

PRODUCT

DATA SHEET



Bending
Cutting
Welding
Marking

2024-2025

HIGHTECH INDUSTRY GROUP

BUILD . TO LEAD .

HT YAG

LASER WELDING MACHINE



High Precision and Clean Welds

The YAG laser provides concentrated energy for deep, narrow welds with a small heat-affected zone, reducing deformation and ensuring strong, smooth weld seams.

Stable and User-Friendly Design

An integrated structure with a working platform, mechanical arm, and built-in chiller ensures stable operation, easy handling, and reliable performance during long working hours.

Wide Application Range

Pulse welding control, the machine is suitable for various metals and precision welding tasks, making it ideal for signage and light industrial fabrication.



YAG LASER SOURCE

THE YAG LASER PROVIDES CONCENTRATED ENERGY FOR DEEP, NARROW WELDS WITH EXCELLENT PRECISION, MAKING IT IDEAL FOR DETAILED AND DELICATE WELDING TASKS.

ITS SMALL HEAT-AFFECTED ZONE MINIMIZES DEFORMATION, RESULTING IN STRONG, CLEAN, AND SMOOTH WELD SEAMS WITH MINIMAL POST-PROCESSING REQUIRED.

PARAMETER SYSTEM

PRECISE PARAMETER CONTROL
ADJUSTABLE LASER POWER, FREQUENCY, AND PULSE SETTINGS ALLOW ACCURATE TUNING FOR DIFFERENT MATERIALS AND WELDING NEEDS.

USER-FRIENDLY INTERFACE
AN INTUITIVE TOUCHSCREEN WITH QUICK-ACCESS BUTTONS MAKES OPERATION SIMPLE, EFFICIENT, AND RELIABLE.



PARTS



CHILLER SYSTEM

CUSTOM-DESIGNED CHILLERS IN WELDING MACHINES PROVIDE HIGH COOLING CAPACITY, ENSURING STABLE OPERATION DURING EXTENDED WELDING SESSIONS. THEY PREVENT OVERHEATING AND MAINTAIN CONSISTENT WELD QUALITY.

TAILORED FOR ENERGY EFFICIENCY AND DURABILITY, THESE CHILLERS HANDLE HARSH ENVIRONMENTS, REDUCING MAINTENANCE NEEDS AND EXTENDING OPERATIONAL LIFE. THIS RESULTS IN INCREASED PRODUCTIVITY AND REDUCED DOWNTIME.

CRYSTAL ROD

YAG LASER CRYSTAL GENERATES A 1064 NM PULSED LASER, WHICH IS SHAPED AND FOCUSED ONTO THE WORKPIECE TO CREATE PRECISE, LOCALIZED MELTING FOR WELDING.

WELDING PARAMETERS SUCH AS PULSE FREQUENCY, PULSE WIDTH, AND MOVEMENT ARE CONTROLLED BY A PLC OR INDUSTRIAL PC, ALLOWING EASY ADJUSTMENT OF LASER ENERGY FOR STABLE AND CONSISTENT RESULTS.



PARTS



CCD CAMERA SYSTEM

THE MACHINE IS EQUIPPED WITH A STANDARD CCD CAMERA SYSTEM, OFFERING 10X MAGNIFICATION, CROSSHAIR ALIGNMENT, AND RED-LIGHT POSITIONING.

DESIGNED FOR INDUSTRIAL USE, THE CCD CAMERA IS DURABLE AND RELIABLE, CAPABLE OF WITHSTANDING HARSH FACTORY ENVIRONMENTS. ITS ROBUST CONSTRUCTION ENSURES LONG-LASTING PERFORMANCE WHILE MAINTAINING CONSISTENT IMAGE QUALITY FOR PRECISE WELDING OPERATIONS.

HANDHELD WELDING (OPTIONAL)

THE HANDHELD TRANSMISSION USES A HIGH-QUALITY IMPORTED OPTICAL CABLE, WITH A STANDARD LENGTH OF 5 METERS, ENSURING RELIABLE AND EFFICIENT LASER DELIVERY DURING WELDING.

THE SYSTEM COMES WITH A PREMIUM, DESIGNED FOR COMFORT AND PRECISION, ALLOWING OPERATORS TO SWITCH BETWEEN DIFFERENT WELDING MODES



Technical Parameters

Laser Power	300W/500W
Working Size	310*170*125cm
Packing Size	170*130*140cm(3.1m ³)
Packing Weight	360KG
Maximum Laser Power	300W/500W
Laser Wavelength	1064nm
Monopulse Max power	80J/110J
Pulse Width	0.1-10ms
Welding Frequency	1-50Hz
Laser Spot	0.2-3.0mm
Peak Power	≤7.5KW
Laser Device Horizontal Direction	200-800mm
Laser Stroke	≥200mm
Targeting and Positioning	CCD Camera + Red light
Input Voltage	HT300W: Single Phase 220V±10%, 50Hz/60Hz HT500W: Three-phase 380V±10%, 50Hz/60Hz
Applicable Material	Stainless steel, Galvanized sheets, Aluminum plates, etc.

Welding Capacity

Power	Stainless steel	Galvanized	Aluminum
300w	0.1-1.5mm	0.1-2.5mm	/
500w	0.1-2.5mm	0.1-4mm	0.1-1mm

APPLICATION



ABOUT US

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Based in Weifang, Shandong, our modern manufacturing base covers over 12,000 m² and integrates research, development, production, and testing in one facility – ensuring stability, efficiency, and quality at every stage.

Hightech provides professional installation, training, and lifetime technical support. Our responsive service team and spare-parts centers ensure fast solutions and long-term reliability for every customer.



Equipped with advanced CNC machining centers, laser cutting systems, precision welding equipment, and intelligent assembly lines, Hightech continuously upgrades its technology to meet global industrial standards.



Driven by passion and professionalism, our international team of engineers, designers, and sales specialists works together to deliver innovative machines and trusted partnerships worldwide under the Hightech brand.





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