

Series GVX-2H/GVX-2HR Vibration & CVT Welders

Overview

The GVX-2H/GVX-2HR is available with Branson™'s Vibration and Clean Vibration Technology (CVT). CVT's infrared preheating feature is ideally suited for applications requiring clean welds with minimized particulates, flash, or other visible contaminants.

The combination of infrared and vibration welding offers more options and applications for smart molding joint design. Infrared emitters melt the joining surfaces before the welding process starts, resulting in a variety of benefits:

- Joints with greatly reduced particulates
- Reduced residual stresses and material-specific friction
- Shorter welding time
- Increased joint strength
- Improved ability to handle hard-to-weld materials



Enhanced User Experience

The GVX-2H/GVX-2HR features an exceptionally user-friendly human machine interface developed using **multiple user profiles, an improved sequence editor, intuitive navigation**, and enhanced screen display. Plus ergonomically designed lift table height for greater user efficiency and comfort.

- Six pneumatic tool functions
- Better tool access from front and back of machine
- Swing bolts to quickly clamp lower fixture
- Less maintenance

Features

- **Improved weld quality and consistency** through continual feedback from closed loop sensors that ensure accuracy and repeatability.
- **Fast cycle time** to support high-speed, automated applications.
- **Smaller footprint** yet larger lift table than traditional vibration welders.
- Convenient rear-door and symmetrical design provides **easy access** for tool changes and part loading/unloading.
- Branson industrial PC-controlled servo drive offers state-of-the-art **speed, accuracy**, increased **energy efficiency** as well as **reduced maintenance and downtime**.
- **Local, rapid-response** technical expertise and repair service supported by Emerson's worldwide network of facilities.

For more information:
www.Emerson.com/Branson

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Technical Specifications

| Mechanical | GVX-2H | GVX-2HR | |
|---|-------------------------------------|--------------------|-----------------|
| Overall Dimensions (H x W x D) ⁽¹⁾ | 2340 x 2470 x 1300 | 2340 x 2470 x 2280 | mm |
| Sound Enclosure Dimen. (H x W x D) ⁽¹⁾ | 2340 x 2020 x 1130 | 2340 x 2020 x 2280 | mm |
| Upper Fixture (Oscillating Head, W x D) ⁽²⁾ | 880 x 376 | | mm |
| Lower Fixture (W x D x Level Above Floor) | 1070 x 600 x 860 | | mm |
| Cut Out in the Table (W x D) | 660 x 250 | | mm |
| Clearance Between Column Supports | 1160 | | mm |
| Clearance Between the Table and Head | 850 | | mm |
| Min. Tooling Height | 260 | | mm |
| Table Stroke | 600 | | mm |
| Weight (Approx Value Depend of Options) | 4000 | 5000 | kg |
| Oscillating Head | | | |
| Kinematics | Linear Vibration | | |
| Frequency (Nominal, Depending on the Tooling Weight) | Approx. 240 | | Hz |
| Amplitude (Peak to Peak) | 0.7 – 1.8 | | mm |
| Tool Weight Upper Tool / Lower Tool / ⁽³⁾ IR Plate (CVT) ⁽⁴⁾ | 40-70 / 200 | 40-70 / 200 / 100 | kg |
| Performance (Weld Area, Depending on the Material) ⁽²⁾ | 300 | | cm ² |
| Drive System | | | |
| Type | Branson Frequency Inverter | | |
| Power Consumption | 30 | | kW |
| Machine Controls | | | |
| Machine Logic / Internal Communications | Branson Logic Control System | | |
| User Interface | 12" Capacitive Color Screen Display | | |
| Force Control (Closed Loop) | Direct Force Measuring | | |
| Table Position Control | Full Stroke | | |

⁽¹⁾ Dimensions can vary depending on options chosen.

⁽²⁾ With Branson i3 electromagnetic head.

⁽³⁾ Lower tool weight can increase above spec, with minor reductions in max clamp force.

⁽⁴⁾ Only valid for IR preheating (CVT).

⁽⁵⁾ Max temperature may be increased to 40°C with optional air conditioning.

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| Lift Table Drive | GVX-2H | GVX-2HR |
|---|--|-----------|
| Design | Servo Motor; Drive Belt Mechanism | |
| Lift Table Velocity | 0 – 500 | mm/s |
| Clamp Force | 1-25 | kN |
| IR Preheating Drive Velocity (CVT) ⁽⁴⁾ | n/a | 1000 mm/s |
| Pneumatics | | |
| Input Air Pressure | 6 – 10 | bar |
| Functions (Standard, Alternative: See Spec.) | 6 | |
| Sound Enclosure | | |
| Noise Emission Max. (EN ISO 11202) | 77 | dBA |
| Front Door (H x W x Level Above Floor) ⁽¹⁾ | 820 x 1110 x 940 | mm |
| Rear Maintenance Door(s) (Inside Opening H x W) ⁽¹⁾ | 1850 x 1100 | mm |
| Machine Colors | RAL9011, RAL7011 (Outside) RAL7011 (Inside) | |
| Connections | | |
| Pneumatic | 1/2" | inch |
| Electrical (Connection) | Based on Customer Requirement: <ul style="list-style-type: none"> • 3 x 400 V, 50 Hz, PE, N (5 x 16 mm²) • 3 x 480 V, 60 Hz, PE, Without N (4 x 16 mm²) • 3 x 200 V, 50/60 Hz, PE, Without N (4 x 35 mm²) • 3 x 380 V, 50 Hz, PE, N (5 x 16 mm²) • 3 x 380 V, 60 Hz, PE, Without N (4 x 16 mm²) | |
| Data Interfaces | USB, Data Interface Gateway 'DIG' available as an option | |
| Ambient Conditions | | |
| Temperature ⁽⁵⁾ | min. +15 – max. +35 | °C |
| Humidity (No Condensation) | 30 – 95 | % |
| Altitude (Above Sea Level) | max. 1000 | m |

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