



## Inverter-Capacitor Charging Technology

Maximum welding rates  
Minimum energy consumption  
Minimum weight  
Maximum efficiency

### CDi 3102

**Stud Welding Unit** (with digital display)  
For CD stud welding (capacitor discharge welding)  
according to current standards

#### Technische Daten

|                     |  |
|---------------------|--|
| Welding range       | #4 to 7/16", dia. #4 to 3/8" (M3 to M10, dia. 3 to 10 mm)  |
| Welding material    | Mild steel, stainless steel, aluminum and brass  |
| Welding rate        | M3 = 20 studs/min. (Charging voltage 50 V)<br>M8 = 10 studs/min. (Charging voltage 140 V)<br>M10 = 6 studs/min. (Charging voltage 200 V) |
| Capacitance         | 132,000 µF   |
| Welding time        | 1 to 3 msec  |
| Energy              | 3,200 Ws   |
| Charging voltage    | 50 to 220 V (stepless voltage regulation)  |
| Primary power       | 115 V, 50/60 Hz, 10 AT   |
| Power source        | Capacitor  |
| Cooling type        | F (temperature controlled cooling fan)   |
| IP-code             | IP 23  |
| Dimension L x W x H | 18.90" x 8.07" x 9.84" (480 x 205 x 250 mm) without handle   |
| Weight              | 39.68 lbs (18 kg)  |
| Order No            | <a href="#">92-12-3102</a>   |

#### General Information

##### Application

- Especially suitable for thin sheets (at least 0.5 mm)

##### Process variants

- **Contact welding**
- **Gap welding**



## Advantages

### Features

- **Microcontroller** – for precise process times, optimal functional reliability and maximum operating convenience
- **Function monitoring** – automatic function test following power-up; monitoring of all internal system functions
- **Display of error codes** – on digital display
- **Library function** – automatic specification of charging voltage through selection of stud diameter according to welding range; fine adjustment via arrow keys

### Structure

- **Extremely easy to operate**
- **Compact**
- **Robust** – Powder coated steel housing withstands rough treatment in shop and on site

### Safety

- With integrated **mains filter** (protection against voltage peaks)
- **Optimal for construction sites with large mains voltage fluctuations** – use even with critical voltage supply (- 25% + 20%)
- **EMC test** (DIN EN 60974-10)
- **High-voltage test with log** (DIN EN 60974-1)
- Logged **capacitor forming** for quality control of the stud welding capacitors
- **Self-forming capacitors** provide a longer life period and higher reliability
- **Retriggering lock-out** – prevents welding on a welding element that has already been set
- **Thermal monitoring of charging unit and internal temperature of stud welding unit**– automatic shutdown in case of overheating
- **Temperature controlled cooling fan** – reduces noise and dust in the stud welding unit (greater system reliability)
- **Optimal protection against external interferences**
- **IP-code: IP 23**

### Welding

- **Display** – infinitely adjustable power setting (charge reversal via set-point switch); easy monitoring of all functions via LED displays
- **Powerful** – built-in power reserves
- **Trouble-free changing** of welding voltage polarity possible by reconnecting welding current and ground cables
- **Use of special capacitors** (developed for stud welding)

### Suitable welding guns/-heads

- **C 08**
- **CA 08**