

IGOLDENLASER



TECHNICAL PROPOSAL

iGR-R Laser Cutting Robot

● PRODUCT OVERVIEW

The iGR-R 6-axis robotic laser cutting machine is equipped with MAX fiber laser system and Hanhua offline 3D programming software. Designed around high-precision flexible processing, it breaks the limitations of conventional flat cutting machines and enables multi-angle cutting of 3D special-shaped contours on various metal workpieces. It meets the 3D sheet metal processing demands across multiple industries including auto parts, hardware components, sanitary hardware and metal furniture.

● PRODUCT PICTURE



Quotation for Robotic Laser Cutting Machine

Seller	Company Name: Shandong iGolden CNC Technology Co.,Ltd. Company Address: 5th Floor, Building 2-2, Enterprise Park, East 8, Tangye Middle Road, Licheng District, Jinan City, Shandong Province, China Whatsapp: Mobile: Contact Person: Email Address:
Model	iGR-R
Power(optional)	Fiber
Type	
Quotation FOB QINGDAO USD	
Delivery	
Payment	
Packing Size	
Gross weight	
Container	

● TECHNICAL PARAMETER

Model		iGR-R
System		iGOLDENLASER
Cutting software		Professional 3D software
Power		1500w-3000w
Laser		MAX
Laser cutting head		RAYTOOLS
Water cooler		S&A
Robot parameters		
Degree of freedom		Six-axis robot
Drive mode		Servo drive
Max. working radius		1813mm
Repeatability of positioning accuracy		$\pm 0.05\text{mm}$
Max. load		25KG
Range of motion	Axis 1	+180°~-180°
	Axis 2	+156°~-99°
	Axis3	+75°~-200°
	Axis4	+180°~-180°
	Axis5	+135°~-135°
	Axis6	+360°~-360°

Range of motion	Axis1	204°/s
	Axis2	186°/s
	Axis3	182/s
	Axis4	492°/s
	Axis5	450°/s
	Axis6	750°/s
Work temperature		0℃~+45℃
Storage temperature		-10℃~+55℃
Environmental humidity		Usually below 75% RH (without frosting) Short-term below 90% RH (within 1 month)
Allowing for a high degree		Below an altitude of 1000 meters
Allow vibration		4.9m/s ² (0.5G) 以下
Protection level		IP67
Machine size		1813*1532*542
Noise level		≤75dB(A)
Machine weight		256KG
Voltage		Three-phase 380V (50Hz)

● CONFIGURATION INTRODUCTION



Fiber laser

- ✧ Excellent beam quality
- ✧ High power & high efficiency
- ✧ High reliability with long service life
- ✧ Compact and rugged structure
- ✧ Advanced programming interface



S&A Water Chiller

- ✧ Real-time display of current water temperature; precise temperature control, low energy consumption and fast heat dissipation
- ✧ Unique dual-water circuit design: one circuit cools the laser source and the other cools the laser cutting head to support efficient machine operation
- ✧ Built-in temperature alarm function for smarter operation



RAYTOOLS Cutting Head

- ✧ Auto-focus function saves focusing time, with focal length adjustment accuracy up to 0.01mm, boosting working efficiency by 10 times.
- ✧ Optimized structural design extends the service life of the cutting head.
- ✧ Built-in high-efficiency water cooling system. - Dustproof grade: IP65.



Wire spool

The standard cable is 10 meters, and the winding tray is used to comb the cable to avoid entanglement affecting the work.



Shifting roller

Universal wheel with lock design, easy to move, can realize a variety of scenarios of cleaning work.



Touch screen panel

Friendly interface; Rich functions, a variety of cleaning modes are optional, easy to learn.



6 axis Robot

6-axis linkage enables full-angle 3D machining, completing cutting of bent parts, curved parts and special-shaped pipe fittings in one single process.



Control Cabinet

It integrates complete servo drive, signal transmission and safety control modules to provide stable and high-precision motion control for the robotic arm, and can realize multi-axis synchronous linkage processing with 3D offline software.



Handheld Teach Pendant

The handheld remote controller enables easy control of cutting operations.

Advanced Performance

- Axis Flexible 3D Cutting 6-axis linkage realizes full-angle 3D machining. It completes cutting of bent workpieces, curved components and special-shaped pipe fittings in one go, replacing traditional stamping and manual flame cutting processes.
- Ultra-high machining precision Repositioning accuracy of $\pm 0.05\text{mm}$. Paired with stable fiber laser, it delivers smooth, burr-free cutting surfaces without secondary polishing to improve finished product quality.
- Intelligent offline programming Hanhua 3D offline software supports workpiece model import and cutting path simulation. Programs can be compiled offline without occupying machine production time, effectively boosting workshop output.
- Complete set of first-tier brand components Equipped with full industrial-grade accessories including MAX laser source, Raytools cutting head, S&A water chiller and Syntec robot system. Low failure rate and long service life. The IP67-protected robotic arm is dustproof and splashproof, suitable for harsh workshop environments.
- Universal for multiple materials and industries Capable of processing various metals such as carbon steel, stainless steel and aluminum alloy. Widely applied in 3D sheet metal processing for automobile frames, medical hardware, metal furniture, construction machinery parts and more.

● Samples

Multi-industry Applications:

Cabinet, Machinery, Hardware, Home Appliance, Door & Window, Construction, Electromechanical, Furniture and Automotive Industries.







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