

CDA 161

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

Applications:

- ◆ Especially suitable for thicker sheets of about 2 mm or higher
- ◆ Welding of welding nuts type HexNut
- ◆ For welding on perforated and non-perforated sheets

Process Variants:

- ◆ Short cycle drawn arc welding
- ◆ Drawn arc welding
- ◆ Welding with magnetic rotating arc

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
- ◆ **Lift test** – for gap welding guns and welding heads
- ◆ **Library function** – automatic specification of welding current and welding time through selection of stud diameter according to welding range (with and without shielded gas); fine adjustment via arrow keys
- ◆ **Process monitoring** – recording and analysis of factors affecting the welding process; after each weld, the reference and actual values are compared; display of the welding energy input; switchable automatic welding stop if limits are exceeded

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%)
- ◆ EMC test and High-voltage test with log
- ◆ **Retriggering lock-out** – prevents welding on a welding element that has already been set
- ◆ Optimal protection against external interferences



- ◆ **RS232 interface** – for data output; data and time of day are stored; welding parameters of each weld are logged (only for version gas/automation/process control)

Equipment:

- ◆ Welding with ceramic ferrule (series)
- ◆ Welding with shielding gas (series)
- ◆ Automation (optional)
- ◆ Process sequence control (optional)

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

- ◆ **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
- ◆ IP Code: IP 23
- ◆ Also permits operation outdoors

Welding:

- ◆ **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, automation and process monitoring possible; digital display of current, welding and gas-preflow time (optional: pneumatic feed time for automation); separate settings for welding current and welding time
- ◆ **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
- ◆ **2 in 1** – switchable from drawn-arc ignition to electrode welding

Suitable Stud Welding Guns/-Heads:

- ◆ **A 12, A 16, AI 06, CA 08**
- ◆ **Powerful** – built-in power reserves
- ◆ **KAH 412, KAH 412 LA** (only suitable for automatic version)
- ◆ **AM 12 A, AM 12 W** (only suitable for Magnetic Rotating Arc welding process)

Optional Accessories:

- ◆ Auto-Darkening Welding Helmet

TECHNICAL DATA	CDA 161
Gas/Automation/Process Control	Series/Option/Option
Welding Range	Studs #4 to 5/8", dia, 14ga to 9/16, (M3 to RD16, dia 2 to 14mm) Steel MARC welding nuts type Hex ^{Nut} M6 to M12
Welding Material	Studs: Mild Steel, Stainless Steel, Aluminum Sleeves and MARC welding nuts type Hex ^{Nut} : Mild Steel, Stainless Steel
Welding Rate	Stud welding: 1/2" (M12) = 25 studs/min Nut welding ¹⁾ : Welding Nuts type Hex ^{Nut} M12 = 10 sleeves /min (AM 12 W) <small>¹⁾The maximum welding rate is limited by a variety of parameters.</small>
Welding Current	1 000 A (max.)
Current Adjustment	100 to 1 000 A
Range	Electrode 50 to 400 A (stepless)
Welding Time	5 to 1 000 ms (stepless)
Primary Power	480/460 V, 3 phases, 50/60 Hz, 35 AT (alternative input voltages available)
Connected Load	50 kVA (400 V mains), 40 kW
Cooling Type	F (temperature controlled cooling fan)
IP Code	IP 23
Weight	68.343 lbs (31kg)
Dimensions L x W x H	26" x 11" x 13.4" (660 x 280 x 340mm) without handle

A 16

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

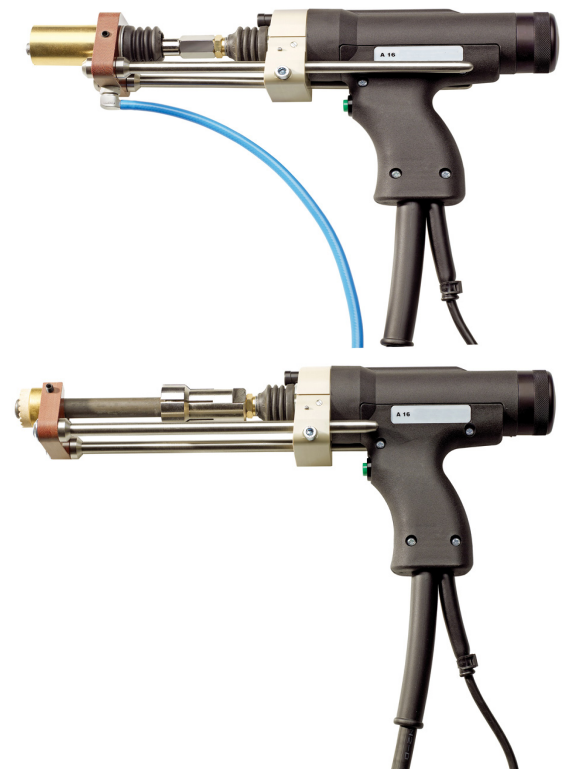
Process Variants:

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

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

TECHNICAL DATA	A 16 STUD WELDING GUN
Welding range	Dia. #4 to 5/8" (dia. 3 to 16 mm)
Stud length	0.39" to 9.45" (10 to 240 mm) depending on tripod
Stud material	Mild steel, stainless steel
Stud type	Any type or shape (special chucks if required)
Length compensation	0.24" (6 mm) automatic
Stroke	Adjustment range 0.16" (4 mm), (0.01" (0.25 mm) steps, arresting)
Damping	Adjustable oil damper
Welding cable	15.91', 1/0 (4.85 m, 50 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
Dimension L x W x H	10.24" x 2.91" x 8.66" (260 x 74 x 220 mm) without cable, with foot piece