IPG SYS 750
Precision Welding for High Value Parts

WELDING WORKSTATION

Applications

- High Precision Delivers High Part Yield
- HMI 2200 Software for Regulatory Compliance
- Zero-maintenance Lasers & Robust Design Ensures High Availability
- Fast Characterization, Qualification & Time to Production

Features

- Precision 3-axes Part Movement
- Choice of Standard, Wobble and Scanning Welding Heads
- Automated Door for Fast Part Loading
- Standing Station Load Height Configuration
- Traceable Calibration Unit Options

The IPG SYS 750 Welding Workstation is a Class I fiber laser welding workstation for the medical device and aerospace industries where high-quality, repeatable part processing and traceability are mandatory. Designed specifically to deliver the required performance at an attractive price point, the IPG SYS 750 is ideal for entry-level laser welding applications or replacement of jewelry welders in applications demanding regulatory compliance.

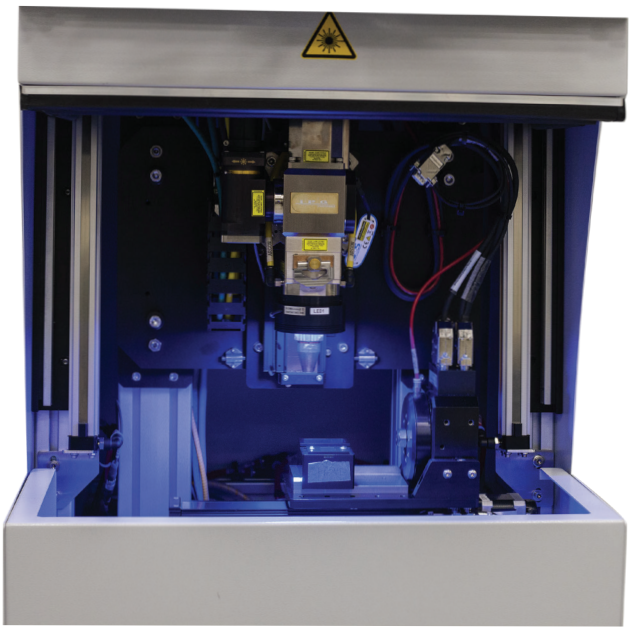
The small footprint and portability of this workstation enable easy integration into any single part flow manufacturing line. Industry leading HMI-2200 user-interface comes standard with a robust library of proven and validated processing routines that integrates with MES as well as providing real-time and historical data logging. Hardware options include vision systems and programmable lighting for automated part alignment and inspection, barcode and RFID scanners and comprehensive programmable I/O to reduce operator dependency and increase quality and yield.

Laser Power

- CW Lasers 100, 200, 300 W
- QCW High Peak Power Lasers: 150/1500 or 300/3000
- Laser is Internally Mounted, Saving Energy & Space
- All Lasers are Air-cooled and No Chillers Required

System Enclosure

- Class 1 Enclosure with Laser-safe Viewing Windows
- Vertically Opening Automated Door with Full Side Access
- Standing Station Configuration
  1040 mm (41 in) Load Height



IPG SYS 750 Welding Workstation

Modular Work Area

- 100 mm X Travel , 100 mm Y Travel, 100 mm Z Travel
- Threaded Aluminum Base Plate
- Rotary Stages Available

Compact Footprint

- 560 mm (22 in) Wide x 915 (36 in) Deep
- Vertically Operating Front Door with Side Access
- Ergonomic Work Height for Single Part Flow Standing Operation
- Workstation Portability Minimizes Potential Revalidation Requirements

Welding Heads

- IPG's FLW-D30 Welding Head
- Coaxial Viewing System
- Supports One Process Gas
- Optional D30 Wobble Module

HMI-2200 Medical Micro OS

- Rack Mounted Industrial Computer with Touch-Screen Interface
- Robust Library of Validated Programming Routines
    - Speeds Programming & Extends Flexibility
- FDA (21 CFR Part 11) Option for Regulatory Electronics Records Compliance
- MES Interfacing Options and Integration Support for Rapid Time to Production

Up to 3-Axes of Coordinated Motion for 2D, Tube & 4D Materials Processing

- Stepper Motor Driven Stages for Cost-effective Laser Welding Accuracy
- Motion System Options to Suit Individual Needs

Reliable Part Processing

- Zero-maintenance Lasers Provide Consistent Process
- Precision Stages for Positional Repeatability
- Full Closed-Loop Vision Control Addresses Incoming Material Variations
- Process Condition and Motion System Calibration Suite with Validated Software for Automatic Tool Verification
- Comprehensive Programmability Minimizes Operator Dependency

Why IPG's Welding Workstation?

Fast Production Laser Welding
Fully Automated Processing
Optimizes Speed Quality & Part Yield

IPG's Fiber Reliability
No Laser Maintenance
No Mirrors to Clean or Align

Low Operating Costs
Low Facilities Costs
No Laser Chiller Required
Min. System Maintenance Required

Size Matters
Compact Footprint: 22 in. x 36 in.

Affordable
The Right-sized Machine for Your Parts

Regulatory Compliance
Accelerated Move-in, Qualification & Validated Processing

Simple Production Implementation
Process Development & Automation by IPG

Single Point Service & Support
Laser & Workstation
Designed, Built & Supported by IPG

Increase Part Quality Yield & Compliance with IPG

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System Specifications

Laser Power, W	QCW 150 W average, 1.5 kW peak or 300 W average, 3.0 kW peak CW: 100, 200, 300
Beam Delivery	IPG's FLW-D30 Welding Head Includes Live Co-axial Vision & Single Process Gas Support (Manual Flow Control) FLW Wobble Module (Optional)
Work Envelope, X:Y:Z, mm, in.	100 x 100 x 100; 4 x 4 x 4
X-Y-Stage Travel	X: 100 mm, 4 in., Y: 100 mm, 4 in. Accuracy: ±30 µm (1.2 mils); Repeatability: ±5 µm (0.2 mils); Velocity: 25 mm/sec (60 in/min)
Z-Stage Travel	Z: 100 mm (4") Accuracy: ±30 µm (1.2 mils); Repeatability: ±5 µm (0.2 mils); Velocity: 25 mm/sec (60 in/min)
Tooling	Aluminum T-slot Table
Rotation Stage- A-axis (Option)	Travel: 360º Continuous, Speed: 30 rpm max; Accuracy: ±180 arc-sec Repeatability: ±45 arc-sec
Controls/ Interface	Rack Mounted Industrial Computer with Tough-screen Monitor; HMI-2200, Medical Micro Operating System
Exhaust	2" Exhaust Plenum for Optional Welding Table
Safety	CDRH Class I Laser System (Complies with 21 CFR Chapter 1, Subchapter J)
Dimensions, WxLxH, mm, in.	560 x 915 x 2030; 22 x 36 x 80

Optional Features:

Beam Delivery	IPG FLW-D30 Wobble Module, Airknife & through the Lens Camera Options; Laser Mech (Supports Photodiode Option)
Rotation	A-axis Coordinated Rotary Motion (See spec above)
Vision (Option)	Cognex Vision Pro Package for Automated Part Alignment
Lighting	Programmable 2-Channel LED Illumination System
Gas Delivery	Programmable Gas Control
Power Measurement	Power/ Energy Measurement
Calibration	Laser Spot & Vision Calibration Suite (non-fixed)

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