Turnkey Robotic Laser Workcell
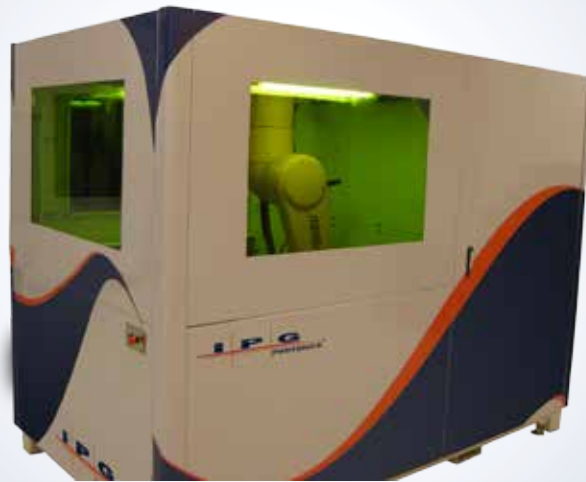## Laser Welding, Cutting & Cladding

Applications

- Laser Welding
- Laser Cutting
- Laser Cladding
- Body-in-white Industry
- Hydroformed Parts Welding and Cutting
- Remote Laser Welding- Configuable for Welding On-the-fly
- Selectable Welding, Cladding or Cutting Functions

Features

- Fiber Laser Configured to Specific Needs
- 6-axis Robot with Optional Rotary Axis
- Class 1 Fully Interlocked Safety Enclosure
- Laser Safe Windows for Process Monitoring

Optional Features:

- Functions Selected by Beam Switch and Process Head Exchange
- CTV Viewing
- Actuated Table Base for Ease of Loading

IPG's Turnkey Robotic Laser Workcell is a modular, highly-configurable workstation comprising IPG's world-leading fiber lasers, laser processing heads and a 6-axis robot within a Class 1 laser safe enclosure. A 17 inch touchscreen monitor is the operator interface to the integrated system control system that provides programmability of motion, laser parameters and process gas.

System specifications detailed here are typical capabilities for reference only. Each primary function module such as laser power, robot capacity and reach and process head, is available in a range of sizes and capacities and is readily integrated into the base configuration. IPG has taken this modular approach to make systems readily customizable for your specific applications; enabling you to invest in only the process capabilities applicable to your needs.

The Power to Transform®

Turnkey Robotic Laser Workcell
Laser Welding, Cutting & Cladding

System Specifications

Laser Power Options	CW 1 kW to 10 kW; Typ. 6 kW

Beam Delivery Options	IPG's FLW-D50 Welding Head; IPG's FLC-D30 or D50 Cutting Head
	Cladding Head- Application Dependent, Specify when Ordering
	
	Beam Delivery Typically Includes:
	    Selectable Collimator/ Focus Lenses
	    Integrated Air-knife/ Cross-jet
	    Integrated Shield Gas Delivery Nozzle and Electronic Flow Control
	    Water-cooled Optics
	    Engineered Cable Management

Robot (Typical)	6-axis: Reach 1.81-2.1 m (72-82 in.); Repeatability 0.05 mm (0.002") Includes Robot Controller with Motion Package and Dual Safety Position and Speed Check Work Envelope: 1.2 m x 1.2 m x 1.0 m (50 x 50 x 40 in.)
Controls/ Interface Options	Stand-alone Mobile HMI Stand Industrial PC with 17" Color Touchscreen IPG Cell Control Interface Front panel Controls for Emergency Stop, Laser Mode, System Reset, Cycle Start, Cycle Stop
System Integration	Electrical Integration of all Components; Software Integration of Robot, Laser, Cell Safety and Beam Delivery; Safe Position Monitor Interlocked with Laser Emissions
Tooling	Heavy Duty Table to Mount Customer Supported Tooling
Enclosure	Class 1 Laser Safety Enclosure Dual Wall Aluminum Extrusion Panels Laser Safe Viewing Window
Dimensions	2.7 m x 3.6 m x 3.0 m
Weight, kg lbs	2720 6000

Optional Features:

Beam Switching	Beam Switching Module to Support Multiple Process Heads on a Single Laser
Automatic Tool Change	Pneumatic Tool Change Coupler to Exchange between Welding, Cutting and Cladding Heads
CCTV Viewing	Webcam Mounted Inside Workcell for Process Monitoring; Image Fed to HMI Screen
Actuated Table Base	Additional Motion Axis to Move Table for Ergonomic Part Loading Motor-driven with Locking Pins to Ensure Repeatability
Automatic Door	Motorized Door for Rapid Load/ Unload
Additional Axes	Additional External Axes for Ergonomic Part Loading

+1 (508) 373-1100
sales.us@ipgphotonics.com
www.ipgphotonics.com

The Power to Transform®