

THE WORLD BRAND OF CUTTING & WELDING TECHNOLOGY

FARLEY·LASERLAB

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HIGH POWER LASER MANUFACTURAL EQUIPMENT APPLICATION

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All information is subject to change without prior notice

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Introduction

- 1917** "Stimulated Emission" was proposed by Einstein
- 1960** The First Laser Beam was discovered by American Scientists
- 1977** LaserLab was started in Melbourne, Australia
- 1983** Farley Cutting Systems was founded
- 1999** Farley and Laserlab emerged
- 2000** Farley Laserlab became a wholly owned subsidiary of HGLaser
- 2005** The 3rd generation of Farley high efficient Laser Cutting Machine merged into America
- 2012** FarleyLaserlab was accepted by 23 countries



With over 30 years experience and thousands of installations worldwide HG Farley Laserlab has developed a reputation for being an industry leader in the provision of laser, Plasma and Drilling technologies.

Through years of research and development and collaboration with Metal Industries and engineers, Farley Laserlab has developed high performance machines backed with leading edge technology and superior service that has satisfied industry professionals on a worldwide scale.

Farley Laserlab offers a range of Laser, Plasma and drilling technologies that will meet the needs of any industry application.

Founded in Melbourne Australia, Farley Laserlab is one of the first companies to develop Laser systems in the world. Over the years Farley Laserlab has expanded to China, USA, United Kingdom, Russia and India to become a multinational company.



Advanced Mechanical Design

Farley Laserlab machines consist of Gantry mechanical designs, Cantilever, Hanging beam and Laser source airborne structures.

Hanging Beam

Simple electronic control systems with excellent stability, well suited for process jobs requiring high levels of speed and accuracy.

Gantry Double side rack and pinion driving structure

The dual sided rack and pinion rail provide support from both sides for rigidity to support and increase accuracy and productivity.

Laser Source Air-borne Structure

The dual source beam is integrated with a wide cross section, dual sided supporting frame and steel construction beam. The high beam has been designed with greater rigidity to facilitate faster acceleration and accuracy. Suitable for larger cutting tasks extending 30 meters in length and 6 meters in width.

Cantilever structure

Classical structure patented by **Farley Laserlab**, the open structure is designed for easy uploading and downloading of materials suitable for standard plate processing.





Comprehensive Control System Functions

Highly reliable German Siemens 840D is adopted for laser cutting machines of Farley Laerlab and has been developed and constantly updated for more than 20 years. the main functions are as follows:

Professional profi-CNC laser cutting operation system based on Siemens 840D, mutlti-language operation interface, easier operation;

- High-class industry control mainboard.
- Super 1200x1920(24") LCD with abundant interface information.
- Powerful graphics display function for on-line monitoring cutting path.
- Multi-task: CNC functions allowing customer process multi-task simultaneously.
- Look-ahead function for processing program: ensuring cutting speed and smooth turning.

Pendent Unit for Operation Easily

- Hand Pendant: it is a controller which can be moved and put as you wished, and with it, the operator can enable and operate the machine anywhere.
- Profi-bus with NCU communication, less connections with reliability.
- Integration of Numerical input output, potentiometer signals, pendent pulse generator.
- Pendent Operation system can realize table system return to zero, height capacitance following, job cutting retrace, table mechanical moving etc.
- Fine turning for laser source power, assist gas pressure, height detection, focus point data etc.

Expert Database for Laser Cutting

This machine comes with a cutting database; this allows all aspects of a cut to be preset for each material type which is easy for customers to learn. This includes all aspects from gas and pressures, power and speed focus points position, cut monitoring thresholds and pierce styles, once set up this is a valuable tool that allows very simple use monitoring and programming.



Reliable Servo-motor Driving

- All systems adopting Siemens servo-motor with reliability and easy for maintenance.
- Flexible driving modes Ball screw, dual-side rack and pinion driving, linear motor driving according to different machine structure to ensure the entire movement of the system.

