

# Automatic Laser Welding Machine for Gear Ring Seams

This welding machine features a four-station tray for feeding, processing, welding, and cutting. It is designed with specific carriages to facilitate product specification changes and automated operations.



## ADDITIONAL IMAGES



## Overview

### High-Efficiency Automated Welding

This automatic laser welding machine is engineered for precision gear ring seam welding and high-volume industrial applications. Featuring a four-station tray system for continuous feeding, processing, welding, and cutting, it ensures seamless automated production. The system integrates advanced temperature detection and segmented welding technology to deliver consistent, high-quality results while minimizing deformation.

## Key Features

### Automation Features

- Four-station tray system (feeding, processing, welding, cutting)
- Two-dimensional loading and unloading device
- Integrated preheating and conveyor design
- Segmented welding detection for automatic start-point determination
- Weld infrared temperature detection
- Easy manual and automatic welding mode switching

## Performance Metrics



Automated welding system demonstrating capabilities for gear rings and saw blades.

### Performance Specifications

**2500 W**

Power Range Min

**3500 W**

Power Range Max

**3 m/min**

Welding Speed Min

**6 m/min**

Welding Speed Max

**1 mm**

Welding Penetration

## Technical Specifications

### System Components

Component	Specification/Model
Host Model	GS-HZ03
Laser Generator	IPG1000W
Control System	PLC
Linear Guide/Screw	HIWIN
Cooling System	HC050M
Temp/Humidity Control	250W

### Servo Motor Configuration

- X-axis: 400KW, 150mm stroke
- Z-axis: 400W with brake, 300mm stroke
- C-axis: 400KW, 360 degree rotation

## Applications

### Suitable Applications

Gear Ring Seams, Gear Shafts, Woodworking Saw Blades, Automobile Rocker Welding