General Air-cooled Laser welder

The A-series Reci welding machine is independently developed and produced by Reci laser. Compared with traditional air& solid laser devices, the product has the outstanding characteristics of higher electro-optical conversion efficiency as well as superior beam quality.

meanwhile, due to the coilability of optical fiber,the structure of fiber laser is more compact. The Reci air-cooled laser welder has the advantages of Wall-plug efficiency, high output power, superior beam quality, compact structure, maintenance-free, and low cost, and can be widely used in metal processing related fields like Industrial processing, military and national defense, scientific research and other scenarios

	Model	A80	A120	A150
Optical Specifications	Limit Power	700W	1000W	1300W
	Maximum Power	800W	1200W	1500W
	Operating Mode	Continuous Welding & Spot Welding		
	Polarization Direction	Random		
	Output Power Adjustment Range	10~100%		
	Central Wavelength	1080±3nm		
	Power attenuation after 1 hour of continuous operation	<2%		
	Maximum Modulation Frequency	5Khz		
	Indicating Red Light Power	≥0.2mW		
	Output Fiber Core Diameter	20μm		
	Output Armored Cable Length	Default 5m		
electrical Specifications	Operating Voltage	AC 220v， Single Phase， 50/60Hz		
	Maximum Power Consumption (W)	＜2100W	＜3100W	＜4100W
	Control Method	Touch Screen		
Other Specifications	Dimension (W × H X D) mm	273×614.9×396.3	273×634.9×527.7	273×634.1×527.7
	Weight	34kg	41kg	43kg
	Operating Temperature	-30~40℃		
	Operating humidity	<90%		
	Cooling	Air		
	Storage Temperature	-10~60°C		
	Input Gas Pressure	≤0.7MPa		
Accessories	Welding Gun	Default		
	Wire Feeder	Default		

Industrial Air-cooled Laser welder

The A-series Reci welding machine is independently developed and produced by Reci laser. Compared with traditional air& solid laser devices, the product has the outstanding characteristics of higher electro-optical conversion efficiency as well as superior beam quality.

meanwhile, due to the coilability of optical fiber,the structure of fiber laser is more compact. The Reci air-cooled laser welder has the advantages of Wall-plug efficiency, high output power, superior beam quality, compact structure, maintenance-free, and low cost, and can be widely used in metal processing related fields like Industrial processing, military and national defense, scientific research and other scenarios

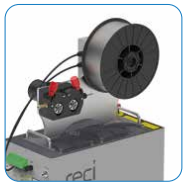
	Model	A200	A320
Optical Specifications	Limit Power	1800W	3000W
	Maximum Power	2000W	3200W
	Operating Mode	Continuous Welding & Spot Welding	
	Polarization Direction	Random	
	Output Power Adjustment Range	10~100%	
	Central Wavelength	1080±3nm	
	Power attenuation after 1 hour of continuous operation	<2%	
	Maximum Modulation Frequency	5Khz	
	Indicating Red Light Power	≥0.2mW	
	Output Fiber Core Diameter	20μm	25μm
	Output Armored Cable Length	Default 5m	
electrical Specifications	Operating Voltage	AC 220v 、 Single-phase 、 50/60Hz	AC 380V 、 Three-phase 、 50/60HZ
	Maximum Power Consumption (W)	＜6000W	＜9000W
	Control Method	Touch Screen	
Other Specifications	Dimension (W × H X D) mm	323×684.2×629	373×877.2×758
	Weight	58kg	90kg
	Operating Temperature	-30~40 ℃	
	Operating humidity	<90%	
	Cooling	Air	
	Storage Temperature	-10~60°C	
	Input Gas Pressure	≤0.7MPa	
Accessories	Welding Gun	Default	
	Wire Feeder	Default	

Product Features

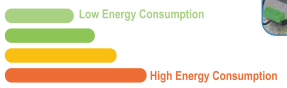
Efficient Cooling

Air cooling structure, high-efficiency turbofan

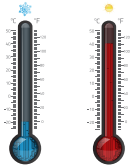
Quiet, Embedded turbofan, Multi-level speed change, Low noise during operation



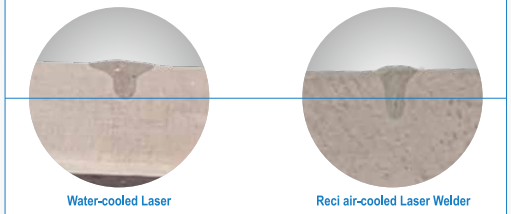
Welder and Wire feeder together in one



Saving power, The electricity fee for medium-intensity welding is ¥1.0 per hour



High reliability and high environmental adaptability, Can work continuously for 24 hours in an environmental temperature range from -30°C to +40°C

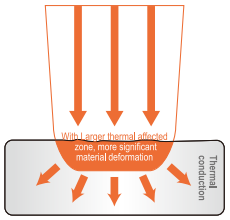


Deep Welding, using 14um YDF
It is 1.5-2.0 times the welding depth of water-cooled laser welder with the same power.

