IT 50

Technical Data Sheet

IT 50

Stud Welding Unit
for ARC stud welding
according to current standards

Technical Data

Gas/Automation/Process control	Series/Series/Series
Welding range	M3 to MR16, dia. 2 to 14 mm
Welding material	Mild steel, stainless steel, aluminum
Welding rate	M12 = 25 studs/min
Welding current	1,000 A (max.)
Current adjustment range	300 to 1,000 A (stepless)
Welding time	5 to 1,000 msec (stepless)
Primary power	400 V, 3 phases, 50/60 Hz, 35 AT (alternative input voltages available)
Primary plug	32 A (with 400 V mains)
Connected load	50 KVA (with 400 V mains)
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	650 x 560 x 1,290 mm (without handle)
Weight	120 kg
Order No.	**93-60-42056 (Gas/Automatic/Process control/4 Gun connections)**

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** (series)
- **Process sequence control** (series)

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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
- **Lift test** – for gap welding guns and stud 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
- **RS232 interface** – for data output; data and time of day are stored; welding parameters of each weld are logged)
- **4 gun connections** (series)

Structure

- **Extremely easy to operate**
- **Compact**
- **Mobile** – highly mobile thanks to compact dimensions and low weight (50% weight savings vis-à-vis conventional stud welding units)
- **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)
- **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; 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

Suitable stud welding guns/ -heads

- **A 12 , A 16, AI 06**
- **PAH-1**
- **KAH 412, KAH 412 LA**

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(Technical data may change)

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