

PARALLEL GAP WELDER PREMIUM

SMAPRO 180

THE WORLD'S BEST ENAMELED WIRE & RIBBON WELDER
PATENTED TECHNOLOGY



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Features:

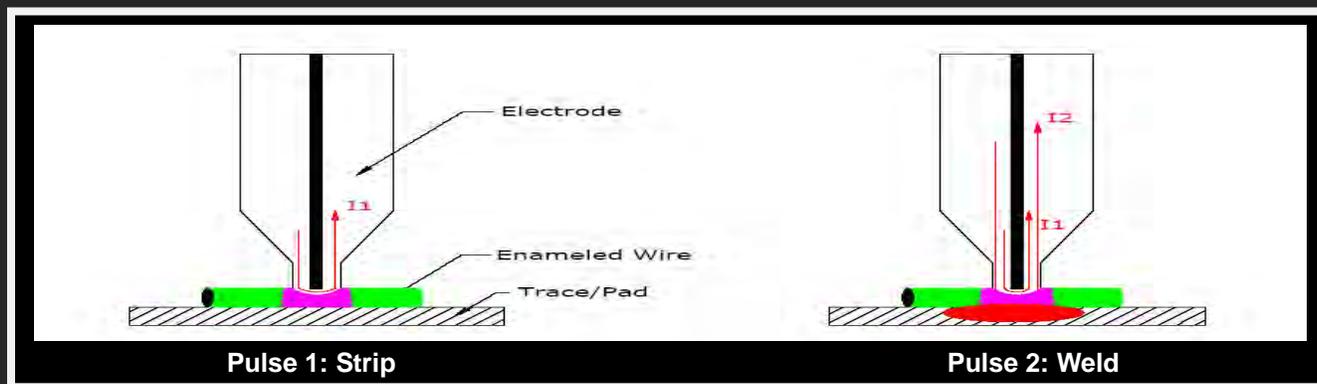
- ❖ Patented Technology
- ❖ Parallel Gap (PG) Welding: **One Step** Gold, Silver, Metal Ribbons & **Enameled Wire** Welding
- ❖ No Solder Involved: the Product Manufactured meets RoHS Standards
- ❖ Auto Welding Power Adjustment and Large Welding Parameter Range Selection
- ❖ Up to 20 Welding Schedules Storage Capacity
- ❖ RS232 and RS485 Communication Ports

Descriptions:

SMAPRO180 PG Welder Premium is the company's most advanced product. It is a parallel gap welder based on the resistance or ohmic spot welding principle. With improved power supply, electrodes and computer processor, it is an industry premium parallel gap welding machine available for gold, silver and metal ribbon and enameled wire welding applications. The most prominent feature of the **SMAPRO180 PG Welder Premium** is that it strips and welds enameled wire directly to the welding pads or PC boards in one simple step operation. It not only eliminates the costly and difficult stripping process, but also results in neat, clean, pollution/corrosion free and improved welding joints. Naturally, the products manufactured meet **RoHS** requirements since there are no toxic soldering materials involved. **SMAPRO180 PG Welder Premium** is offered in two power levels to meet various applications.

Welding Principles:

The welding principle of the welder is based on the **resistance welding** process, which is realized when current is caused to flow through electrodes and separate pieces of the metal to be joined. The resistance of the base metal to electrical current flow causes localized heating in the joint, and a weld is formed. Four factors, power (amperage or amplitude and time or duration), resistance of the metal and applied pressure from the welding head are the key factors in making a successful welding joint. To perform **one step enameled wire** welding, two electric pulses are generated. The first pulse is used to strip the coating layer and the second pulse is used to complete the welding. The patented technologies are implemented to generate the pulses and fine control the process and produce the most reliable joints. The following diagram illustrates the process.



Key Specifications:

Model	Type S	Type L
Input Power	110 VAC/60 Hz or 220 VAC/50 Hz	
Output Pulse Power	400 W (max)	800 W (max)
Output Pulse Amplitude	0 to 1.99 V adjustable	0 to 2.99 V adjustable
Output Pulse Width	0 to 29.9 ms (step size: 0.1 ms)	
Welding Head Force	1 to 100 ounces (30 to 3,000 grams) adjustable	
Maximum Welding Speed	120 strokes/minute (max)	100 strokes/minute (max)
Ribbon Size (use Type S only)	2 to 25 mils x 0.25 to 5 mils (0.05 to 0.65 mm x 0.006 to 0.13 mm)	
Wire Diameter	0.8 to 10 mils (0.02 to 0.25 mm)	3 to 16 mils (0.08 to 0.40 mm)