



ARC 500

Stud Welding Unit
for ARC stud welding
according to current standards

Technical Data

Gas/Automation	Option/Option	
Welding range	#4 to 7/16", dia. 14 ga to 5/16" (M3 to MR10, dia. 2 to 8 mm)	
Welding material	Mild steel, stainless steel	
Welding rate	5 to 15 studs/min (depending on application and stud dia.)	
Welding current	580 A	
Welding time	5 to 350 msec	
Primary power	230/460 V or 575 V, 3 phases, 50/60 Hz, 35 AT (alternative input voltages available)	
Power source	Transformer/Rectifier	
Cooling type	F (temperature controlled cooling fan)	
Insulation class	IP 23	
Operational and storage conditions	According to current standards	
Dimension L x W x H	18.50" x 9.06" x 8.66" (470 x 230 x 220 mm) without handle	
Weight	68.34 lbs (31 kg)	
Order No.	230/460 V: 93-16-0401A 93-16-0402A (Gas) 93-16-0404A (Gas/Automation)	575V: 93-15-0401A 93-15-0402A (Gas) 93-15-0404A (Gas/Automation)

General Information

Application

- Especially suitable for thicker sheets of about 2 mm or higher
- **ISO** – especially suitable for attaching cut-to-length ARC-ISO and Fiberfix pins; also material with high heat resistance; excellent for insulation applications in building construction and fire-resistant insulation (FRI)

Process variants

- **Short cycle drawn arc welding**
- **Drawn arc welding**

Special equipment

- **Welding with ceramic ferrule** (series)
- **Welding with shielding gas** (optional)
- **Automatic** (optional)



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
- **Lift test** – for gap welding guns and stud welding heads

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** – use even with critical voltage supply (- 10% + 10%)
- **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** – automatic shutdown in case of overheating
- **Temperature-regulated ventilator** – reduces noise and dust in the stud welding unit (greater system reliability)
- **Consistent separation of transformer and control unit** – protects electronic components against dust and thermal loading
- **Control unit galvanically separated from welding lines** – high degree of functional safety
- **Cooling-air tunnel** – channelling of cooling air to the transformer protects electronic components against dirt and dust
- **Optimal protection against external interferences**
- **Protection class IP 23**
- Also permits operation outdoors

Welding

- **Display** – infinitely adjustable power setting; easy monitoring of all functions via LED displays; display of welding and gas-preflow time (optional: pneumatic feed time for automation); control and monitoring of all system functions
- **Powerful** – built-in power reserves
- **Trouble-free changing** of welding voltage polarity possible by reconnecting welding current and ground cables

Suitable stud welding guns/ -heads

- **A 12**
- **PMH-6**
- **CA 08**
- **AI 06**
- **PAH-1 (only suitable for automatic version)**
- **KAH 412 (only suitable for automatic version)**

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(Technical data may change)