

# IPG Photonics SYS-4X4 CUTTING PLATFORM



## The Power to Transform® Industrial Manufacturing using IPG's SYS-4X4 CUTTING PLATFORM

**NEW  
SYSTEM**

NEW System Available from IPG Photonics

*Designed to Reap the Benefits of Fiber Laser Technology*

### System Features:

- High-speed Cutting, Marking & Welding
- 2-D Contouring with Look-ahead
- High Performance Linear Motor Driven Stages
- Granite Superstructure for High Stability
- Sealed Stages with Air Purge to Extend Life
- CDRH Class 1 Laser System
- Configurable with a Variety of IPG Lasers



### System Overview:

IPG's SYS-4X4 Fiber Laser Cutting Platform is a high-quality, industrial system for use in both prototype and production environments. It features high-performance linear motor-driven stages and IPG's FLC-D30 Cutting

Head housed in a clean, integrated package. The SYS-4X4 provides superior cutting performance and reliability in a compact footprint while maintaining low operating costs for rapid return on investment.

## IPG's SYS-4x4 Fiber Cutting Platform

### Robust, Industrial Design

#### Laser Options

- Single-mode: Fine Kerf Cutting
- Multi-mode CW: Flat Sheet Cutting
- Pulsed Fiber Laser: Marking and Welding
- High Power CW: High Speed Sheet Cutting

#### System Enclosure

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

#### Modular Work Area

- 1270 mm X x 1270 mm Y x 100 mm Z

#### Beam Delivery Options

- IPG's FLC-D30 Cutting Head Standard
- Optional Processing Heads for Welding, Drilling, Marking Applications



#### 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
- **Pallet Changer** for Automated Material Handling
- **Material Pass-through** for roll-feed applications

#### Full 2D Contouring with Look-ahead for High Accuracy Cutting using ACS Motion Controls

- Direct-drive Linear Stages for Demanding Applications requiring High Speed and Acceleration
- Linear 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

#### Compact Footprint

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



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## System Specifications:

<b>Laser Power</b>	Up to 4000 W
<b>Beam Delivery</b>	IPG Photonics FLC-D30 Cutting Head Automatic Capacitive Height Sensing Replaceable Cover Window Integrated Coaxial Cutting Assist Gas
<b>Work Envelope</b>	X – 1270 mm (50.0 in.); Y – 1270 mm (50.0 in.); Z – 100 mm (3.9 in.)
<b>Maximum Speed</b>	1000 mm (39.0 in.)/ sec. Cutting 2000 mm (78.0 in.)/ sec. Rapid Positioning
<b>Accuracy</b>	25 µm (0.001 in.) Positioning Accuracy 2 µm (0.0001 in.) Repeatability
<b>Motion Platform</b>	Linear Stage H-gantry High-force Direct-drive Linear Motors 0.5 µm Resolution Linear Encoders Air-purge to Reduce Contamination
<b>Materials</b>	Stainless/ Mild Steel, Aluminum, Brass, Copper, Laminated Foils
<b>Controls/ Interface</b>	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
<b>Cutting Gas</b>	Electronic High-pressure (250 psi) Regulator Inputs for Two Cutting Gasses for Cutting Various Metals Gas Pressure Programmable via NC Code
<b>Cutting Surface</b>	Telescoping Drawer with Metal Saw Tooth Cutting Points or Honeycomb Inserts Removable Debris Collection Bins Optional Front and Rear Pass-through Available
<b>Safety</b>	CDRH Class I Laser System (Complies with 21 CFR Chapter 1, Subchapter J)
<b>Exhaust</b>	4" Blast Gate with Exhaust Plenum for Cutting Box and Debris Drawer
<b>Dimensions, L x W x H</b>	2530 x 3130 x 1630 mm; (100.0 x 120.0 x 65.0 in.)
<b>Weight</b>	2850 kg (6300 lbs.)
<b>Power</b>	208 to 230 VAC, 47 to 63 Hz, 3 PH, 30 A

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