

MATRIX WELDING

3 IN 1 FIBER LASER WELDING

WELDING | CUTTING | CLEANING



MXW-FW 3-IN-1

Authorized Dealer

شركة النجم الرقمي للألات و المعدات

DIGITAL STAR MACHINERY AND EQUIPMENTS

Source of Digital Solutions...

Welcome to Digital Star, your trusted partner in the world of cutting-edge printing solutions. As a leading printing machines, materials, and ink authorized dealer in Riyadh – Saudi Arabia (KSA), we pride ourselves on delivering state-of-the-art technology that empowers to achieve unparalleled levels of efficiency and quality.

At Digital Star, we understand the pivotal role that printing machinery plays in the success of your operations. With a commitment to innovation and excellence, we curate a diverse range of top-tier printing machines to meet the unique needs of our clients. Our product line-up reflects the latest advancements in the industry.

As a responsible printing machines supplier, we prioritize sustainability. Our commitment to eco-friendly practices is reflected in the products we offer, promoting energy efficiency and environmentally conscious manufacturing processes. When you choose Digital Star, you're not just investing in cutting-edge technology – you're partnering with a company that values the planet as much as your success.



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About Us

PRODUCT OVERVIEW

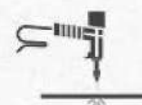
1. One machine, bringing together three functions: welding, cleaning and cutting, the conversion of each function is convenient and simple.
2. The hand-held cleaning head has a simple hand-held structure and is easy to carry. Equipped with a touch screen, it is convenient to switch parameters during work and simplify the operation. Weight 0.75kg, light to use without fatigue.
3. This laser equipment can be used for metal cleaning, rust removal, welding and cutting.
4. Redlight positioning, makes the work position is more accurate and beautiful.
5. The hand-held laser welding machine can work manually or be installed on a robot, so that the machine can work fully automatically and improve work efficiency.



LIGHT PORTABLE



HIGH STABILITY



EASY OPERATE



HIGH SPEED



LOW CONSUMPTION



SMOOTH WELDING

Features

1. Small, beautiful and smooth weld seam, no pores, high weld depth ratio and high welding quality, the toughness after welding is comparable to that of the parent material.
2. Simple operation, large laser power, high efficiency, no consumables, long-term processing is possible;
3. Spot welding, butt welding and precision welding can be realized for thin-walled materials & precision parts;
4. Obvious advantages in special-shaped welding, splicing welding and spot welding, large laser power is sufficient to weld metals that is not easily to be melted such as steel, stainless steel, gold, silver and copper. It can weld small and delicate geometric areas.
5. It has the functions of welding, cleaning and cutting at same time, which is more convenient to use and saves costs

Applied Materials:

Carbon Steel Stainless Steel Alvanized Steel Iron Gold
 Aluminum Copper Titanium Zinc Sliver
 and many other metal and alloy and also cooper-brass, cooper-titanium, nickel-cooper, cooper-titanium and many other heterogeneous metals.

CONSUMBLES PARTS (OPTIONAL)



BRASS NOZZLE



PROTECTIVE LENS



Applied Materials: (The most stable of the three laser generators)

- 100,000 hours of lifetime, free maintenance;
- High electro-optical conversion efficiency (up to 25-30%), excellent beam quality, high energy density, and reliability, a wide modulation frequency;
- Low energy consumption, only 20%-30% of the traditional machine



Built-in Water Chiller

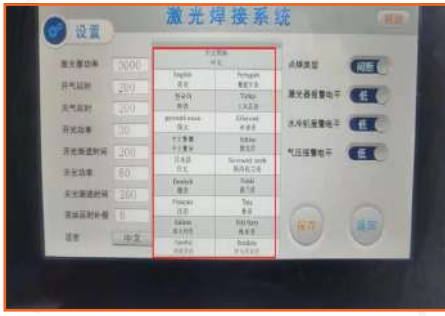
The function of the water cooler is to reduce the temperature of the laser generator and prevent the laser from being burned out. We only use brand-name water coolers with reliable quality.



High quality Chaoqiang 3 in 1 laser head

Basic characteristics of self-developed three-in-one control system, welding, cleaning, cutting flexible switching, set multiple safety alarms, simple and flexible operation is more stable: all parameters are visible, monitor the state of the whole machine in real time, avoid problems in advance, facilitate problem investigation and solution, and ensure the stable work

of the system. process: the process parameters can be set, flexibly try various process effects. parameters are stable, high repeatability: determined nozzle pressure and lens state, as long as the laser power is stable, Process parameters must be reproducible and greatly improve the efficiency.



Chaoqiang 3 in 1 Control System and Software

The product with a self-developed three-in-one control system can be flexibly switched the mode of welding, cleaning, and cutting. It sets up multiple security alarms and can be operated easily and flexibly.



