



SCD 3201

Stud Welding Unit (with wide range power supply)
for CD stud welding and short cycle drawn arc stud welding
according to current standards

Technical Data

Gas/Automation	Series/Series
Welding range	CD welding: M3 to M10, dia. 2 to 10 mm Short Cycle: M3 to M8, dia. 3 to 6 mm
Welding material	Mild steel, stainless steel (aluminum and brass only CD welding)
Welding rate	CD welding: 15 to 40 studs/min depending on application and stud dia. Short Cycle: 8 up to 15 studs/min depending on application and stud dia.
Capacitance	CD welding: 132,000 µF/66,000 µF*
Welding current	Short Cycle: 900 to 3,000 A, stepless (over charging voltage)
Welding time	CD welding: 1 to 3 msec Short Cycle: 5, 10, 15 msec
Energy	3,200 Ws/1,600 Ws*
Charging voltage	50 to 220 V (stepless voltage regulation)
Primary power	85 to 265 V ~ wide range selection 50/60 Hz, 10 AT
Power source	Capacitor
Cooling type	F (temperature controlled cooling fan)
Protection class	IP 21
Operational and storage conditions	According to current standards
Dimension L x W x H	600 x 240 x 280 mm (without handle)
Weight	29 kg * with change over of capacitors
Order No.	91-10-2321

General Information

Application

- Especially suitable for thin sheets (at least 0.5 mm), only CD
- Capacitor discharge and short-cycle drawn arc stud welding possible with one stud welding unit
- **Capacitor discharge** – especially suitable for dia. 10 mm (collar stud) welding elements and problematic surfaces (e.g. galvanised sheets)
- **Short cycle drawn arc stud welding** – requires only single-phase 85 to 265 V wide range power supply (no 400 V 3-phase current); for welding short cycle welding elements; best reproducibility of welds through storage of welding energy in capacitor battery prior to each weld;

Process variants

- **Contact welding**
- **Gap welding**
- **Short cycle drawn arc welding**



Equipment

- **Welding with shielding gas** (series)
- **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 (only CD)
- **RS232 interface** – for data output; data and time of day are stored; welding parameters of each weld are logged (only CD)

Structure

- **Extremely easy to operate**
- **Compact**
- **Robust** – metal housing withstands rough treatment in shop and on site
- **230 V mains connection** (instead of 400 V 3-phase current connection)

Safety

- With integrated **mains filter** (protection against voltage peaks)
- 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)
- **Welding current setting** – infinitely adjustable from 900 to 3,000 A (via charging voltage)
- **Capacitance switching** – 66,000 μ F or 132,000 μ F
- **2 in 1** – switchable from capacitor discharge to short-cycle welding

Suitable stud welding guns/ -heads

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

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(Technical data may change)