

Branson™ GL-300 Laser Welder



The Branson GL-300 combines highly efficient and accurate welds with cost-effective and easy-to-change tooling.

The Branson GL-300 Laser Welder is a flexible plastic joining solution designed to help manufacturers with high mix production with greater production capability, without compromising on product quality. Very efficient and accurate welds are combined with cost-effective and easy-to-change tooling that enables faster set-up and adjustment for changing application specifications.

Manufacturing flexibility is further enhanced by a range of unique features that support applications with different materials, product sizes and production speeds.

KEY DIFFERENTIATORS

- **300 Watt laser unit power source provides high intensity of laser transmission supporting greater material compatibility**
- **Adjustable spot size (0.5 mm – 1.57 mm) supports different application requirements and minimum size is suitable for small and delicate parts**
- **Adjustable power source height for products of varying size**
- **Range of welding modes for different production requirements**
- **Large welding area (300 mm x 300 mm) whilst retaining a small overall footprint**

OTHER FEATURES

- **Highly efficient scanning system** and route setting system
- **High-speed 3D scanning system** for complex geometries
- **Easy to setup** welding path definition via HMI
- **Welding path pre-check** – pilot run of red light beam
- **Enhanced security** – with up to 99 levels of customized password protection
- **Data Interface Gateway (available as option)** provides capability to securely and easily transfer weld and system data to customer Manufacturing Execution System (MES)

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TECHNICAL SPECIFICATIONS

DIMENSIONS AND WEIGHT

Overall dimensions*	2480 mm H x 1405 mm W x 1160 mm D
Dimensions with opened doors*	2480 mm H x 2840 mm W x 3480 mm D
Table dimensions	896 mm W x 760 mm D
Table available dimensions	680 mm W x 625 mm D
Weight (approx)*	1500 kg

LASER SYSTEM

Laser unit power	300 Watts @1080 nm
Welding area	300 mm x 300 mm
Spot size	0.5 mm – 1.57 mm
Focus range	±60 mm
Scanner height range	590 mm – 870 mm

MACHINE CONTROLLERS

Machine logic	Branson Logic Control System
Communication protocol	CANopen
User interface	Industrial PC / resistive 12" color display / screen resolution 1024 x 768
Safety controller	SPS
Light curtain	Standard

TOOL INTERFACE

Communications protocol tool/machine	CANopen
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MACHINE ENCLOSURE

Noise level reading (actual value) EN ISO 11202	70 dB(A)
Color	RAL9011
Safety doors	Front double sheet metal slide doors
Maintenance door	Single wing hinged door on the front and rear side

CONNECTIONS

Pneumatic input	G3/8 Inch
Compressed air	6 – 10 bar
Electrical system	3 x 380 V, 50 Hz, N, PE (China) 3 x 480 V, 60 Hz, PE, without N (North America) 3 x 400 V, 50 Hz, N, PE (Europe)
Data interfaces	USB
Power consumption	4.7 kVA
Max. short circuit current breaking capacity	50 KA (at 690 VAC)
Control voltage	24 VDC

(continued overleaf)

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TECHNICAL SPECIFICATIONS (continued)

ENVIRONMENTAL CRITERION	
Floor properties	Industrial floor
Air humidity	Max. 70% (non-condensing)
Ambient operating temperature	+15°C ~ +35°C (+59°F ~ +95°F)
Altitude (above sea level)	Max 1000 m

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

**The equipment is not allowed to operate under the environments of anti-explosion, inflammable, poisoning, corrosion and underground.

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