

Sunstone CD1000DP & CD1100DP Welders

Dual Pulse Capacitive Discharge Welders

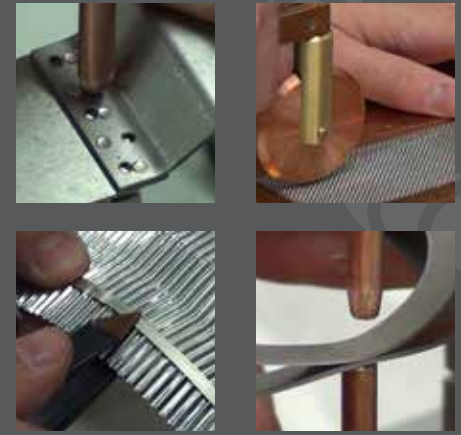
Capacitive Discharge (CD) resistance welders have many advantages over other welder types. CD spot welders are generally more affordable. Operators also achieve quick energy release for welding highly conductive metals such as copper. This quick energy release is concentrated into a small area, generating only a small heat signature or heat affected zone (HAZ). This small HAZ means that more delicate projects such as welding a battery will maintain the integrity of the cell's chemistry when using Sunstone's Dual pulse CD spot welding technology.

The Dual Pulse feature is ideal for achieving strong weld joints. Dual Pulse is another way of saying that a given stored energy level can be allocated or divided into two separate pulses that occur within milliseconds of one another. Pulse 1 is a low energy pulse designed only to pre-heat the weld part, and does not actually perform the weld. This pre-heat pulse has a few advantages: it seats the electrodes, helps to eliminate weld splash, and aids in burning away contaminants and oxides. Pulse 2 performs the actual weld by discharging remaining stored energy for permanent nugget formation.

Sunstone spot welders are simple to use with an intuitive and user-friendly interface. Each of the Dual Pulse CD welders can be adjusted and fine-tuned to match the requirements of countless applications. A digital screen displays total weld energy and individual pulse length settings, ensuring detail and precision. When combined with Sunstone's new line of weld heads or hand attachments, CD welders perform strong and repeatable welds for high levels of consistency and quality control.



Applications



- Battery Pack Assembly
- Thermocouples & RTD's
- Strain gauges
- Flat Heating Elements
- Mesh
- Cross Wire Welding
- Foils & Small Wires
- Temperature Sensors
- Honeycomb & Aerospace
- Terminals & Relays

Features

- Single or Dual Pulse Operation
- Roll Spot (optional)
- Infinitely Adjustable Pulse Width
- Up to 120 Welds/Min
- Intuitive User Interface

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Table 1: Peak weld current shown by model number and external cabling gauge number (AWG). Four and eight AWG cabling is typically seen when using hand held attachments.

Welder	1 AWG 4 Ft	4 AWG 6 Ft	8 AWG 6 Ft
CD1000DP (1000ws)	10250	7885	4100
CD1100DP (1100ws upgrade)	10750	8269	4300
*Minimum Load = 1mOhm, using a smaller load may damage the welder.			

Table 2: Weld speed in welds per minute by Dual Pulse model number at maximum energy.

Pulse width (max energy set-point)	Rep Rate CD1000DP Welds/Min (pulse energy)	Rep Rate CD1100DP Welds/Min (pulse energy)
10%	120 (100ws)	120 (100ws)
25%	76 (250ws)	76 (250ws)
50%	60 (500ws)	60 (500ws)
100%	36 (1000ws)	36 (1000ws)

Table 3: Sunstone Dual Pulse General Technical Specifications

Feature	CD1000DP/CD1100DP
Single and Dual Pulse	Yes
Pulse 1 Energy Adjustment (% of set-point energy)	0% - 30%
Pulse 2 Energy Adjustment (% of set-point energy)	0% - 99%
Peak Current (1000ws)	10,000 Amps
Peak Current (1100ws)	11,150 Amps

Table 4: Power Specifications

	CD1000DP/CD1100DP
Input Voltage	85 - 240 VAC
Frequency Range	47-63Hz
Power Factor (typ.)	PF>0.94/230VAC PF>0.99/115VAC
AC Current (typ.)	8.5A/115VAC 5A/230VAC

Table 5: Weld Pulse Characteristics

Model	Min and Max Output	Pulse Width		Rise Time (to max voltage)	Min Pulse Height	Max Pulse Height
CD1000DP (1000ws)	5 ws - 1000 ws	Min	0.23 ms	0.2 ms	2.2 V	20.5 V
		Max	54.7 ms			
CD1100DP (1100ws) upgrade	5 ws - 1100ws	Min	0.22 ms	0.2 ms	2.2 V	21.5 V
		Max	55.4 ms			

Table 6: Welder Physical Characteristics

	CD1000DP/CD1100DP	
	Inches	cm
Height	11	28
Width	18.75	47.6
Depth	14	35.6
Weight	56 Lbs	26 Kg



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