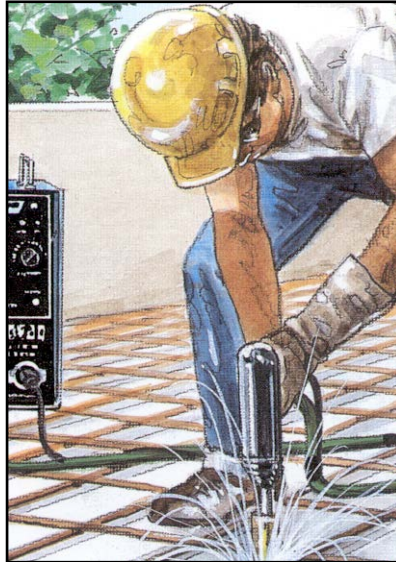
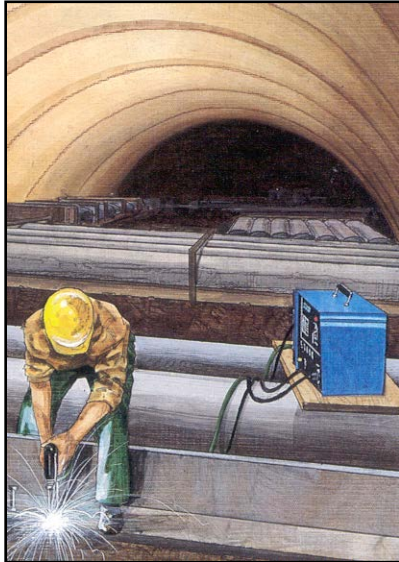




ARC STUD WELDING SYSTEMS



ARE complete stud welding systems which weld ARC studs using the ARC stud welding process.

CONSIST OF the following items:

- An ARC stud welding **power supply with built-in timer/control**
- An ARC stud welding **gun***
- A system **power cable**
- A system **ground cable**
- A gun **extension cable set**

*The gun requires additional accessories depending on the part to be welded & its application.

ARE GENERALLY USED FOR WELDING:

- Large diameter studs (1/4" diameter or larger)
- When base material is thick (18 Ga. Or heavier for steel)
- When base material is rough, dirty, or painted
- When high fastener strength is required

Page 14-2 will help you select the stud welding system to meet your ARC stud welding requirements.

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ARC STUD WELDING SYSTEM SELECTION GUIDE

Full capability

POWER	STUD WELD BASE DIAMETER RANGE	WELDING AREA IS...	THESE SYSTEMS CAN MEET YOUR REQUIREMENTS					
			HBS					
			<u>ARC 110</u> (Visar 650)	<u>ARC 110 Gas</u> (Visar 650)	<u>ARC 800</u>	<u>IT 1002</u>	<u>VISAR 1200</u>	<u>IT 2002</u>
SINGLE PHASE	12 GA - 3/8"	Local or Large						
	3/8" - 1/2"							
3 PHASE	12 GA - 5/16"	Local						
	5/16" - 1/2"	Local						
	1/2" - 5/8"	Local						
	5/8" - 7/8"	Local						
	7/8" - 1"	Large or Multi-level						
NO AC POWER AVAILABLE	1/2" - 1 1/4"	Remote	FIELD DIESEL					

POWER	STUD WELD BASE DIAMETER RANGE	WELDING AREA IS...	THESE SYSTEMS CAN MEET YOUR REQUIREMENTS				
			PRO-WELD				
			<u>ARC 656</u>	<u>ARC 800</u>	<u>ARC 1200</u>	<u>ARC 1850</u>	<u>ARC 3000</u>
SINGLE PHASE	12 GA - 3/8"	Local or Large					
	3/8" - 1/2"						
3 PHASE	12 GA - 5/16"	Local					
	5/16" - 1/2"	Local					
	1/2" - 5/8"	Local					
	5/8" - 7/8"	Local					
	7/8" - 1"	Large or Multi-level					
NO AC POWER AVAILABLE	1/2" - 1 1/4"	Remote	FIELD DIESEL				

A rule-of thumb is the base metal must be a minimum of 1/3 the diameter of the stud or the weld process will burn through the base material. This is not an exact specification and when in doubt consider the stud diameter, base thickness, material, power requirements and plunger of the stud.

