

D-CD320

Thermocompression Bonding and Capacitive Discharge Spot Welders



Applications:

- Thermocompression and Microjoining Bonding
- Magnet Wire Welding
- Enamel Coated Wires
- Wire to Chip Welds
- Reflow Soldering
- Fine Wires and Ribbons

Features:

- Two Welding Technologies
- DC and CD Waveforms
- Dual Pulse Capabilities
- Fine Control of Low Energies



D-CD320 Spot Welders

The D-CD320 has been design for maximum versatility and productivity. The D-CD320 offers both capacitive discharge welding technology and thermocompression bonding technology (DC waveforms). Operators can quickly and easily switch from one mode to the other - saving time and resources.

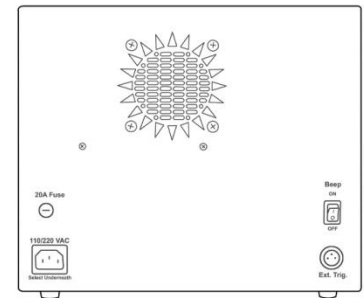
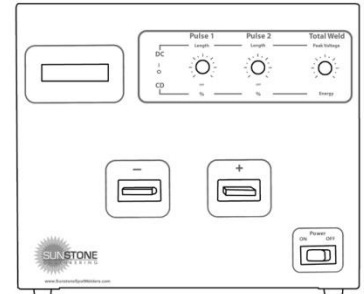
In capacitive discharge (CD) mode the D-CD320 operates as a dual pulse 320 watt-second capacitive discharge spot welder. The CD mode allows very precise energy storage and discharge of the capacitor banks, down to 0.1 watt-seconds of stored energy. In addition, the dual pulse feature allows for pulse width refinement to limit output energies to as low as 0.01 watt-seconds per pulse. Because the pulse width and the energy storage are uncoupled, peak welding current and actual energy delivered can be adjusted to produce unique welding wave forms.

The DC mode, or “dynamic capacitive”, is a hybrid between a capacitive discharge supply and a linear DC (direct current) type of power supply. The welder utilizes larger internal power capacitors and large internal power supplies to produce a wave form that can be constant current for up to 750ms depending on the desired voltage and weld load.



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Specifications

**Table 1: Peak Weld Current and External Cabling Gauge Number (AWG).
Four and eight AWG cabling is typically seen when using hand held attachments**

| | DC Mode | CD Mode |
|------------------------------|---------|---------|
| TCB Electrode Pk Current Max | 1,000A | -- |
| TCB Electrode Pk Current Min | 10A | -- |
| 1 AWG 4 Ft | -- | 6,000A |
| 4 AWG 6 Ft | -- | 4,500A |
| 8 AWG 6 Ft | -- | 2,400A |

Table 2: General Technical Specifications

| Feature | Feature | Feature |
|--------------|------------|------------|
| Dual Pulse | Dual Pulse | Dual Pulse |
| Pulse 1 | Pulse 1 | Pulse 1 |
| Pulse 2 | Pulse 2 | Pulse 2 |
| Peak Current | 800 Amps | 6,300 Amps |



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Table 3: Weld Speeds

| | DC Mode | CD Mode |
|------------|---------|-----------------------------|
| Duty Cycle | 50% | -- |
| Rep Rate | -- | 144 welds/min @ 100% Energy |
| Rep Rate | -- | 224 welds/min @ 50% Energy |

Table 4: Weld Pulse Characteristics

| | DC Mode | CD Mode |
|----------------------------|---------|---------|
| Min Output | 0.2V | 0.1 ws |
| Max Output | 12V | 170 ws |
| Pulse Width Min | 0.5 ms | 0.5 ms |
| Pulse Width Max | 500 ms | 24 ms |
| Rise Time (to Max Voltage) | 0.2 ms | 0.2 ms |

Table 5: Physical Characteristics.

| | D-CD320 | |
|--------|---------|-------|
| | Inches | cm |
| Height | 10.5 | 26.7 |
| Width | 12.0 | 30.5 |
| Depth | 13.5 | 34.3 |
| Weight | 41 lbs | 19 kg |



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