, 1064nm, 1320nm, 1470nm, 1550nm etc.,
- Application: Diodes, ND: YAG, Telecom

LP-GTY

- Optical Density: 180 - 532nm OD5+ / 900 - 1080nm OD5+
- LB-Rating: 316 - 532nm DIRM LB5 / 900 - 1080nm DIR LB5
- Transmittance: 22%
- Available for: 532nm & 1064nm etc.,
- Application: 2 line YAG and KTP, Q-Switched

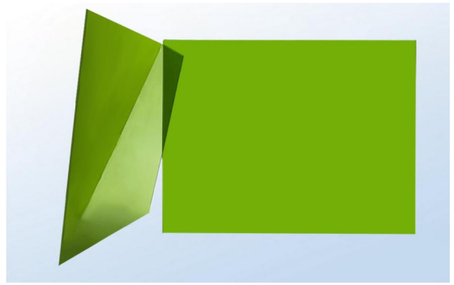
Laser safety room

Laser protective screen

- Product description of mobile laser protective plate;
- Mobile and highly flexible;
- The panel has been inspected by a professional organization;
- Modular design that can be assembled into various shapes;
- Lightweight and easy to disassemble and assemble;

Modle		Laser protective screen
Color		black
Thickness		4±0.2mm
Weight		4+0.2kg/㎡
Structure		Three-layer aluminum panels
Features		High strength, low weight, corrosion resistance
Material		Aluminum material; The surface is resistant to high temperature paint treatment, and the paint is mixed with laser absorber
Test parameters	PEL	4000W/cm²
	Test wavelength	1080nm
	Spot diameter	3mm
	Test time	100s

Laser Safety Window



- Optical Density: 930-1030nm OD>6 1050 - 1100nm OD>7
- LB-Rating: >930-1050nm D AB6 + IR AB7,>1050-1100nm D AB5 +IR AB7
- Transmittance: 23%
- Standard size: 1000*1200mm, could be customized
- Thickness: 5mm
- Application: Fiber laser

Laser safety room

LP-CAB 2.0 (None)
Security interlock
Size: 2 * 2 * 2.1M
Laser protection board size and quantity: 400 * 600mm 5pcs
Material composition: Laser protective screen+Laser protective plate (LP LSs+lP YlW)

LP-CAB.R 2.0 (Has a top)
Security interlock
Size: 2 * 2 * 2.1M
Laser protection board size and quantity: 400 * 600mm 5pcs
Material composition: Laser protective screen+Laser protective plate (LP LSs+lP YlW)

LP-CAB 3.0 (None)
Security interlock
Size: 3 * 3 * 2.1M
Laser protection board size and quantity: 400 * 600mm 8pcs
Material composition: Laser protective screen+Laser protective plate (LP LSs+lP YlW)

LP-CAB.R 3.0 (Has a top)
Security interlock
Size: 3 * 3 * 2.1M
Laser protection board size and quantity: 400 * 600mm 8pcs
Material composition: Laser protective screen+Laser protective plate (LP LSs+lP YlW)