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**ARC STUD WELDER
ARC 110 MODEL 375**



DESCRIPTION / FEATURES

- Drawn arc with ceramic ferrule (ARC)
- The ARC-110 Model 375 is a compact single phase arc stud welding system which uses single phase 110V power (simply convertible to 240V)
- Modern inverter technology ensures precise control and reproducibility of the welding process
- System is unaffected by power fluctuations
- Low power consumption
- Welding current and time are continuously adjustable
- Temperature controlled by cooling fan
- Robust housing for use in harsh environments
- Dual grounding cables with vice grips for quick installation and removal. Dual ground helps eliminate possible "ARC Blow" during welding process

SPECIFICATIONS

Welding Range: ARC: M3 to M10 (type RD), dia. 2 to 8 mm #4 to 1/4", dia. 14 ga to 3/8"	Dimensions L x W x H: 18.66" x 13.27" x 13.82" 474 x 337 x 351 mm
Welding Material: Mild steel, Stainless steel	Primary Power: 100 to 240 V, 1 phase, 50/60 Hz, 16 AT (slow blow)
Weld Rate: M3 / #4 = 40 studs/min M8 / 5/16" = 12 studs/min	Primary Plug: 16 A, 2-pin grounded safety plug (plug type F; CEE 7/4)
Welding Current: 650 A (max.)	Connected Load: 3 kVA
Current Adjustment Range: 100 to 650 A	Cooling Type: F (temperature controlled cooling fan)
Welding Time: 5 to 200 ms (stepless)	IP Code: IP 44
Order Number: 93-66-0650 (Plug B; USA, Canada + China)	Weight: 40 lb / 18 kg

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**ARC STUD WELDER
ARC 110 MODEL 375**

PARTS LIST	
System Complete: EQ-SA-110-375	Ground Cable: 93-40-020 (5 m, 25 mm ² , 2 vice grips 10")
STUD WELDING GUNS	
A 12 with ceramic leg assembly PSC-1	A 12-FL

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**ARC STUD WELDER
ARC 110 MODEL 375
Shielding Gas Version**



DESCRIPTION / FEATURES

- Drawn arc with ceramic ferrule (ARC)
- Drawn arc with shielding gas (ARC)
- Intuitive operation
- Handy tool bag (optional)
- Cable tidy system provided via the handle
- Enclosed housing (no air vents)
- Protection against dirt, water, dust, knocks
- Protection class IP 44
- Side panels provide a raised base
- Solid base

SPECIFICATIONS

Welding Range: ARC: M3 to M10 (type RD), dia. 2 to 8 mm #4 to 1/4", dia. 14 ga to 3/8"	Dimensions L x W x H: 18.66" x 13.27" x 13.82" 474 x 337 x 351 mm
Welding Material: Mild steel, Stainless steel	Primary Power: 100 to 240 V, 1 phase, 50/60 Hz, 16 AT (slow blow)
Weld Rate: M3 / #4 = 40 studs/min M8 / 5/16" = 12 studs/min	Primary Plug: 16 A, 2-pin grounded safety plug (plug type F; CEE 7/4)
Welding Current: 650 A (max.)	Connected Load: 3 kVA
Current Adjustment Range: 100 to 650 A	Cooling Type: F (temperature controlled cooling fan)
Welding Time: 5 to 200 ms (stepless)	IP Code: IP 44
Order Number: 93-60-0652	Weight: 39.68 lbs / 18 kg

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**ARC STUD WELDER
ARC 110 MODEL 375
Shielding Gas Version**



STUD WELDING GUNS

- | |
|--|
| A 12 with gas shroud PSS-1/SC |
| A 12 with shielding gas leg assembly PSS-2 |
| A 12-FL |

