

# ARC WELDERS: IT 1002



Technical Data	
Gas/Automation/Process control	Series/Option/Option
Welding range	#4 to 5/8ö, dia. 14ga to 9/16ö (M3 to MR16, dia. 2 to 14mm)
Welding material	Mild steel, stainless steel, aluminum
Welding rate	½ö (M12) = 25 studs per minute
Welding current	1,000 A (max.)
Current adjustment range	Stud welding 100 to 1,000 A, electrode 50 to 400 A (stepless)
Welding time	5 to 1,000 msec (stepless)
Primary power	480/460 V, 3 phases, 50/60 Hz, 35 AT (alternative input voltages available)
Connected load	50 KVA (with 400 V mains), 40kw
Cooling type	F (temperature controlled cooling fan)
Protection class	IP 23
Operation and storage conditions	According to current standards
Dimensions L x W x H	26ö x 11ö x 13.4ö (660 x 280 x 340 mm) without handle
Weight	63.9 lbs (29 kg)
Order No.	93-66-1202 (Gas)
	93-66-1204 (Gas/Automation)
	93-66-1206 (Gas/Automation/Process control)
Features	
<ul style="list-style-type: none"> <li>• <b>Display</b> – 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)</li> <li>• <b>Powerful</b> – built-in power reserves</li> <li>• <b>Trouble-free changing</b> of welding voltage polarity by reconnecting welding current &amp; ground cables</li> <li>• <b>Outstanding welding quality</b> – very high arc stability even at weak welding currents</li> <li>• <b>High process flexibility</b> – high clock frequency (30kHz) of unit allows highly dynamic regulation of welding process</li> <li>• <b>2 in 1</b> – switchable from drawn-arc ignition to electrode welding</li> </ul>	
Suitable stud welding guns	Suitable heads
<ul style="list-style-type: none"> <li>• A 12, A 16, A1 06</li> <li>• CA 08</li> </ul>	<ul style="list-style-type: none"> <li>• PAH-1 (only suitable for automatic version)</li> <li>• KAH 412 (only suitable for automatic version)</li> </ul>

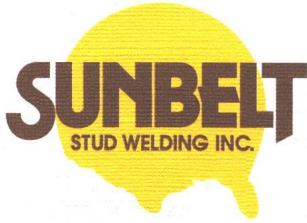
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14-12

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# TECHNICAL DATA SHEET

## ARC WELDERS: IT 1002

### General Information

#### Application

- Especially suitable for thicker sheets of about .093 inches (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)
- Process sequence control (optional)

### Advantages

#### Features

- **Microcontroller** ó for precise process times, optimal functional reliability and maximum operating convenience
- **Function monitoring** ó automatic function test following power-up; monitoring of all internal system functions
- **Display of error codes** ó on digital display
- **Lift test** ó for gap welding guns and welding heads
- **Library function** ó 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** ó 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** ó for data output; data and time of day are stored; welding parameters of each weld are logged (only for version gas/automation/process control)

#### Structure

- **Extremely easy to operate**
- **Compact/Mobile** ó highly mobile thanks to compact dimensions and low weight (50% less weight compared to conventional stud welding units)
- **Robust** ó 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 fluctuationsóuse even with critical voltage supply  $\pm 10\%$
- **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 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

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