Leading Beam Path Technology

- Complete flying optics beam path.
- Positive pressure dust cleaning to prevent reflectors from contamination.
- Anti-reflection optical system: ensure beam collimating in all processing zone.
- Constant beam system: ensure beam quality at every point.

Professional Multi-functions Laser Cutting Head

Laser cutting head suits the following functions: automatic surface following, automatic focusing, high pressure cutting, assisting for cooling the nozzles, multi focus length can be quickly changed, etc.

CAD/CAM Software Package

Professional FastCam programming software package transfers the geometric information from CAD system to NC code. The off-line programming CAD/CAM software can pass the generated NC code into CNC system. Without manual programming, the DXF graph file can be transferred to NC program. The NC code has all the laser functions, which means the machine can process directly.

- The software simplifies the program for complex components, also it is easy to modify the existing program, and the component will be displayed always in graph.
- With power features, CAD system has many perfect features to generate graphs the auxiliary information will be kept in the graph for future use.
- With cost management and expert cutting database functions.
- Convenient nesting function.
- Co terminal cutting function.
- Continued software updating support.



CONTOUR DM SERIAL CNC LASER CUTTING MACHINE



Advantage

- More stable simultaneous gantry driving structure
- Positioning speed as fast as linear motor machine
- Efficiency doubled with bilateral vertical lifting exchange table
- Dual-side rack-and-pinion driving
- Mini-gantry with aluminum structure , easy for operation



Model	CONTOUR DM3015	CONTOUR DM1020	CONTOUR DM6021
X Stroke	3000m	4000m	6000m
Y Stroke	1500m	2000m	2100m
Z Stroke	150m	150m	150m
Max.Moving Speed for X&Y	120m/min	100m/min	100m/min
Positioning Accuracy	±0.05mm	±0.05mm	±0.05mm
Repeatability Accuracy	±0.025mm	±0.025mm	±0.025mm
Max.Loading for Working Table	1250Kg	1500Kg	2000Kg
Max. Thickness of Cutting Board	MS 20mm	25mm	25mm
	SS 10mm	12mm	12mm
	AL 8mm	10mm	10mm
Laser Source Power	2000w ~ 6000w	2000w ~ 6000w	2000w ~ 6000w