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ARC STUD WELDER ARC 800



APPLICATION

Especially suitable for thicker sheets of about 2 mm or higher

FEATURES

- Drawn arc with ceramic ferrule (ARC)
- Drawn arc with shielding gas (ARC)
- Short-cycle (SC)
- Modern technology with extremely wide welding range
- For welding with ceramic ferrules or with inert gas
- Operating by membrane keyboard and display panel
- Digital display of welding time in msec.
- Inert gas module standard
- Option automatic mode
- Thermally controlled fan
- Guided cooling air flow to the transformer to protect electronic components from being polluted
- Emergency circuit to cut off the complete unit in case of defective power circuit
- Integrated mains filter protects uniform voltage peaks and spikes
- Galvanic separation of control and welding cables provide reliable operation
- Sturdy metal housings; small dimensions and low weight
- Depending on mains fuse, configuration also for 16 amps primary power supply possible

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**ARC STUD WELDER
ARC 800**

SPECIFICATIONS	
Welding Range: M3 to M12 (type RD), dia. 2 to 10 mm #4 to 1/2" (type RD), dia. 14 ga to 3/8"	Dimensions L x W x H (without handle): 470 x 230 x 220 mm 18.50" x 9.06" x 8.66"
Welding Material: Mild steel, Stainless steel	Primary Power: 400 V, 3 phases, 50/60 Hz, 35 AT (slow blow)
Weld Rate: 7 to 17 studs/min (depending on application and stud dia.)	Primary Plug: 32 A (at 400 V mains)
Welding Current: 800 A	Connected Load: I _{1max} = 31 A
Weight: 40 kg / 88.185 lbs	Cooling Type: F (temperature controlled cooling fan)
Welding Time: 5 to 1 000 ms (stepless)	IP Code: IP 23
Order Number: 93-10-0702A (400 V) 93-16-0702A (230/460 V) 93-15-0702A (575 V)	

STUD WELDING GUNS
CA 08 with gas shroud PSS-1/SC
A 12 with ceramic leg assembly PSC-1
A 12 with gas shroud PSS-1/SC
A 12 with shielding gas leg assembly PSS-2
A 12-FL
A 16

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ARC STUD WELDER

Visar 1200 HBS



DESCRIPTION / FEATURES

- Drawn arc stud welding
- Short cycle stud welding
- All-rounder for workshops and construction sites – whether with shielding gas or with ceramic ferrule
- Compact lightweight unit with power: 1,200 A but just 20.5 kg
- Extremely wide current setting range from 25 to 1,200 A
- USB port for saving and loading welding programs
- Comprehensive customer-specific setting options as well as detailed process optimization and control

SPECIFICATIONS

Welding Process: ARC, Short ARC, Inert Gas (for s/c and aluminum)	Technology: Inverter			
Equipment: Welding with ceramic ferrule Welding with shielding gas Process control	Welding range: M3 to M16, dia. 2 to 16 mm #4 to 5/8", dia. 14 ga to 9/16"			
Welding Material: Mild steel, Stainless steel, Aluminum (w/gas #4 to 3/8"), M3 to M10 - #4 to 5/8"	Current adjustment range: 25 to 1 200 A (stepless)			
Welding rate (Duty cycle *)	25 °C	100%	50%	35%
	F [studs/min]	11	16	21
	t [ms]	600	600	600
	I* [A]	1200	1200	1200
	U* [V]	30	30	30
	<p>* The term "duty cycle" refers to the ratio of welding duration to work pause of a stud welding unit. It describes the uninterrupted operating time of a unit over a period of 10 minutes. The largest possible studs are used in the test.</p> <p>100% duty cycle=10 min. of continuous welding, no shutdown due to over temperature.</p> <p>50% duty cycle=5 min. of welding followed by 5 min. pause.</p> <p>35% duty cycle=3.5 min. of welding followed by 6.5 min. pause.</p>			

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ARC STUD WELDER Visar 1200 HBS

SPECIFICATIONS (continued)

Welding Current: 1 200 A (max.) at 50 V	Primary power: 200 to 600 V, 3 phases, 50/60 Hz
Welding time: 5 to 1 500 ms (stepless)	IP Code: IP 43
Cooling type: F (temperature controlled cooling fan)	Dimensions L x W x H (without handle): 472.5 x 355 x 358 mm 18.60" x 13.98" x 14.09"
Weight: 20.5 kg / 45 lbs	Display: Digital
Order Number: 93-66-0120 - USA 93-40-020 - Ground cable, 5 m, 25 mm ² , 2x 10" vice grip 88-24-466 - Tool bag - (Accessories and welding gun are not included)	
STUD WELDING GUNS	
A 16	
A 12 with gas shroud PSS-1/SC-1	
A 12 with shielding gas leg assembly PSS-2	
A 12-FL	
A 12 with ceramic leg assembly PSC-1	

