

# Branson™ GLX-AP and GLX-AS

## Laser Welding Systems in Automation

The production industry's demand for advanced automation and efficiency is on the rise, and Emerson is at the forefront with innovative laser solutions. Introducing the Branson GLX-AP and GLX-AS, designed to support Industry 4.0's increasing need for automation and Industrial IoT (IIoT). These advanced systems facilitate seamless integration and enhanced productivity in modern production environments. The automated GLX version efficiently manages the entire welding process by combining clamp force and welding energy, using Emerson's patented Simultaneous Through Transmission Infrared (STTIr®) technology.

Available with either a Servo (GLX-AS) or Pneumatic Actuator (GLX-AP), these systems ensure reliability in simultaneous laser welding, designed to operate as integrated solutions within complex automation lines, utilizing self-contained, independent weld process controllers.

With a focus on precision, the GLX series eliminates vibration and linear movement, reducing particulates and delivering uniform welds. Continuous feedback from closed-loop sensors enhances weld quality, accuracy, and consistency. Optimized for speed and high throughput, these systems incorporate with the Branson High Power Laser Bank to deliver exceptional performance, setting a new standard for automated laser welding solutions in production industries.



## Features

- **Seamless Integration:** Tailored for automated processes, the GLX-AP & GLX-AS combines clamp force with precise welding energy, offering unmatched reliability in simultaneous laser welding.
- **Technological Excellence:** Choose between a Servo (GLX-AS) or Pneumatic Actuator (GLX-AP) for superior STTIr Laser Technology performance.
- **Precision Engineering:** Experience minimal particulates and homogeneous welds thanks to Emerson's patented Simultaneous Through Transmission Infrared (STTIr®) technology.
- **Advanced Feedback Systems:** Closed-loop sensors continuously enhance weld accuracy and consistency, ensuring precision and repeatability.
- **Handsfree and Wireless Operation:** Offers enhanced flexibility through web-based HMI for parameter setup and adjustment.
- **Weld Recipe Synchronization:** Capable of synchronizing weld recipes across multiple units, with SIG add-on accessory.
- **Scalability:** Supports control of up to 10 additional welding units via web HMI.
- **Standardization:** Utilizes Emerson's harmonized and standardized automation technology concept.
- **Insight and Analytics Access:** Easy access to system insights and analytics through OPC-UA and Fieldbus capabilities.
- **High-Speed Performance:** Optimize your production with the Branson High Power Laser Bank for rapid throughput and superior results.

For more information:  
[www.Emerson.com/Branson](http://www.Emerson.com/Branson)

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**Technical Specifications**

<b>GLX-AP &amp; AS Automation Configuration</b>		
<b>Laser Welding System</b>		
Number of Laser Banks	Up to 2	
Wavelength	990 ± 20 nm.	
Laser Power	Configurable, Max. 250 Watts per Laser Bank	
Cooling	Water/DowFrost mix	
<b>Servo Actuator</b>	<b>Max Stroke</b>	<b>Maximum Clamp Force*</b>
Servo Actuator	125 mm	2500 N
Force Control	Force sensor	
<b>Pneumatic Actuators</b>	<b>Max Stroke</b>	<b>Maximum Clamp Force*</b>
ACTUATOR DIA32 2000XC MICRO LASER	75 mm (2.95 in)	400N
ACTUATOR DIA 1.5" 2000XC LASER	152 mm (5.98 in)	600N
ACTUATOR DIA 2.5" 2000XC LASER	152 mm (5.98 in)	1800N
Force Control	Force Sensor	
Welding Pressure	Electronic Setup of Welding Pressure	
<b>Controls</b>		
HMI	WEB server, fixed IP	
Control Interfaces	One from the list must be selected: - Data Interface Gateway (OPC-UA server) - Fieldbus Interface Gateway (Ethernet/IP, Profinet, other on request) - Digital I/O (8x In / 8x Out)	
Service Interfaces	Optional: - Service Interface Gateway (Remote access)	
<b>Welding tool interface (Option)</b>		
Tool Signals	8 In / 8 Out	
<b>Dimensions and Connection</b>		
Dimension, Weight, Connection	More details in layout and MOS template	
<b>Operating Environmental Requirements</b>		
Operating Temperature Range	15° C (59° F) -35° C (95° F)	
Relative Humidity	Maximum Dewpoint 20°C (68° F)	

\*The dimensions and values can vary depending on switches, pneumatic input unit, rubber elements, tolerances and other options.