

# Alphatron Industries CDDP Welders

## Dual Pulse Capacitive Discharge Welder

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 Alphatron's Dual pulse CD spot welding technology.

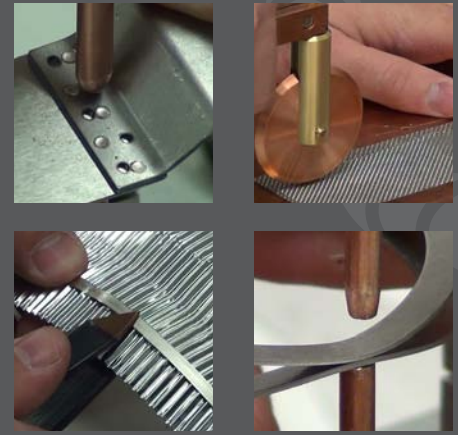
The Dual Pulse feature is ideal for achieving strong weld joints. Dual Pulse is another way of saying that a given stored energy level can be allocated or divided into two separate pulses that occur within milliseconds of one another. Pulse 1 is a low energy pulse designed only to pre-heat the weld part, 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.

Alphatron's 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 Alphatron's new line of weld heads or hand attachments, CD welders perform strong and repeatable welds for high levels of consistency and quality control.

### Features

- Models Include: 200, 400, 600ws
- units
- Single or Dual Pulse Operation
- Roll Spot (optional)
- Infinitely Adjustable Pulse Width
- Up to 275 Welds/Min
- Intuitive User Interface

### 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



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Table 1: Peak weld current (1.09mOhm Internal) shown by model number and external cabling gauge number (AWG). Four and eight AWG cabling is typically seen when using hand held attachments.

Peak Current	CD200DP	CD400DP	CD600DP
1 AWG4 Ft (0.99mOhm)	7600	8775	10750
4 AWG 6Ft (1.49mOhm)	6125	7075	8675
8 AWG 6 Ft (3.77mOhm)	3250	3750	4600
*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 CD200DP Welds/Min (pulse energy)	Rep Rate CD400DP Welds/Min (pulse energy)	Rep Rate CD400DP Welds/Min (pulse energy)
10%	150 (20ws)	240 (40ws)	140 (60ws)
25%	107 (50ws)	150 (100ws)	90 (150ws)
50%	79 (100ws)	100 (200ws)	55 (300ws)
100%	50 (200ws)	60 (400ws)	27 (600ws)

Table 3: Alphatron's Dual Pulse General Technical Specifications

Feature	CD200DP/ CD400DP/ CD600DP
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	7905 - 11,180 Amps

Table 4: Power Specifications

	CD200DP	CD400DP	CD600DP
Input Voltage	85 - 260 VAC	85 - 260 VAC	85 - 260 VAC
Frequency Range	47-63Hz	47-63Hz	47-63Hz
Power Factor (typ.)	PF>0.94/230VAC PF>0.99/115VAC	PF>0.94/230VAC PF>0.99/115VAC	PF>0.94/230VAC PF>0.99/115VAC
AC Current (typ.)	8.5A/115VAC 5A/230VAC	8.5A/115VAC 5A/230VAC	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
CD200DP	5 ws - 200 ws	Min	0.53 ms	0.2 ms	2.5 V	15.8 V
		Max	43.2 ms			
CD400DP	5 ws - 400ws	Min	0.37 ms	0.2 ms	2.04 V	18.3 V
		Max	48.1 ms			
CD600DP	5 ws - 600ws	Min	0.29 ms	0.2 ms	2.04 V	22.4 V
		Max	51.1 ms			

Table 6: Welder Physical Characteristics

	CD200DP		CD400DP		CD600DP	
	Inches	cm	Inches	cm	Inches	cm
Height	10.5	26.7	10.5	26.7	10.5	26.7
Width	12	30.5	12	30.5	12	30.5
Depth	13.5	34.3	13.5	34.3	13.5	34.3
Weight	34 Lbs	16 Kg	39 Lbs	18 Kg	39 Lbs	18 Kg