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ARC STUD WELDER ARC-656

FEATURES

- Designed and built in USA
- Precise weld time and weld current adjustments.
- Lightweight aluminum cabinet
- Short cycle capabilities
- Diagnostic L.E.D.'s
- State of art gun control circuitry
- Portable, powder coated
- 1-yr. warranty on pr. Circuit board



DESCRIPTION

- The **ARC-656** is a compact, lightweight stud welding power supply capable of welding studs through 1/2" diameter reduced weld base. The power supply, which operates on three-phase power, produces a smooth, stable welding arc. The front panel digital display indicates the weld time, which is infinitely adjustable for preciseness and repeatability.
- The expanded time range provides fine adjustment of weld time for special short cycle applications such as welding to thin materials.
- A specially designed electronic gun control circuit has been incorporated to increase overall reliability. If a fault condition occurs due to a shorted gun solenoid or a faulty control cable, the circuit will prevent gun retriggering and eliminate damage to printed circuit boards.

SPECIFICATIONS

Dimensions: 8-1/4"H x 11-1/4"W x 17"D	Output: 650 Amps @ 36 VDC
Weight: 77 lbs.	Duty Cycle: 3/8" 8/Min
Input: 230/460/575 VAC 3 Phase 60 Cycle	Fusing: 60/30/30 Delay Type
Timer Control: .015 – 1.00 sec.	

COMPONENTS

DESCRIPTION	PART NO.	
System	100-0215	
System w/Dampner	100-0216	
Power Supply	200-0027	
Weld Gun	W/25' Cable Length	300-0802
	W/Dampner	300-0803

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ARC STUD WELDER ARC 800

FEATURES

- Designed and built in USA
- Regulated output current
- Precise weld time and weld current adjustments.
- Storage Compartment
- Diagnostic L.E.D.'s
- State of the art gun control circuitry
- Thermally Protected
- Portable
- Easy access to control circuitry



DESCRIPTION

- The **ARC-800** is a compact and portable stud welding power supply capable of welding studs through 1/2" diameter weld base. The power supply, which operates on single-phase power, has the added feature of weld current regulation that improves stud welding consistency. Both the weld time and weld current are infinitely adjustable for preciseness and repeatability.
- A specially designed electronic gun control circuit has been incorporated to increase overall reliability. If a fault condition occurs due to a shorted gun solenoid or a faulty control cable, the circuit will prevent gun retriggering and eliminate damage to printed circuit boards.

SPECIFICATIONS

Dimensions: 36-1/2H x 16"W x 14"D	Output: 900 Amps
Weight: 150 lbs.	Duty Cycle: (1/4: 14/Min) (5/16: 12/Min) (3/8: 10/Min) (1/2: 5/Min)
Input: 208/230/460 VAC Single Phase 60 HZ	Fusing: 100/100/50 Amps
Timer Control: Stepless Adjustable .05 - .6 Sec	Current Control: Stepless Adjustable 100-900 Amps

COMPONENTS

DESCRIPTION	PART NO.	DESCRIPTION	PART NO.
System	100-0211	Gr. Cable 1/0 x 25	125-0102
Power Supply	200-0026	Combo Cable 1/0 x 50	125-1000
Gun	300-0800		

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ARC STUD WELDER ARC 1200

- FEATURES**
- Designed and built in USA
 - Regulated output current
 - Precise weld time and weld current adjustments.
 - Dual time range
 - Short cycle capabilities
 - Diagnostic L.E.D.'s
 - State-of-the-art gun control circuit
 - Built in chuck saver
 - Portable, Powder coated



DESCRIPTION

• The **ARC-1200** is a compact and portable stud welding power supply capable of welding studs through 5/8" diameter weld base. The fully regulated power supply, which operates on three-phase power, produces a smooth, stable welding arc. Both the weld time and weld current are infinitely adjustable for preciseness and repeatability. For maximum flexibility the weld time can be switched between two ranges. The expanded short time range provides fine adjustment of weld time for special short cycle applications such as welding to thin materials. A specially designed electronic gun control circuit has been incorporated to increase overall reliability. If a fault condition occurs due to a shorted gun solenoid or a faulty control cable, the circuit will prevent gun retriggering and eliminate damage to printed circuit boards.