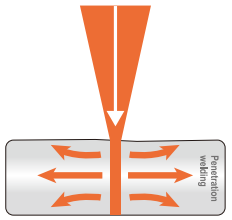
Welding Depth Data Summary

Welding conditions: No wire feeding
Welding Speed is about 10mm/s

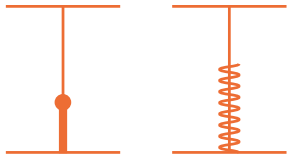
Water-cooled Laser Welder			Reci Air-cooled Laser Welder			
Power (W)	Penetration (mm)		Power (W)	Penetration (mm)		Difference in Welding Depth (mm)
	Min	Max		Min	Max	
620	0.865	0.895	655	2.190	2.321	1.325~1.426
940	1.967	2.077	995	2.750	2.979	0.783~0.902
1250	2.618	2.732	1299	5.404	5.617	2.786~2.885
1750	3.437	3.613	1782	6.936	7.02	3.499~3.407



Welding Machamism of Traditional Welding Machine



Mechanism of Laser Penetration Welding



Traditional Welding
Arc large area heating

Laser Welding
Micron diameter beam stirring heating

Reci Air-cooled Laser Welder/Traditional Welder/ Water-cooled Laser Welder/Other Brand Welder

Item	Traditional Welder	Reci Air-cooled Laser Welder	Water-cooled Laser Welder	Other Brand Welder
Welding Speed	Slow	Fast, high efficiency, 6 times that of traditional welding machines	-	-
Operability	Complex operation , High demands on operators	Easy to operate , No technical threshold	-	-
Safety	Easy to produce strong light and harmful gas	No harmful factors	-	-
Deformation	Easy to produce deformation and blisters etc	Little thermal impact, almost no deformation	Thermal impact is smaller than traditional welding machines	-
Secondary Processing	Require secondary processing	No secondary processing	-	-
Power Consumption	Set as 100%	Saving 25% power than Traditional Welder	Consuming more 45% than Traditional Welder	-
Wall-Plug Efficiency	-	≥ 38%	≥25%	-
Weight	-	A80 30kg	More than 60kg (including compressor)	-
Dimension	-	0.0915m3	0.2m³	-
Penetration	-	5.617	2.732	-
		Reci Air-cooled Laser welder's welding depth is 1.5-2 times than Water-cooled Laser Welder		
Cost	-	Compared with water-cooled laser welding machine, it saves electricity cost, Saving cost of one and half years almost can buy a new Reci air-cooled laser Welder	The compressor consumes more electricity , it requires to add refrigerant every year, Water tank also needs mantenance	-
Weight (including wire feeder)	-	A80 40kg	Not integrated with wire feeder	-
Continuous Working Time	-	Sustainable work	Sustainable work	Not sustainable, it has to stop once every minute
Operating temperature	-	- 30°C to 40°C	1 °C to ＋40°C if water freezed, the water tank will break	- 1 0℃ to +30℃
Maintenance cost	-	Clean the filter and replace the protective Lens	Clean the filter and replace the protective Lens Adding refrigerant Adding Water Adding antifreeze	-

. It is 7 times more efficient than traditional argon arc welder

. 14 micron core diameter optical fiber output, fundamental mode light spot, good beam quality

. The welding depth is 1.5 times that of other water-cooled lasers with the same power

. High Wall-Plug Efficiency, The Wall-Plug Efficiency of whole machine is 38%

. Purely air-cooled compact structure design, can work in -30 ℃ ~+40 ℃ environment

. High reliability, service life is more than 6 years, low mantenance cost

. Saving Power, Compared with water-cooled laser welding machine, it saves electricity cost, Saving cost of one and half years almost can buy a new Reci air-cooled laser Welder

For example : A150 model, with wire feeder, Right angle welding 3mm stainless steel plate, under 35% laser power, the Power comsumption is 1 kWh/1 hour.

Classic Applications/ Typical Clients

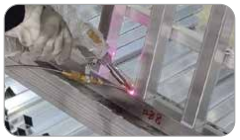

Mechanical


Transportation


Electrical Appliances


Advertisement


Automobile

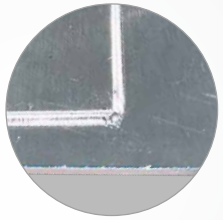

Hardware-Door and Window Welding

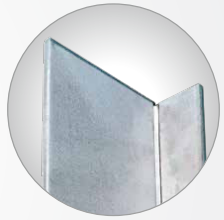

Hardware-Aluminum Alloy

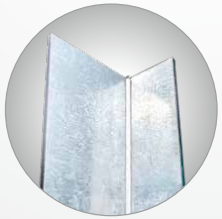
Typical customers

Automobile	Dofeng Motor，Changhe Auto
Power	State Grid
R&D and Schools	Southern University of Science and Technology，ShangHai Institute of Laser Technology
Machine Made	SANY，LEO
Ship	BoYang Ship

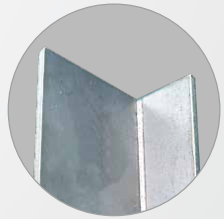
Welding Processing


Aluminum Plate-3.0mm
Lap welding


Stainless steel-3.0mm
T-type welding


galvanized sheet-3.0mm
T-type welding


Aluminum-4.0mm
T-type welding


Carbon Steel-4.0mm
T-type welding