GF3015 FIBER LASER CUTTING MACHINE

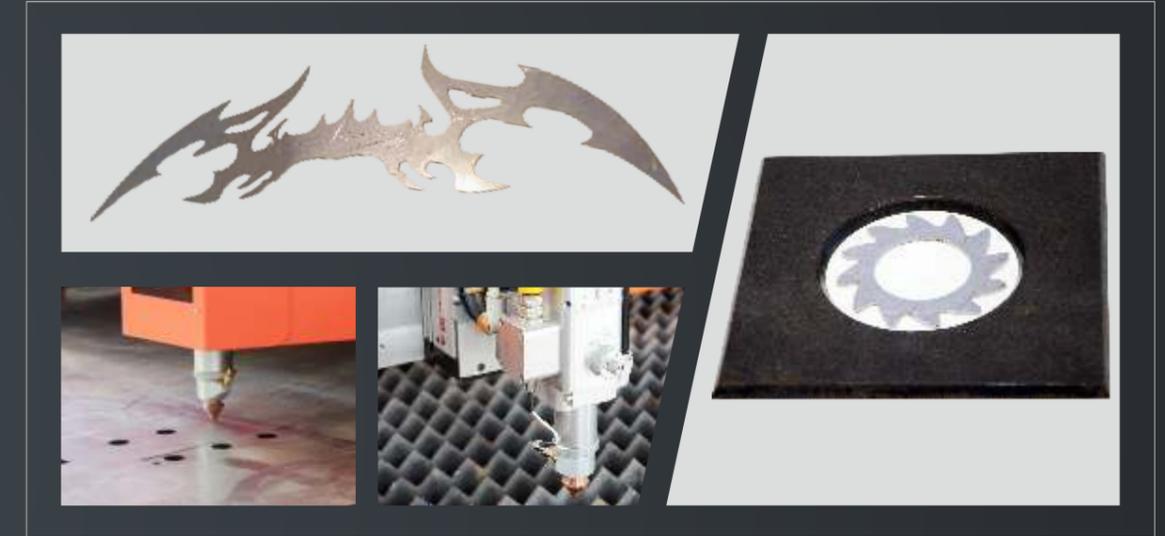


Advantage

- Traveling Gantry Structure
- Linear Guide
- AC Servo Motor
- Bilateral Vacuum System
- Screw Drive

Product Introduction

- World-brand BECKHOFF CNC Control System
- Human-computer Interactive Interface Integration
- Fiber Laser Source (IPG)



Model	GF3015			
Cutting Area	3000mmx1500mm		Moving Speed	50m/min
Laser Model	Fiber laser IPG-500W/1000W		Stroke	1500mm
Laser Wavelength	1,070-1,080nm		Position Accuracy	±0.05mm/m
CS Cutting Thickness	Max. 5mm/10mm		Repeatability Accuracy	0.05mm
SS Cutting Thickness	Max. 2mm/5mm		Stroke	50mm
Interface	USB, RJ45		Power Supply	400V/50Hz/30A(36A)
X-axis	Moving Speed	50m/min	Continuous Working Time	24Hours
	Stroke	3000mm	Machine Weight	Approximate 3000kg
	Position Accuracy	±0.05mm/m	Dimension	4500mmx2300mmx1500mm
	Repeatability Accuracy	0.05mm		

CONTOUR DF CNC LASER CUTTING MACHINE



Exclusive Function of Laser Cutting

- Expert database with material thickness, processing techniques, speed matched with the main parameters such as gas bars selection, air pressure, capacity factor etc.
- Jumping-mode to enhance cutting effectiveness.
- Quick-response surface monitor.
- Re-trace mode when job ignored, operator is allowed to return to obvious mode when missing job is checked.
- Hi-speed response laser power slope adjustment to ensure the cutting quality of the corner point.
- Laser piercing adjustable slope function to improve the piercing quality.
- Line/circle complement and kerf compensation function.
- Fly-piercing function for thin plates: non-stop cutting which dramatically improve the cutting efficiency.
- Automatic edge-detecting function.



Model	DF3015	DF4020	DF6022	
X Stroke	3048mm	4048mm	6096mm	
Y Stroke	1524mm	2024mm	2200mm	
Z Stroke	150mm	150mm	150mm	
Positioning Accuracy	±0.05mm	±0.05mm	±0.05mm	
Repeatability Accuracy	±0.025mm	±0.025mm	±0.025mm	
Positioning Speed	150m/min(single) 210 m/min (linkage)	120m/min(single) 180m/min(linkage)	120m/min(single) 180m/min(linkage)	
Acceleration	2G	2G	2G	
Fiber Laser Source Power	1-2KW	1-2KW	1-2KW	
Thickness of Cutting Board MS	≤16mm	≤16mm	≤16mm	
Thickness of Cutting Board SS	≤8mm	≤8mm	≤8mm	
Exchangable Working Table	Bearing	720Kg	1200Kg	1500Kg
	Exchanging Period	8 seconds	12 seconds	30 seconds



LT 9035 LASER PIPE CUTTING MACHINE



Full-Automatic Feeding System

Regular and rectangular pipe can be integrated into a fully automated feeding process, without human operation. Deformed pipes can be processed through the artificial semi-automatic feed.