SPECIFICATIONS

Dimensions: 27-1/2"H x 17"W x 22"D	Output: 1300 Amps @ 40 VDC
Weight: 194 lbs.	Duty Cycle: (1/4: 20/Min) (5/16: 15/Min) (3/8: 13/Min) (1/2: 8/Min) (5/8: 4/Min)
Input: 230/460/575 VAC Three Phase 60 HZ	Fusing: 120/60/50 Delay Type
Timer Control: Stepless Adjustable Range (A: .06-.3 Sec.) (B: .1-1.0 Sec)	Current Control: Stepless Adjustable 400-1300 Amps

COMPONENTS

DESCRIPTION	PART NO.	DESCRIPTION	PART NO.
System	100-0208	Gr. Cable 1/0 x 25	125-0102
Power Supply	200-0018	Combo Cable 1/0 x 50	125-1000
Gun	300-0800		

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ARC STUD WELDER ARC 1850

FEATURES

- Designed and built in USA
- Constant current output
- Single or dual gun systems
- Independent gun controls
- Precise weld time and weld current adjustments
- Digital display of actual weld time & weld current
- Diagnostic L.E.D.'s
- State of the art gun control circuitry
- Built-in chuck saver
- Auto safety shutdown



DESCRIPTION

- The **ARC-1850** is a fully regulated stud welding power supply that is available in a single or dual gun version. Both versions have the constant output feature that allows the unit to be used as a power source that can operate external stud welding control units. Stick welding and Arc air gouging processes are available only as an option. An added feature in the ARC-1850 is the ability to dial in the desired weld time and weld current before even making a weld. By selecting the setup mode, the weld time and current can be adjusted and displayed on the front panel digital meters.
- A specially designed electronic gun control circuit has been incorporated into the system. If a fault condition occurs due to a shorted gun solenoid or a faulty control cable, the circuit will prevent gun retriggering and eliminate damage to printed circuit boards.

SPECIFICATIONS

Dimensions: 26"H x 24"W x 33"D	Output: 1850 Amps @ 45 VDC
Weight: 500 lbs.	Duty Cycle: (12 GA -5/8": Unlimited) (3/4": 10/Min) (7/8": 4/Min)
Input: 230/460/575 VAC Three Phase 60 HZ	Fusing: 200/100/90 Delay Type
Timer Control: .1 -1.6 sec.	Current Control: 100-1900 amp

COMPONENTS

DESCRIPTION	PART NUMBER	
System	Single	100-0210S
	Dual	100-0210D
Power Supply	Single	200-0022
	Dual	200-0023
Weld Gun	300-0900	
Ground Cable: 4/0 x 25 ft.	125-0104	
Combo Cable: 4/0 x 50 ft.	125-1002	

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ARC STUD WELDER ARC 3000

- FEATURES**
- Designed and built in USA
 - Constant current output
 - Single or dual gun systems
 - Independent gun controls
 - Precise weld time and weld current adjustments
 - Digital display of actual weld time & weld current
 - Diagnostic L.E.D.'s
 - State of the art gun control circuitry
 - Built-in chuck saver
 - Auto safety shutdown



- DESCRIPTION**
- The **ARC-3000** is a fully regulated stud welding power supply that is available in a single or dual gun version. Both versions have the constant output feature that allows the unit to be used as a power source that can operate external stud welding control units. An added feature in the ARC-3000 is the ability to dial in the desired weld time and weld current before even making a weld. By selecting the setup mode, the weld time and current can be adjusted and displayed on the front panel digital meters.
 - A specially designed electronic gun control circuit has been incorporated into the system. If a fault condition occurs due to a shorted gun solenoid or a faulty control cable, the circuit will prevent gun retriggering and eliminate damage to printed circuit boards. This system is capable of welding studs from 1/4" thru 1-1/4" diameter with preciseness and repeatability.

