

MATRIX LASER

# FIBER LASER CUTTING MACHINE

Unleash Precision and Power



MXL-3015A

Authorized Dealer

شركة النجم الرقمي للآلات و المعدات  
DIGITAL STAR MACHINERY AND EQUIPMENTS

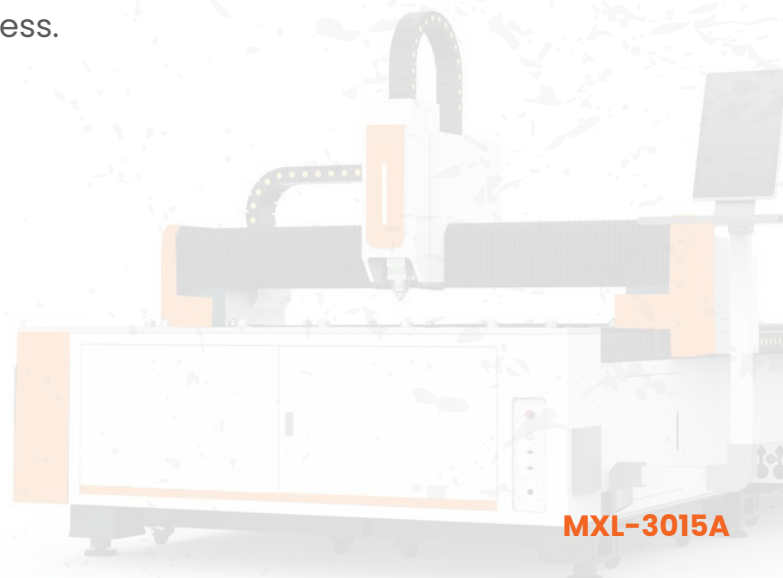
# About Us

## 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 The Kingdom of Saudi Arabia, 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.



## PRODUCT OVERVIEW

- This machine is specially developed for cutting metal sheets. The advantages of this machine are reasonable price, high cost performance and reliable performance.

### Application materials:

- The fiber laser cutting equipment is suitable for cutting various metal sheets, such as carbon steel sheet, iron sheet, stainless steel sheet, low carbon steel sheet, alloy steel sheet, spring steel sheet, galvanized iron sheet, aluminum sheet, copper sheet, brass sheet, bronze sheet, gold sheet, silver plate, titanium plate, etc.

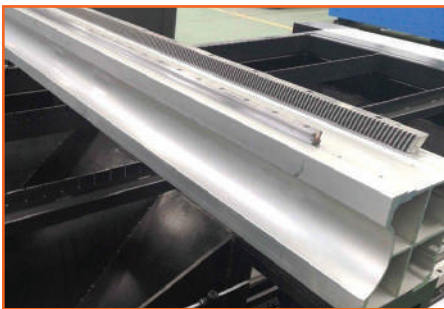
### Application Industries:

- The Fiber Laser Cutting Machines are widely used in manufacturing sheet metal processing, metals components and parts, ironware, chassis, racks & cabinets processing, metal crafts, metal art ware, elevator panel cutting, hardware, auto parts, billboard, advertising, signs, signage, metal letters, LED letters, kitchen ware, advertising letters, glasses frame, electronic parts, nameplates, refrigeration machinery, agricultural machinery, food machinery, kitchen stainless steel countertops, aerospace, railroad locomotive, auto parts manufacturing, car body processing, medical equipment, smart home, home appliances, kitchen equipment, fitness equipment, machinery manufacturing, sheet metal processing. etc.



### Max Fiber Laser Generator

1500W~3000W SINGLE MODULE CW FIBER LASER is a high-power fiber laser with high electro-optical conversion efficiency, compact size, good beam quality and maintenance-free. Wide fiber core diameter range from 100~600um, can be customized from 800um~1000um. Mainly used in metal welding and cladding and other fields such as new energy, 3C, precision machining.



### Aluminum Profile Gantry Beam

The gantry beam is aerospace standard manufacturing, strongest strength (6061 T6);

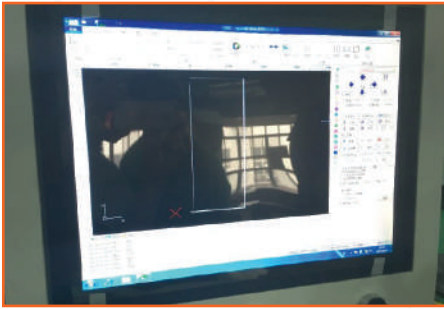
The gantry beam is with high impact resistance performance and light weight, best for high-speed movement.



### Raytools BM110 laser head

- Modular design with easy maintenance
- 3 Cover glasses (top, middle and bottom) to protect collimation & focus lens
- IP65 class dustproof, patented cover glass cover plate. Allaround dust prevention.
- Integrated design and improved QBH fiber interface to prevent from sticking.

- RayTools AG designs and produces laser beam delivery systems, commonly called beam tools or processing heads.
- RayTools processing heads have built-in intelligence, incorporating real-time sensing, feedback control loop, and adjustment capabilities.
- RayTools has grown to be one of the largest beam tool suppliers in the world. It sells more units, to more customers, than any other company in its category.



### Functional possibility

- Supports flying cutting, frog jumping, electric focusing, double exchange workbench.
- Supports two levels of perforation
- Support communication control of most mainstream lasers in the market



### Control

- Support track accuracy 0.05mm, positioning accuracy 0.01mm.
- Maximum cutting speed 100m / min, maximum moving speed 100m / min.
- Support Maximum acceleration 1G



### Japan Fuji servo motor

- Japan Fuji servo motor is top brand in all over the world. Fuji servo motor is installed on XYZ axis.
- The big powerful servo motor on Y axis, makes the machine cutting at high speed, the Max. speed can be 80m/min. Moreover, the Fuji servo motor is famous for the high precision and stable performance.



