

Branson™ Polaris IW Ultrasonic Welder

Overview

Branson's Polaris Integrated Welder is a self-contained ultrasonic plastic assembly system that combines a power supply module, process controls, and actuator in a compact bench unit to conserve workspace, ease set up, simplify operation, facilitate resolution, and ensure convenient service. This modernized solution replaces the legacy integrated welder with enhancements for automation environments and an improved interface. The integrated welder is ideal for new users of ultrasonic technology and those with simple production requirements. When using the welder assembly operation is characterized by simplicity, speed and efficiency.

Differentiators

- **3 Operating Modes:** Weld by Time, Collapse Distance or Absolute Distance.
- **Amplitude control** with patented amplitude profiling.
- **Automatic pretriggering** initiates ultrasonics prior to part contact.
- **Dynamic trigger force** based on pre-selected force setting.
- **Autotune plus memory** for fully automatic tuning and storage for the horn frequency at the end of each weld cycle.
- **Afterburst with variable delay and duration** is available to dislodge a part or material adhering to the horn face.
- **Line/Load Regulation** corrects for variations due to power line fluctuations and varying load conditions through Branson's proprietary closed-loop amplitude control.
- **Visual and audible alarms and external outputs** identify overload, machine faults and setup errors.



Specifications

Power	Nominal AC Input	Current Rating
1.25 kW	200-240 V @ 50/60 Hz, Single Phase	10 Amp Max. @ 200 V
2.5 kW	200-240 V @ 50/60 Hz, Single Phase	20 Amp Max. @ 200 V
4.0 kW	200-240 V @ 50/60 Hz, Single Phase	30 Amp Max. @ 200 V

Frequency	20 kHz
Compressed Air	35-100 psi clean, dry air
Maximum Force	2000 N for Dia 63 mm cylinder 3000 N for Dia 80 mm cylinder
Welder Dimensions W x L x H	415 mm x 705 mm x 1420 mm - 1720 mm (Lowest to Highest Position)
Base Dimensions W x L x H	415 mm x 705 mm x 135 mm
Welder Weight	75 kg
Stroke Length	100 mm
Amplitude Adjustment	10-100%

For more information:
www.Emerson.com/Branson

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Features

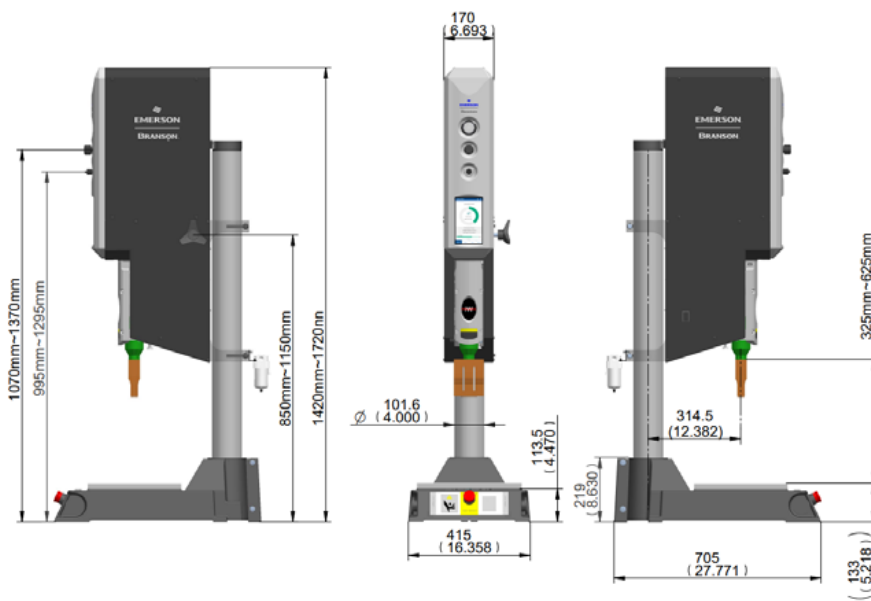
Connectivity	USB 3.0 Type A (Software Upgrades)
	User IO 15 Pin D-Sub High Density (3 rows)
	E-Stop and Two Hand Palm Button 15 Pin D-Sub (2 rows)
OS System	VxWorks
UI App	Modern & Smart Design User-Friendly
Time to Start	Fast Cycle Start Up
Display	7", Capacitive LCD
Result Display	Power Graph & Weld Results Chart
Actuation	Pneumatic
Linear Encoder	Digital Encoder, 5µm Resolution
Trigger Method	Load Cell

Feature Checklist	
Pneumatic Drive	✓
Multilingual	✓
Protection Against Overload	✓
Protection Against Overheating	✓
Part & Batch Counter	✓
Touchscreen Display	✓
User Administration	✓
Height Adjustment	✓

Configurations

Frequency	Power			Cylinder		Stroke	Mounting	
	1.25 kW	2.5 kW	4.0 kW	80 mm	63 mm		w / Base	w / Hub
20 kHz	✓			✓		100 mm	✓	
		✓		✓			✓	
			✓	✓			✓	
	✓				✓		✓	
		✓			✓		✓	
			✓		✓		✓	
	✓			✓				✓
		✓			✓			✓
	✓						✓	✓
			✓				✓	✓

Dimensions



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