SPECIFICATIONS

Dimensions: 36"H x 28"W x 40"D	Output: 3000 Amps @ 44 VDC
Weight: 950 lbs.	Duty Cycle: (1/4 – 3/8: Unlimited) (1/2": 60/Min) (5/8": 30/Min) (3/4": 20/Min) (7/8": 15/Min) (1": 10/Min)
Input: 230/460/575 VAC 3-Phase 60 Cycle	Fusing: 400/200/180 Delay Type
Timer Control: Stepless adjustable .1-1.8 sec.	Cur. Control: Stepless Adj. 400-3000 Amp.

COMPONENTS

DESCRIPTION	PART NUMBER	
System	Single	100-0207S
	Dual	100-0207D
Power Supply	Single	200-0016
	Dual	200-0017
Weld Gun	300-0900	
Ground Cable: 4/0 x 25 ft.	125-0110	
Combo Cable: 4/0 x 50 ft.	125-1002	

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INVERTER ARC STUD WELDER - IT 1002



TECHNICAL DATA

Gas/Automation/Process control	Series/Option/Option
Welding range	#4 to 5/8", dia. 14ga to 9/16" (M3 to MR16, dia. 2 to 14mm)
Welding material	Mild steel, stainless steel, aluminum
Welding rate	1/2" (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	26" x 11" x 13.4" (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)

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INVERTER ARC STUD WELDER - IT 1002

FEATURES

- **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 by reconnecting welding current & ground cables
- **Outstanding welding quality** – very high arc stability even at weak welding currents
- **High process flexibility** – high clock frequency (30kHz) of unit allows highly dynamic regulation of welding process
- **2 in 1** – switchable from drawn-arc ignition to electrode welding

SUITABLE STUD WELDING GUNS

A 12 with ceramic leg assembly PSC-1	A 12 with gas shroud PSS-1/SC
A 12 with shielding gas leg assembly PSS-2	AM 12 A (for nut/bush welding)
A 16	A 12-FL

CA 08 with gas shroud PSS-1/SC

GENERAL INFORMATION

Application

- Especially suitable for thicker sheets of about .093 inches (2 mm) or higher

Process Variants

- Short cycle (SC)
- Drawn arc with ceramic ferrule (ARC)
- Drawn arc with shielding gas (ARC)

Equipment

- Welding with ceramic ferrule (series)
- Welding with shielding gas (series)
- Automation (optional)
- Process sequence control (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 welding heads

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INVERTER ARC STUD WELDER - IT 1002

ADVANTAGES

Features (continued)

- **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 (only for version gas/automation/process control)

Structure

- **Extremely easy to operate**
- **Compact/Mobile** – highly mobile thanks to compact dimensions and low weight (50% less weight compared to 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 $\pm 10\%$
- **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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INVERTER ARC STUD WELDER - IT 2002



TECHNICAL DATA	
Gas	Option
Welding range	#4 to 1", dia. 14ga to 1" (M3 to M24, dia. 2 to 25mm)
Welding material	Mild steel, stainless steel, aluminum
Welding rate	7/8" = 7 studs per minute (dia. 22 mm = 7 studs/min)
Welding current	2,000 A (max.)
Current adjustment range	300 to 2,000 A (stepless)
Welding time	5 to 1,500 msec (stepless)
Primary power	480/460 V, 3 phases, 50/60 Hz, 63 AT (alternative input voltages available)
Connected load	100 KVA (with 400 V mains), 80kw
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	23.6" x 19.7" x 32.7" (600 x 500 x 830 mm) without handle
Weight	209.4 lbs (95 kg)
Order No.	93-66-2201
	93-66-2202 (Gas)

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INVERTER ARC STUD WELDER - IT 2002

FEATURES

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 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

SUITABLE STUD WELDING GUNS

A 12 with ceramic leg assembly PSC-1	A 12 with gas shroud PSS-1/SC
A 12 with shielding gas leg assembly PSS-2	A 12-FL
A 16	A 22

GENERAL INFORMATION

Application

- Especially suitable for thicker sheets of about .093 inches (2 mm) or higher
- Especially suitable for welding of concrete anchors/shear connectors for job site applications
- Suitable for through deck welding