### Japan Shimpo Gear Reducer

Japan Shimpo gear reducer is with high transmission efficiency, low energy consumption and superior performance. Service life is much longer.



### XY axis Taiwan YYC helical rack and pinion

- High precision, high rigidity, and high speed, stronger wear resistance
- Optimized roller circulation system and guide element design for smooth, quiet operation



### Feeding roll

The machine comes with the feeding roll. The feeding roll will help the worker feeds the material easily





### SMC Electrical Proportional Valve

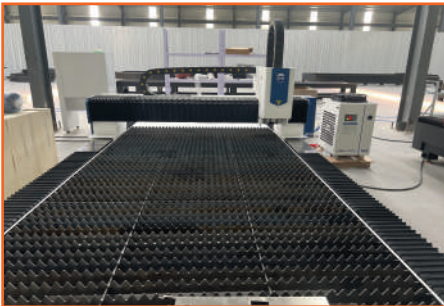
It can realize the endless adjustment of pressure and speed, and avoid the impact phenomenon when the normal switching valve changes direction.

- 1) It can realize remote control and program control.
- 2) Compared with intermittent control, the system is simplified and the components are greatly reduced.

3) Compared with hydraulic proportional valve, it has the advantages of small size, light weight, simple structure and low cost, but its response speed is much slower than that of hydraulic system, and it is also sensitive to load changes.

4) Low power, fever and noise.

5) There will be no fire and no pollution to the environment. It is less affected by temperature change.



### Serrate working platform

The steel serrated table can withstand heavier work pieces and has only a small area to touch the workpiece when cutting, maximizing the melting of the table surface by the heat of the laser. Each piece is independent for easy replacement and maintenance.



### Rotatable monitor support frame

The monitor is fixed on a rotatable support frame, which is convenient for the staff to adjust the angle according to their needs.



### S&A 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.



### Steel pipe welded machine bed

We have the aging vibration process, annealed process.

So the machine will not get deformed for long time use. Here is the process of how we make our machine frame:

## Optional Items



### Air compressor + freeze dryer + filter

1. The special air compressor for laser cutting adopts an integrated design, which is simple and convenient to install.
2. Adopt well-known brand freeze dryer to make the freeze drying effect better.
3. The filter adopts imported filter element five-stage filtration to purify the air and improve the air quality.
4. Adopt large main engine and super large oil separation barrel design, complete oil separation, low oil content, customized laser special oil content, oil content is less than 1ppm.
5. Quiet design stainless steel tube to ensure no leakage.



### Stabilizer

The function of the voltage stabilizer is to stabilize the power supply voltage that fluctuates greatly and does not meet the requirements of electrical equipment within its set value range, so that the light cutting machine can work normally under the rated working voltage.

For countries and regions with unstable voltage, it is recommended that customers choose this device.



### Exhaust Fan

The main function of the fan is to remove the smoke from the cutting, to ensure that the workshop air is clean, and to prevent the smoke from contaminating the lens.

## Fiber Laser Cutting Machine



**MXL-3015A**

PRODUCT SAMPLES



Carbon Steel



Stainless Steel



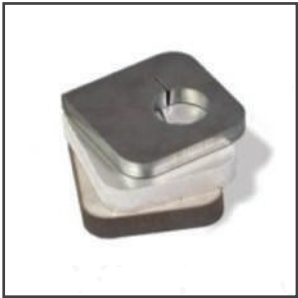
Carbon Steel Cutting



Carbon Steel



Carbon Steel



Stainless Steel



Carbon Steel



Brass



Carbon Steel



Brass



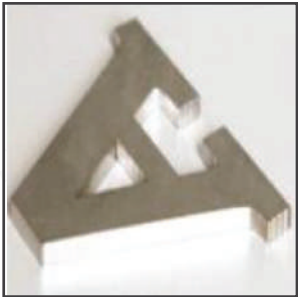
Aluminum Alloy



Stainless Steel



Titanium Alloy



Stainless Steel

PRODUCT SPECIFICATION

Model	MXL-3015A(1500W/ 2000W)
Working Area	3000*1500mm
X axis working area	3,000mm
Y axis working area	1,500mm
Laser Power	1500W,2000W MAX/Raycus
XY Axis Maximum Acceleration	0.5-0.8g
Repeatability positioning accuracy	±0.02mm
XY Axis Max. speed	80m/min
Working Table	Serrate working platform
XY Axis Transmission system	Taiwan YYC Helical rack and pinion
Z axis Transmission system	Taiwan TBI ballscrew
Cooling System	Water chiller
Power Supply Rated Voltage	220V 1PH(For 1500W and 2000W machine) or 380V 3PH
Packing size	4.78*2.28*1.8m
Weight	1800KG
Electric Parts	Schneider
Exhaust Fan	5.5KW
Gear reducer	Shimpo or MOTOVARIO
Controller	Cypcut 2000E

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

POWER REQUIREMENTS

Voltage Regulator	8000W Stabilizer
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OTHER REQUIREMENTS

Coolant	Min. 10L Distilled Water (For Chiller)
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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 applicable as per our Warranty Policies. The Warranty will be valid after signing of Warranty Policies.
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

## شركة النجم الرقمي للألات و المعدات 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