Automatic Wire Feeder

The automatic wire feeder is with higher efficiency and more time saving.



Moving Roller

Easy to move and without lifting

WORKING SAMPLES

Butt Welding



Lap Welding



Overlap Welding



Stud Welding



Edge Welding



T Type Welding



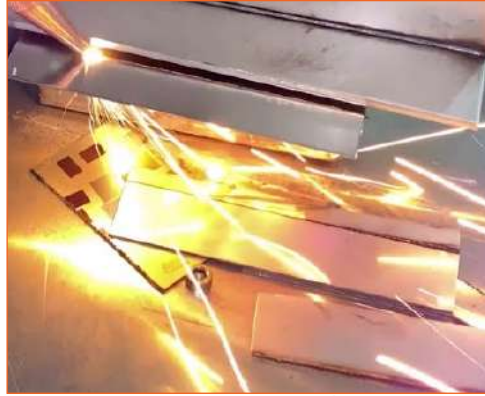
Fold the Tower Welding



Splicing Welding



PRODUCT SAMPLES



PRODUCT SPECIFICATION

Laser Power	1000W	1500W	2000W
Auto wire feeding diameter	0.8, 1.0, 1.2, 1.6mm	0.8, 1.0, 1.2, 1.6mm	0.8, 1.0, 1.2, 1.6mm
Welding Penetration	1.5mm (stainless steel single side)	2.0mm (stainless steel single side)	3.0mm (stainless steel single side)
Welding ability	Stainless steel: 4mm Carbon steel: 4mm Aluminum: 2mm	Stainless steel: 5mm Carbon steel: 5mm Aluminum: 3mm	Stainless steel: 5mm Carbon steel: 5mm Aluminum: 3mm
Power consumption of whole machine (Including the water chiller)	≤5.7kw	≤8.5kw	≤11kw
Cooling Method	Water Chiller Cooling		
Voltage	Single-phase 220V±10%, 50/60Hz AC		
Protective gas argon or nitrogen	20L/min		
Laser Source	Raycus/MAX/IPG		
Output Power Tunability(%)	10%-100%		
Laser Wave Length	1080±5nm		
Laser Type	Continuous laser		
Fiber Laser Optic Length	10m		

*Specifications are subject to change without prior notice, all rights reserved.

POWER REQUIREMENTS

Voltage Regulator	5000W Stabilizer
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TECHNICAL PARAMETERS

1KW WELDING ABILITY			
No.	MATERIALS	DEPTH OF FUSION	PERNETRATION THICKNESS
1	Stainless Steel	≤4mm	≤3mm
2	Mild Steel/ Iron	≤4mm	≤3mm
3	Galvanized Sheet	≤3mm	≤2mm
4	Aluminum/ Brass	≤2mm	≤1mm

1.5KW WELDING ABILITY			
NO.	MATERIALS	DEPTH OF FUSION	PERNETRATION THICKNESS
1	Stainless Steel	≤5mm	≤4mm
2	Mild Steel/ Iron	≤5mm	≤4mm
3	Galvanized Sheet	≤4mm	≤3mm
4	Aluminum/ Brass	≤3mm	≤2mm

2KW WELDING ABILITY			
NO.	MATERIALS	DEPTH OF FUSION	PERNETRATION THICKNESS
1	Stainless Steel	≤6mm	≤5mm
2	Mild Steel/ Iron	≤6mm	≤5mm
3	Galvanized Sheet	≤5mm	≤4mm
4	Aluminum/ Brass	≤4mm	≤3mm

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Terms and Conditions

01. Payment to be made in SAR currency.
02. Payment Terms : As mentioned in Quotation.
03. Bank Charges: Any bank charges relevant to the above transactions will be to your account.
04. Any charges, duties, taxes or levies at the ports of entry will be to our account.
05. The charges of loading, boarding and local conveyance of the technician will be to our account.
06. Any required electrical, mechanical and civil site preparation should be done by the customer according to our engineer's requirements.
07. Digital Star Machinery and Equipments will not be held responsible for delays caused by any damage in the equipment due to shipment, unloading accidents & any related reasons, which is beyond our control.
08. Warranty will be 12 months from the date of installation from Digital Star Machinery and Equipments. Wear and tear, consumables are exempted and warranty can be claimed only if you use the Inks and Services from Digital Star Machinery and Equipments.
09. Service will be free of cost within 12 months from the date of installation.
10. Any claim will be invoice directly to you then we will send for claiming procedure which will take 45-60 days, if the claim got approved credit note will issued directly.
11. Delivery: As mentioned in quotation

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DIGITAL STAR MACHINERY AND EQUIPMENTS

IBN AL SAQA 8162 | AS SALHIYAH DIST | RIYADH - 12662



+966 11 229 4473



info@digitalstarksa.com



+966 11 229 4473



www.digitalstarksa.com