Advanced Chuck Clamping System

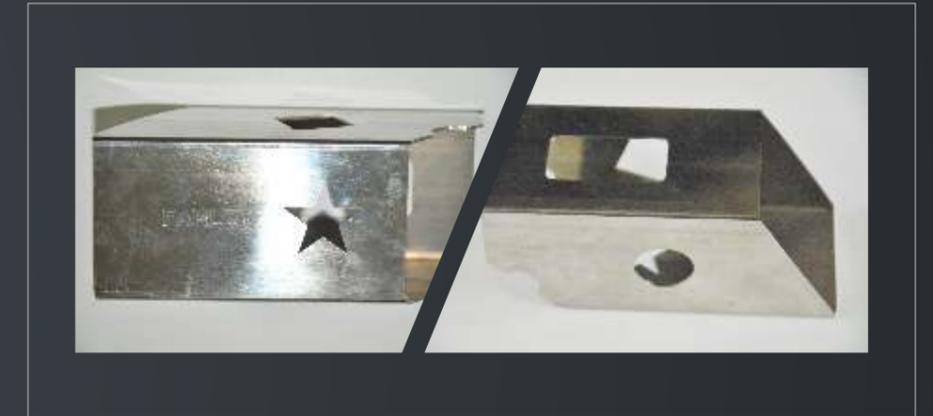
Chuck is able to self-adjust the focus, according to the material size automatically adjusting the clamping force, this ensure it clamps the thin tube without any damage.

Corner Fast Cutting System

Corner fast response, greatly improve the cutting efficiency.

High-Efficiency unloading System

After cutting the workpiece can be unloaded automatically in different areas.



Processing Range	20x10mm- 180x180mm
Standard Material	CS, SS, ALU Alloy
Automatic Feeding Pipe Length	2000- 9000mm
Feeding Stand Bearing	4000KG
Cutting Length	Max. Length 3500mm
CNC Axis No.	12
CNC	Siemens 840D
Laser Source	1000—4000W



SR SERIAL LASER CUTTING MACHINE



LASERLAB 3D Fiber Laser Cutting Machine

Multi-angle and multi-direction flexible cutting for different thickness metal-plate by specific fiber laser cutting head, high-precision capacitive tracking system, fiber source and industry robot system.

Laserlab

Laser Source	Fiber 200-500W
Main Processing Parts	Automotive Forming Plates
Processing Scale	R1.5m-R1.8m
Max. Thickness of Cutting Board MS	3mm
Max. Thickness of Cutting Board SS	2mm
Max. Thickness of Cutting Board AL	1.5mm

Pentacon 5-8 Axis Laser Cutting Machine

Pentacon 5-8 Axis laser cutting system delivers dynamic 2D and 3D cutting with speed, efficiency and reliability that will ensure consistent profits for your operation.

Pentacon

Positioning Accuracy	0.05mm
Repeatability Accuracy	0.03mm
Resolution	0.001mm
Rotation Range A/B Axis	360°±135°
Rotation Accuracy	≤0.015°
Repeatability Accuracy	≤0.005°



PROFILE SERIAL



EXCELLENCE AND RELIABILITY

The Profile is a complete laser cutting system incorporating a 1.5m×3m high speed transfer table to reduce down time caused by loading and unloading. The Profile, which is one of the best value for money laser cutting machines available with 1000's installed worldwide, comes with a laser cutting head and Precitec Height following system.

Features

- Complete flying optics
- Auto Transfer working table 30%-50% production efficiency increased
- Siemens AC servo driving system reliable performance and stability
- Ball screw driving high precision, high dynamic performance
- Unique external beam path system
- Circular water cooling system
- Safety protection
- Low running cost

Profile

Model	Profile 3015	Profile 6015
X Stroke	3000mm	6000mm
Y Stroke	1500mm	1500mm
Z Stroke	100mm	100mm
Max.Moving Speed for X&Y	50m/min	50m/min
Positioning Accuracy	±0.05mm	±0.05mm
Repeatability Accuracy	±0.03mm	±0.03mm
Aplanatism		✓
Max. Thickness of Cutting Board MS	20mm	20mm
Max. Thickness of Cutting Board SS	10mm	10mm
Max. Thickness of Cutting Board AL	8mm	8mm
Laser Source Power	1000-4000W	1000-6000W

