

CDA 221

Stud Welding Unit For ARC stud welding and welding with Magnetic Rotating Arc according to current standards.

General Information Application

- ◆ Especially suitable for thicker sheets of about 2 mm or higher
- ◆ Especially suitable for welding of concrete anchors/shear connectors for job site applications
- ◆ Suitable for through deck welding

Process Variants

- ◆ Short cycle drawn arc welding
- ◆ Drawn arc welding

Equipment

- ◆ Welding with ceramic ferrule (series)
- ◆ Welding with shielding gas (series)

Advantages

Features

- ◆ **Library function** – automatic specification of welding current and welding time through selection of stud diameter according to welding range; fine adjustment via arrow keys
- ◆ **Function monitoring** – automatic function test following power-up; monitoring of all internal system functions
- ◆ **Microcontroller** – for precise process times, optimal functional reliability and maximum operating convenience
- ◆ **Lift test** – for gap welding guns and stud welding heads

Structure

- ◆ Extremely easy to operate
- ◆ **Mobile** – highly mobile thanks to compact dimensions and low weight (50 % weight savings vis-à-vis conventional stud welding units)
- ◆ 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** – use even with critical voltage supply (- 10 % + 10 %)
- ◆ **Retriggering lock-out** – prevents welding on a welding element that has already been set
- ◆ **Thermal monitoring of transformer** – 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
- ◆ EMC test
- ◆ High-voltage test with log
- ◆ IP-Code: IP 23
- ◆ Also permits operation outdoors

Welding

- ◆ Powerful – built-in power reserves
- ◆ Trouble-free changing of welding voltage polarity possible by reconnecting welding current and ground cables
- ◆ Outstanding welding quality – very high arc stability even at weak welding currents
- ◆ High process flexibility – high clock frequency (30 kHz) of stud welding unit allows highly dynamic regulation of welding process

Suitable Stud Welding Guns

- ◆ A 12
- ◆ A 16
- ◆ A 22
- ◆ A 25
- ◆ AI 06

A 22

Stud Welding Gun (damped) for ARC stud welding according to current standards

Applications

- ◆ Especially suitable for thicker metal sheets from approx. 2 mm
- ◆ Automatic compensation of length tolerance of welding elements through integrated length adjustment

Advantages:

Structure

- ◆ Rigid casing made of impact-resistant plastic
- ◆ Slide bearing for guiding the welding piston
- ◆ Sealed welding piston guidance
- ◆ Ergonomic design
- ◆ Compact dimensions
- ◆ Lift adjustment
- ◆ Stud length freely adjustable
- ◆ Mechanical structure tested in production

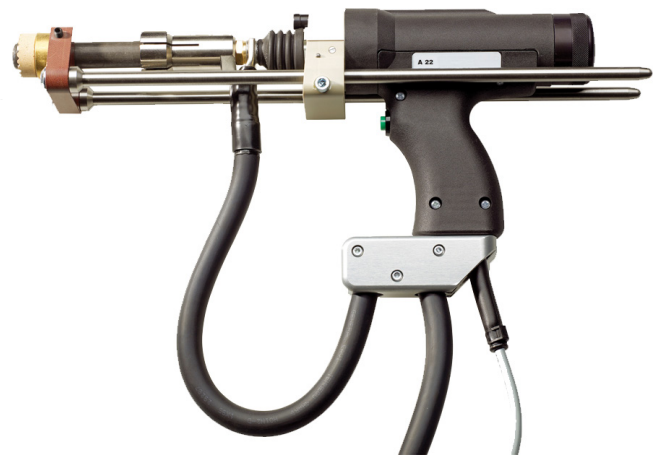
Safety

- ◆ Lock-in lift adjustment
- ◆ High level of security to prevent the selected settings being changed inadvertently
- ◆ Guidance system protected against spatters

- ◆ Display – infinitely adjustable power setting; easy monitoring of all functions via LED displays; easy operation via membrane keyboard and digital display; setting of welding parameters, programs, shielding gas (optional); digital display of current, welding and gas-preflow time; separate settings for welding current and welding time

Optional Accessories:

- ◆ Auto-Darkening Welding Helmet



Process Variants

- ◆ Short-cycle drawn-arc welding
- ◆ Drawn-arc-welding with ceramic ring or shielded gas

Welding

- ◆ Individual adjustment options for optimum welding results
- ◆ Reproducible piston movement with minimized rebound effect for optimum welding quality via lift damper
- ◆ Optimum handling and fatigue-free operation
- ◆ Welding on painted sheets possible (clean, smooth and flat surfaces and grounding required)
- ◆ Ideal for high clock sequences with big diameters
- ◆ Automatic length compensation
- ◆ Damped plunging in the weld pool with installed oil damper

TECHNICAL DATA	CDA 221
Gas	Option
Welding Range	Dia. 14 ga to 1", #4 to 1" (dia. 2 to 25 mm, M3 to M24)
Welding Material	Mild steel, stainless steel, aluminum
Welding Rate	Dia. 7/8" = 7 studs/min (dia. 22 mm = 7 studs/min)
Welding Current	2 000 A (max.)
Current Adjustment Range	300 to 2 000 A (stepless)
Welding Time	5 to 1 500 ms (stepless)
Primary Power	480/460 V, 3 phases, 50/60 Hz, 63 AT (alternative input voltages available)
Connected Load	100 kVA (400 V mains), 80 kW
Cooling Type	F (temperature controlled cooling fan)
IP Code	IP 23
Weight	209.4 lbs (95 kg)
Dimensions L x W x H	23.6" x 19.7" x 32.7" (660 x 500 x 830mm) without handle

TECHNICAL DATA	A 22 STUD WELDING GUN
Welding range	Dia. 9/16" to 7/8" (dia. 1") (dia. 14 to 22 mm (dia. 25 mm))
Stud length	0.39" to 15.35" (10 to 390 mm) depending on tripod
Stud material	Mild steel, stainless steel
Stud type	Any type or shape (special chucks if required)
Length compensation	0.35" (9 mm) automatic
Stroke	Adjustment range 0.24" (6 mm), (0.01" (0.25 mm) steps, arresting)
Damping	Adjustable oil damper
Welding cable	15.91', 3/0 (4.85 m, 95 mm ²)
IP-Code	IP 20
Workplace noise level	Up to 90 dB (A) may occur during welding
Weight	4.41 lbs (2 kg) without cable
Dimensions L x W x H	10.24" x 2.91" x 8.66" (260 x 74 x 220 mm) without cable, with foot piece