

## Parallel Gap Welder Pro, Model # SMAPRO100



### FEATURES:

- Patented technology
- Rugged design
- Parallel gap welding
- No solder involved, RoHS compliant
- Reliable welding joint
- Large welding parameter range
- Custom design available

### APPLICATIONS:

- **Gold and silver ribbon welding**
- **Enameled wire welding**
- Metal wire welding
- Metal strip welding
- RF and microwave circuits tuning

### DESCRIPTION:

**SMAPRO100 Parallel Gap Welder Pro** is one of the company's flagship products. It is configured with push buttons for output voltage amplitude and pulse duration selections. The welding schedule is displayed on a large LED screen located on the front panel of the welding control unit.

As stated in the introduction section, the most prominent feature of Model **SMAPRO100** is that it can not only weld the gold or silver ribbons, bare metal strips and wires, but also can weld enameled wires without additional coating layer stripping steps. Thus, it eliminates the expensive and difficult stripping process. Since there is no toxic soldering materials involved, the products manufactured meet **RoHS** requirements naturally.

Model **SMAPRO100** is offered in TWO output power levels to handle various wire diameters. While **Type S** is a lower power output model mainly for gold/silver ribbons and smaller wire diameters or metal strip sizes, **Type L** is a higher power output model for larger wire diameters or strip sizes.

Model **SMAPRO100** comes with 5 electrodes free of charge for customer's convenience. Customer may select the model number) from the catalog models offered in the catalog when the order is placed.

### OPTICAL Devices:

The optical devices are not included in the base model of **SMAPRO100**. The photos shown are for illustration only. The stereo microscope, digital monocular and Trinocular microscope assemblies designed especially for the parallel welders are offered under part number SW-SMA-5PG, SW-DMA-58N and SW-TMA-52N. Consult factory for using customer's own optical devices.

The photos of the microscope assemblies are shown below. For Model SW-DMA-58N and SW-TMA-52N, a LCD monitor accepting NTSC video mode is required for image display.

SW-SMA-5PG



SW-DMA-58N



SW-TMA-52N



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**KEY SPECIFICATIONS:**

NAME	PARAMETERS	
	Type S	Type L
Type		
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	
Welding Speed	120 Strokes/Minute (Max)	100 Strokes/Minute (Max)
Gold Ribbon (W x T) *	2 to 25 x 0.25 to 5 mils (0.05 to 0.65 x 0.006 to 0.13 mm), <b>Type S</b>	
Wire Diameter Range	0.8 to 10 mils (0.02 to 0.250 mm)	3 to 16 mils (0.08 to 0.40 mm)
Control Unit Size	13" (W) x 7" (H) x 8" (D) or 330mm (W) x 180mm (H) x 200mm (D)	
Control Unit Weight	35 Lbs or 16 Kg	

\*Recommendation: Choose Type S for Gold Ribbon welding.

**ELECTRODES:**

In addition to the output power and welding parameter setting, proper electrode selection is another key factor to deliver a successful and reliable welding joint. Nine electrode families with various electrode head shapes and materials are offered for different applications. The key parameters of the electrodes and their applications are summarized in the **Parallel Gap Welder Electrodes** datasheet.