WALC 8020 LASER WELDING MACHINE



Model	WALC8020
Laser Source Power	2000-5000W
Operating System	SIMENS840D 24"LCD Screen
Thickness of Welding SS	1-1.5mm
Welding Scale	2mx8m
Application	SS Radiator Plate / Pressure Container
Processing Method	Rolling Feeding
Welding Method	Tailored Blank Laser Welding / Stitch Welding



WALC 9030 LASER WELDING AND CUTTING MACHINE



Advantage

- Double Side Simultaneous Rack-and-Rails Driving Equipment
- Moving Beam
- Integrated Z-axis Box
- Aplanatic Structure
- Fixed Working Table
- Movable Fume Exhausting System

WALC9030 is a high performance and wide area CNC laser cutting and welding machine, which adopts integrated beam and laser source structure, double side rack-and-pinion drives, and flying optics to ensure the normal precision and quality. With optimized German Siemens Control Systems specifically designed for laser cutting, combined with a vast working table, the machine can run with more stability and a strengthened ability for operation.

Model	WALC9030 (Optional WALC6030)		
X Stroke	10000mm	Positioning Accuracy	±0.2mm/10m
Y Stroke	3000mm	Repeatability Accuracy	±0.1mm/10m
Z 1	150mm	Thickness of Cutting MS	≤20mm
Z 2	150mm	Thickness of Cutting SS	≤10mm
Speed (Unload) XY	25m/min	Thickness of Cutting AL	≤8mm

LASER CUTTING & WELDING IN AUTO PARTS & ACCESSORIES

Equipment	Laser Source	Application	Features
Automobile Roof Laser Welding	Fiber Laser Source 4000w—6000w	Laser Brazing	Automatic Bilateral Welding
Airbags Panel Laser Weakening Machine	CO ₂ Laser Source 1500w—2500w	Laser Weakening	Automatic Robot Load and Unload
Automobile Unequal Thickness Panel Laser Welding Machine	CO ₂ Laser Source 2500w—4000w Fiber Laser Source 2500w—4000w	Laser Butt Welding	Cutting & Welding
Automobile Tailpipe Welding Machine	CO ₂ Laser Source 3000w—5000w	Laser Welding	Steel Belt Molding Equipment
Airbags Liner Laser Welding Machine	CO ₂ Laser Source 2000w—4000w	Laser Welding	Automatic Double-Position
Roof & Side Parts Fiber 3D Cutting Machine	Fiber Laser Source 200W—500w	Laser Cutting	Low Investment & Low Cost
Automobile Trunk Laser Welding Machine	CO ₂ Laser Source 3000w—4000w	Laser Brazing	Automatic Robot Load & Unload
Gear-Set Laser Cutting Machine	CO ₂ Laser Source 2000w—3000w	Laser Cutting	Automatic Robot Load & Unload
Automobile Bumper Laser Drilling Machine	CO ₂ Laser Source 500w—2000w	Laser Cutting	Automatic Multi-Position Cutting



YAG-MIG LASER HYBRID WELDING MACHINE



Application

Machinery, Oil, Metallurgy, Tube, Aero Space, Military. By means of composite function of laser and arc, weldability of laser, adjustability of weld component and ability of gap bridging have been improved. It's a completely new advanced welding process.

