



## ARC 1550

**Stud Welding Unit**  
for ARC stud welding  
according to current standards

### Technical Data

Gas/Automation	Series/Option
Welding range	#4 to 3/4", dia. 14 ga to 3/4" (M3 - M20 RD, dia. 2 to 19 mm)
Welding material	Mild steel, stainless steel
Welding rate	3 to 35 studs/min (depending on application and stud dia.)
Welding current	1,550 A
Current adjustment range	500 to 1,550 A (500 A - 800 A – 1,000 A – 1,200 A – 1,550 A)
Welding time	5 to 1,500 msec (stepless)
Primary power	460 V, 3 phases, 50/60 Hz, 63 AT (alternative input voltages available)
Connected load	40 KVA (at 460 V mains)
Power source	Transformer/Rectifier
Primary cable	16.40', 1/0 (5 m, 6 mm <sup>2</sup> ), 460 V ; max. cable length 98.42' (30 m), 1/0 (6 mm <sup>2</sup> ) at 400 V
Max. welding cable extension	65.62', 4/0 (20m, 95 mm <sup>2</sup> )
Cooling type	F (temperature controlled cooling fan)
Protection class	IP 23
Operational and storage conditions	According to current standards
Dimension L x W x H	18.11" x 15.74" x 28.74" (460 x 400 x 730 mm) without handle
Weight	293.21 lbs (133 kg)
Order No.	<b>93-16-1552 (Gas)</b> <b>93-16-1554 (Gas/Automation)</b>

### General Information

#### Application

- Especially suitable for thicker sheets of about 2 mm or higher

#### Process variants

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



## Equipment

- **Welding with ceramic ferrule** (series)
- **Welding with shielding gas** (series)
- **Automation** (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
- **Power regulation** – constant power input for reproducible, good welding results; compensation of differences in arc voltage (e.g. drop formation); compensation of changes in resistance due to transformer warming; compensation of fluctuations in mains voltage; recording of welding energy used for reference weld, subsequent welds are then automatically regulated

### Structure

- **Extremely easy to operate**
- **Compact**
- **Mobile** – most mobile stud welding unit of its class thanks to large rubber wheels (trolley design); stairs, ridges and cables are no longer obstacles; easy transport due to integrated crane hook
- **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
- **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; extremely easy operation via keyboard; flashing display indicates power-mode operation
- **Powerful** – built-in power reserves
- **Trouble-free changing** of welding voltage polarity possible by reconnecting welding current and ground cables
- **Welding current setting** – adjustable to 500 A, 800 A, 1,000 A, 1,200 A, or 1,550 A

### Suitable stud welding guns/ -heads

- **A 12, A 16, A 22, AI 06**
- **PMH-6, PMH-9**
- **PAH-1 (only suitable for automatic version)**
- **KAH 412 (only suitable for automatic version)**

Issue 10/07  
(Technical data may change)