



### ARC 1550

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

#### Technical Data

|                                    |                                                                                 |
|------------------------------------|---------------------------------------------------------------------------------|
| Gas/Automation                     | Series/Option                                                                   |
| Welding range                      | M3 to 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                      | 400 V, 3 phases, 50/60 Hz, 63 AT(alternative input voltages available)          |
| Primary plug                       | 63 A (at 400 V mains)                                                           |
| Connected load                     | 40 KVA (at 400 V mains)                                                         |
| Power source                       | Transformer/Rectifier                                                           |
| Primary cable                      | 5 m, 6 mm <sup>2</sup> (max. cable length 30 m, 6 mm <sup>2</sup> at 400 V)     |
| Max. welding cable extension       | 20 m, 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                | 460 x 400 x 730 mm (without handle)                                             |
| Weight                             | 133 kg                                                                          |
| Order No.                          | <a href="#">93-10-1552 (Gas)</a><br><a href="#">93-10-1554 (Gas/Automation)</a> |

#### 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
- **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; 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, A22, AI 06**
- **PAH-1 (only suitable for automatic version)**
- **KAH 412, KAH 412 LA (only suitable for automatic version)**

Issue 11/08  
(Technical data may change)