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.
- **High-speed Curve Motion:**
  Branson introduces the High-speed Curve Motion on the GVX-HR product line, an advanced method for optimizing position control of the axis during preheating changeover times. This innovative feature is designed to enhance the efficiency of the preheating process. The curve motion feature is specifically engineered to expedite the IR preheating release, ensuring a faster and more efficient transition within the preheating cycle. This cutting-edge technology improves overall productivity and reduces downtime, making it a valuable addition to any production line.

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.

Technical Specifications

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: • 3 x 400 V, 50 Hz, PE, N (5 x 16 mm^2) • 3 x 480 V, 60 Hz, PE, Without N (4 x 16 mm^2) • 3 x 200 V, 50/60 Hz, PE, Without N (4 x 35 mm^2) • 3 x 380 V, 50 Hz, PE, N (5 x 16 mm^2) • 3 x 380 V, 60 Hz, PE, Without N (4 x 16 mm^2)		
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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