



IPG Photonics Launches Cobot Laser Welding and Cleaning System

Automating Repetitive Steps Helping Companies

Improve Productivity and Reduce Operating Costs

MARLBOROUGH, Mass. - May 08, 2024 - [IPG Photonics Corporation](#) (NASDAQ: IPGP), the world leader in fiber laser solutions, today announced the launch of an automated cobot laser welding and cleaning system for fabrication and manufacturing industries.

Turnkey Laser Automation Made Easy

The new cobot is a fully automated, laser welding and cleaning system which can be configured with any existing and future LightWELD® welding laser source. It expands IPG Photonics' industry leading LightWELD family of portable laser welders. Cobots, also called collaborative robots, are industrial robots which work with humans often for tasks that require precision, repeatable results or to streamline repetitive tasks. IPG Photonics' cobot laser production system makes automating welding jobs easy for fabricators regardless of experience with cobots or laser processing. Designed and delivered as a turnkey laser system, welders and shop owners benefit from simple installation and setup, to enable production in as little as just one day.

All-in-One Cobot Laser Welding & Cleaning System

The LightWELD Cobot System is comprised of an industrial base with the LightWELD laser source, system controls, a 1 x 1.5 m work surface, drag-and-drop operator user interface, and long-reaching cobot arm which holds the LightWELD gun. As with standalone LightWELD products, the system is also capable of switching between laser welding and laser cleaning in just seconds by simply changing the nozzle with no tools required. The system is also fully compatible with the LightWELD wire feeder, which further expands the system capability.

Effortless Part Programming

Regardless of prior cobot experience, welders are able to teach the cobot with manual guidance in just minutes and control all system functionality from a single graphical user interface which requires no coding knowledge. Cobot motion and LightWELD parameters are easily accessed, as are the built-in editable presets for optimized welding and cleaning. The welder can test and simulate the programmed processing ahead of beginning a job, which ensures results are as expected. This significantly reduces scrap and the need for rework due to the precision and consistency of the cobot motion system and reliability of the LightWELD laser source.

Safety Configurations to Match Any Environment

IPG Photonics puts safety first in every product they produce and is committed to educating the industry on how laser safety standards for welding differ only slightly from the required protection and procedures in traditional welding, which makes adoption of laser-based solutions simpler and faster. The LightWELD Cobot System is available in three configurations: the base system that is integrated into a dedicated and enclosed shop space; an integrated system with a removable safety enclosure with dual-channel interlocking doors and laser-safe window; and in a LightWELD Studio comprised of modular laser-safe panels with sliding door, laser-safe window and safety signage.

Empowering Skilled Welders and Enabling New Capabilities

By automating repetitive laser welds for the LightWELD Cobot System, skilled welders can focus on more demanding tasks and pursue new skills enabling themselves and shop owners to increase productivity and expand capabilities. These benefits, plus lessening the need to grind and rework parts that typically result from hand welding inconsistencies, reduce overall operating expenses and accelerate return on investment.

“This turnkey automated laser welding and cleaning system provides the shortest path for fabricators to install an easy to use system and produce consistent results efficiently and safely,” said Daniel Earley, LightWELD Product Manager.

“My firsthand experience using the system validates that anyone with or without prior welding or cobot skills can quickly learn to program and control the entire system in a matter of minutes. We are excited to bring this system to market as it will enable the fabrication industry to increase productivity with automated processing, address the shortage of qualified welders, and facilitate new shop capabilities.”

The LightWELD Cobot System offers the flexibility and range of motion to tackle multiple project setups with mixes of parts, joint configurations and material combinations, both on the system work surface and on adjacent work surfaces. The small footprint of the system and integrated leveling caster wheels enable easy system repositioning into other areas of the shop floor.

The combination of welders and cobots lower the cost-per-part by reducing downtime, rework and scrap, while increasing production capacity, processing consistency and overall quality for fabrication shops of all sizes.

About IPG Photonics

IPG Photonics Corporation is the leader in high-power fiber lasers and amplifiers used primarily in materials processing and other diverse applications. The company’s mission is to make its fiber laser technology the tool of choice in mass production. IPG accomplishes this mission by delivering superior performance, reliability and usability at a lower total cost of ownership compared with other types of lasers and non-laser tools, allowing end users to increase productivity and decrease costs. IPG is headquartered in Marlborough, Massachusetts and has more than 30 facilities worldwide.

For more information, visit www.LightWELD.com