



## CDM 2401

**Stud Welding Unit** (with wide range power supply) for CD stud welding (capacitor discharge welding) according to current standards

### Technical Data

<b>Automation</b>	Series
<b>Welding range</b>	#4 to 5/16" (7/16" limited), dia. 14 ga to 5/16" (dia. 3/8" limited) (M3 to M8 (M10 limited), dia. 2 to 8 mm (dia. 10 mm limited))
<b>Welding material</b>	Mild steel, stainless steel, aluminum and brass
<b>Welding rate</b>	20 to 40 studs/min (depending on application and stud dia.)
<b>Capacitance</b>	99,000 µF/33,000 µF*
<b>Welding time</b>	1 to 3 msec
<b>Energy</b>	2,400 Ws/800 Ws*
<b>Charging voltage</b>	50 to 220 V (stepless voltage regulation)
<b>Primary power</b>	85 to 265 V ~ wide range selection, 50/60 Hz, 10 AT
<b>Power source</b>	Capacitor
<b>Cooling type</b>	F (temperature controlled cooling fan)
<b>Insulation class</b>	IP 21
<b>Operational and storage conditions</b>	According to current standards
<b>Dimension L x W x H</b>	23.62" x 9.45" x 11.02" (600 x 240 x 280 mm) without handle
<b>Weight</b>	57.32 lbs (26 kg)

\* with change over of capacitors

**Order No.** [92-12-2241 \(Automation\)](#)

### General Information

#### Application

- Especially suitable for thin sheets (at least 0.6 mm)

#### Process variants

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

#### Special equipment

- **Automation** (series)



## 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 LCD display
- **Lift test** – for gap welding guns and stud welding heads
- **Library function** – 8 programs (charging voltages) can be stored; library with stored welding parameters; additional customer-specific entries possible; user interface available in various languages; display of charging voltage in volts
- **Process monitoring** – recording and analysis of factors affecting the welding process by means of the process-analysis factor (PAF); after each weld, the reference PAF value is compared with the actual value; display of the actual and reference values; switchable automatic welding stop, if limits are exceeded; limits selectable in increments; manual entry of PAF value possible
- **RS232 interface** – for data output; data and time of day are stored; welding parameters of each weld are logged

### Structure

- **Extremely easy to operate**
- **Compact**
- **Robust** – metal 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** – safe to operate with mains voltages ranging between 85 to 265 V (wide range power supply); use even with critical voltage supply
- **EMC test**
- **High-voltage test with log**
- **Retriggering lock-out** – prevents welding on a welding element that has already been set
- **Thermal monitoring of transformer and internal temperature of stud welding unit** – automatic shutdown in case of overheating
- **Temperature-regulated ventilator** – reduces noise and dust in the stud welding unit (greater system reliability)
- **Control unit galvanically separated from welding lines** – high degree of functional safety
- **Optimal protection against external interferences**

### Welding

- **Display** – infinitely adjustable power setting (charge reversal via set-point switch); easy monitoring of all functions via LCD display; user-friendly operation via large LCD display
- **Powerful** – built-in power reserves
- **Electronic regulation of charging** – allows high clock rates
- **Trouble-free changing** of welding voltage polarity possible by reconnecting welding current and ground cables
- **Use of special capacitors** (developed for stud welding)
- **Capacitance switching** – 33,000  $\mu\text{F}$  or 99,000  $\mu\text{F}$

### Suitable stud welding guns/ -heads

- **C 08**
- **CA 08**
- **PAH-1**
- **KAH 412**

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(Technical data may change)