

GMX-20DP Series Ultrasonic Metal Welder

Metal Welding

Overview

Emerson's Branson GMX-20DP is a newly developed ultrasonic spot welder with unique mechanical design and precision manufacturing. The GMX-20DP enables high welding capability and high welding quality.

Emerson is the world leader in ultrasonic metal joining through our portfolio of Branson products. We have partnered with industries in many markets including photovoltaic, medical, automotive, battery, refrigeration, electrical and appliance. Our many years of experience have given us a broad base of applications knowledge.

Ultrasonic metal welding provides our customers with a sound solution, superior performance, improved throughput, and reduced maintenance.

Branson welding systems are designed and built to ensure the highest degree of reliability and weld quality.



Key Features

- **Unique pressure applying mechanism** enables more efficient ultrasonic energy transmission.
- **Lower vibration amplitude** results in low heat and particulate during welding, better protecting parts through the weld process.
- **Pressure trig mechanism** enables accurate welding control to ensure welding quality.
- **High definition linear encoder** enables precision height and distance control during welding to ensure accuracy.
- **Various welding modes** enable wide range of applications.
- **Real-time welding data** allows quality monitoring and enables seamless connection to Manufacturing Execution System (MES).

For more information:
www.Emerson.com/Branson

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Advantages Of Ultrasonics

Reliability: Ultrasonic welding can be monitored through time, energy, power, and height limits, assuring excellent process control.

Cost Savings: Elimination of consumables such as solder, flux, crimp connectors and braze materials make ultrasonic welding the most cost effective and environmentally safe process available for welding.

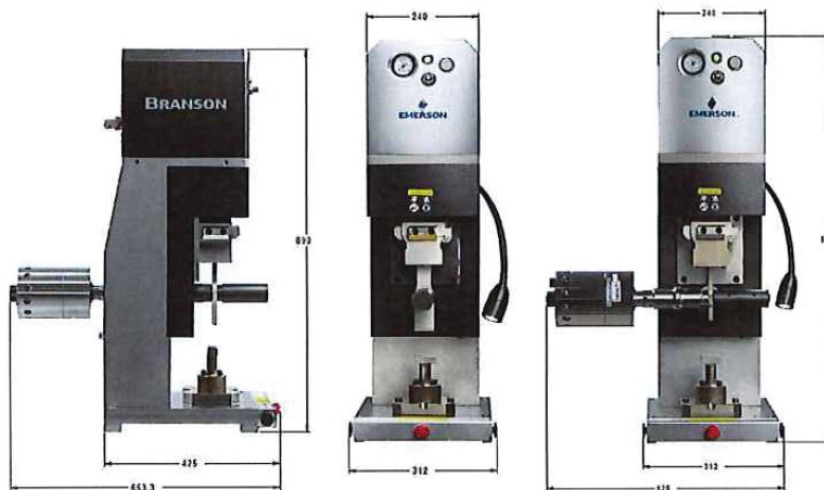
Tool Life: Ultrasonic tools are precision machined from high quality tool steel providing long life, ease of setup, and weld accuracy.

Speed: Typical weld cycles are under 0.5 seconds.

Low operating costs: Ultrasonics require less than 1/30 of the energy of resistance welding.

Automation potential: Efficient size, minimal maintenance and orientation flexibility make Branson ultrasonic equipment the best choice for automatic assembly.

Insulation dispersal: In most cases, the high frequency scrubbing action of the ultrasonic process eliminates the need to strip insulation from magnet wire or to preclean parts.



Specifications

System Parameter	
Overall dimension (actuator only)	653.3 x 312 x 930.5mm
Gross weight	140kg , 308lbs
Working voltage	220V (4kW) 3 phase 380V (5.5kW, Asia) 3 phase 400V (5.5kW, Europe) 3 phase 480V (5.5kW, N. America)
Air supply requirement	Minimum 0.6MPa, 87psi
Filter precision	5µm
Cylinder diameter	ø 125mm
Maximum stroke	50mm
Working temperature	+5°C-50°C
Actuator Performance Parameter	
Valid stroke	11mm~45mm
Valid pressure	0.05MPa~0.6MPa, 7-87 psi
Down speed	8mm/s~100mm/s
Force range	600N_6100N

Key Applications

- EV/ESS battery cell
- Bus Bar
- Battery pack
- Solar panel
- Capacitors
- Heat exchange system
- Wire termination
- Transformer
- Motors

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