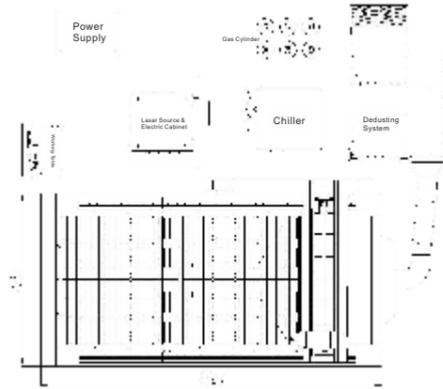


YAG-MIG

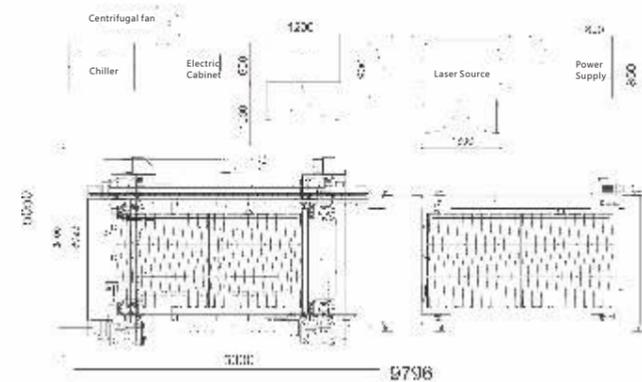
Laser Source	YAG 200-4000W/ Fiber 8000W
Welding Method	longitudinal and circular weldings, laser and feeding and MIG
Material	Al, Ti, CS, SS
Thickness	3-8mm
Speed	1-5m/min



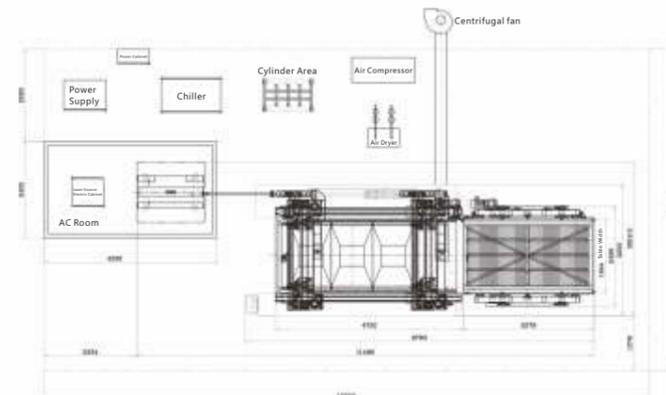
GF 3015 Max Height: 2250



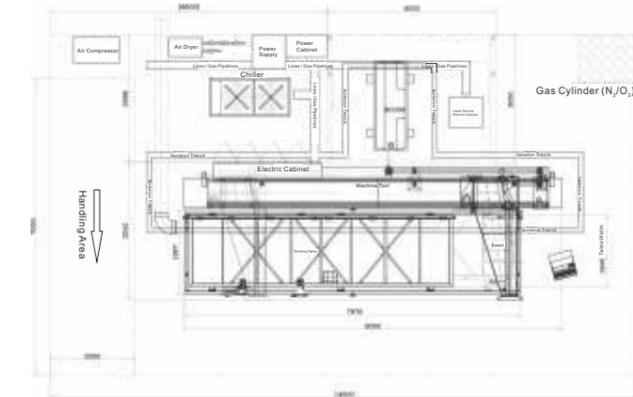
DF 3015 Max Height : 2200



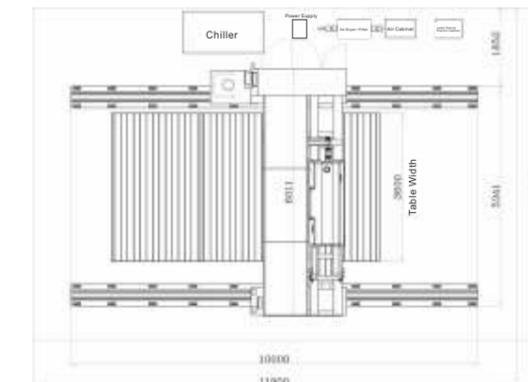
DM 3015 Max Height: 2200



P6015 Max Height : 2000



WALC 6030 Max Height : 3700



LM3015 Max Height : 2300

