

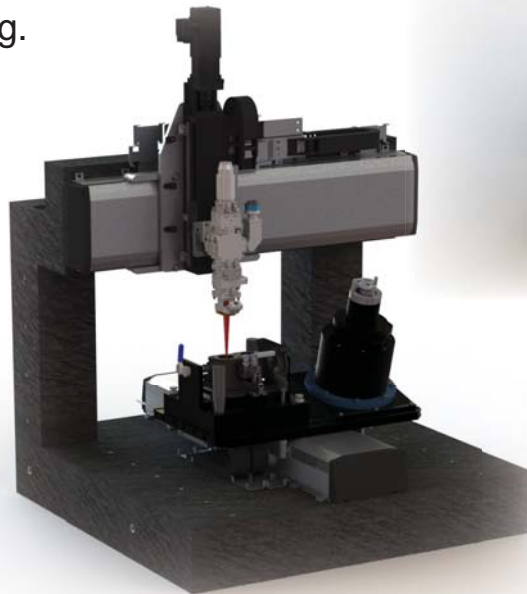
IPG Photonics FIBER LASER WORKSTATION



The Power to Transform[®] Industrial Manufacturing using IPG's MULTIAXIS FIBER LASER WORKSTATION

System Overview:

IPG's MultiAxis Fiber Laser Workstation is a high-quality, industrial system in a clean, highly integrated package for use in both prototype and production environments. The system features high-accuracy linear motor-driven stages and optional rotary stages for precision 2D, tube and 3D processing.



System Features:

- Welding, Cutting, Drilling, Marking & Cladding Capabilities
- Up to 5 Axes of Coordinated Motion for 3D Contouring
- Granite Superstructure for High Stability
- Sealed Stages with Purge to Extend Life
- CDRH Class I Laser Safety Enclosure
- Configurable with a Variety of IPG's Lasers & to match the needs of high volume production

IPG's MultiAxis Fiber Laser Workstation

Robust, Industrial Design

Laser Options

- Single-mode: Tube and Fine Cutting
- Multi-mode CW: Seam Welding and Cutting
- Pulsed Fiber Laser: Overlap, Spot Welding, Drilling and Marking
- High Power CW: Deep Penetration Welding

System Enclosure

- Laser Class 1
- Front Door with Laser Safe Viewing Windows
- Available as Manual or Automatic Operation from HMI or G Code Programmable
- Access Panels on Front and Sides of Cell for Easy Access and Maintenance

Modular Work Area

- 700 mm X, 500 mm Y Travel, 400 mm Z Travel or
- 500 mm X and Y Travel, 200 mm Z Travel

Beam Delivery Options

- Processing Heads for Welding, Cutting, Drilling, Marking and Cladding Applications
- Optional Vision System for Locating Part and Weld Seams



Up to 5 Axes of Coordinated Motion for 2D, Tube and 3D Materials Processing using either ACS or Siemens Controls

- Linear Stages for Demanding Applications requiring High Speed and High Accuracy
- Stages are Sealed to Protect against Damage, Contamination and Debris

User Interface

- Intuitive HMI for Machine Operation
- Multiple Screens to Program all Process Parameters
- G/M-code Programming
- Optional Real Time Process View
- Optional Weld Monitor

Compact Footprint

- Minimizes Factory Floor Space
- Easy to Install
- Ergonomic Work Height- Easy Part Loading and Unloading



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Optional System Features:

- **Coaxial Viewing** for Automatic Feature Recognition & Process Verification
- **Jog Pendant** for Manual Positioning of Stages
- **Fume Extraction System** for Removing Hazardous Fumes from the Process Cell
- **Automatic Door Mechanism** Decreases Cycle Time for Production Systems
- **Process Gas Control** for Automatic Control of Process Gases
- **Laser Power Meter** to Verify Power at Work Piece and Beam Path Integrity

System Specifications:

Laser Power	Up to 4000 W CW, 20,000 W CW, 100 W Pulsed
Beam Delivery Options	IPG Photonics' FLC-D30 Cutting Head, IPG Photonics' FLW-D30 Welding Head IPG Photonics' D30 Drilling Head or 2D Galvanometer Scan Head
Work Envelope	X – 500 mm (19.7 in.); Y – 300 mm (11.8 in.); Z – 200 mm (7.9 in.) X – 750 mm (29.5 in.); Y – 500 mm (19.7 in.); Z – 300 mm (11.8 in.)
Maximum Speed	1000 mm (39.0 in.)/ sec.
Accuracy	15 µm (0.0006 in.) Positioning Accuracy 2 µm (0.0001 in.) Repeatability
Motion Platform	Split X/Y Stages High-force Direct-drive Linear Motors 50 nm Resolution Linear Encoders Air-purge to Reduce Contamination
Materials	Stainless/ Mild Steel, Aluminum, Brass, Copper, Laminated Foils, Polymers
Controls/ Interface	Industrial Motion Controller, Full Look-ahead Contouring Capability Laser Power Proportional to Velocity, Windows-based CNC Interface G/M-code Programming, Editable Materials and Laser Parameter Database Optional CAD/ CAM Package with Nesting Feature
Process Gas	Options: Electronic High-pressure (250 psi) Regulator for Cutting Inputs for Two Cutting Gasses for Easy Material Changeover Gases Programmable via G/M-code
Tooling	Aluminum T-slot Table Optional 4th axis with 5C Collet or 3-jaw Chuck Optional Cutting Table with Honeycomb Inserts Optional Pass-through for Roll-feed Applications Available
Safety	CDRH Class I Laser System (Complies with 21 CFR Chapter 1, Subchapter J)
Exhaust	4" Blast Gate with Exhaust Plenum for Cutting Box and Debris Drawer
Dimensions, L x W x H	1600 x 1900 x 2400 mm; (63.0 x 75.0 x 94.5 in.)
Weight	1600 kg (3530 lbs.)
Power	380 to 480 VAC, 47 to 63 Hz, 3 PH, 30 A

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