Process Variants

- Short cycle (SC)
- Drawn arc with ceramic ferrule (ARC)
- Drawn arc with shielding gas (ARC)

Equipment

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

ADVANTAGES

Structure

- **Extremely easy to operate**
- **Compact/Mobile** – highly mobile thanks to compact dimensions and low weight (50% less weight compared to conventional stud welding units)
- **Robust** – metal housing withstands rough treatment in shop and on site

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INVERTER ARC STUD WELDER - IT 2002

ADVANTAGES (continued)

Safety

- With integrated **mains filter** (protection against voltage peaks)
- Optimal for construction sites with large mains voltage fluctuations—use 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**

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 (optional); digital display of current, welding and gas-preflow time; separate settings for welding current and welding time
- **Powerful** – built-in power reserves
- **Trouble-free changing** of welding voltage polarity possible for 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 for welding process

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INVERTER ARC STUD WELDER - IT 3002



TECHNICAL DATA

Gas	Option
Welding range	#4 to 1 1/4", dia. 14 ga to 1" (M3 to M31, dia. 2 to 31mm)
Welding material	Mild steel, stainless steel, aluminum
Welding rate	Dia. 1" = 6 studs/min (dia 25 mm = 6 studs/min) Through deck welding 3/4" = 12 studs/min (300 feet, AWG 4/0) Industrial application 3/4" = 14 to 15 studs/min
Welding current	2,600 A (max.)
Current adjustment range	300 to 2,600 A (stepless)
Welding time	5 to 1,500 msec (stepless)
Primary power	480/460 V, 3 phases, 50/60 Hz, 125 AT (alternative input voltages available)
Connected load	150 KVA (with 400 V mains), 120kw
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	25.6" x 22" x 50.8" (650 x 560 x 1290 mm) without handle
Weight	352.7 lbs (160 kg)
Order No.	93-66-3211 (1 Gun connection)

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INVERTER ARC STUD WELDER - IT 3002

FEATURES

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 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

SUITABLE STUD WELDING GUNS

A 12 with ceramic leg assembly PSC-1	A 12 with gas shroud PSS-1/SC
A 12 with shielding gas leg assembly PSS-2	A 12-FL
A 16	A 22

GENERAL INFORMATION

Application

- Especially suitable for thicker sheets of about .093 inches (2 mm) or higher
- Especially suitable for welding of concrete anchors/shear connectors for job site applications
- Suitable for through deck welding

Process Variants

- Short cycle drawn arc welding
- Drawn arc welding

Equipment

- Welding with ceramic ferrule (series)

ADVANTAGES

Structure

- **Extremely easy to operate**
- **Compact/Mobile** – highly mobile thanks to compact dimensions and low weight (50% less weight compared to conventional stud welding units)
- **Robust** – metal housing withstands rough treatment in shop and on site

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INVERTER ARC STUD WELDER - IT 3002

ADVANTAGES (continued)

Safety

- With integrated **mains filter** (protection against voltage peaks)
- **Optimal for construction sites with large mains voltage fluctuations** – use 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**

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 (optional); digital display of current, welding and gas-preflow time; 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

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INVERTER ARC STUD WELDER - IT 90



TECHNICAL DATA

Welding range	M3 to M24, dia. 2 to 22 mm / #4 to 1", dia. 14 ga to 7/8"
Welding material	Mild steel, stainless steel, aluminum
Welding rate	Dia. 22 / 7/8" = 6 studs/min
Welding current	2,000 A (max.)
Current adjustment range	300 to 2,000 A (stepless)
Welding time	5 to 1,500 msec (stepless)
Primary power	400 V, 3 phase, 50/60 Hz, 63 AT (slow blow) - alternative primary power available
Primary plug	63 A (with 400 V mains)
Connected load	100 KVA (with 400 V mains)
Cooling type	F (temperature controlled cooling fan)
Protection class	IP 21
Operation and storage conditions	According to current standards
Dimensions L x W x H	25.6" L x 22" W x 50.8" H (650 mm L x 560 mm W x 1290 mm L) without handle
Weight	145 kg / 319.67 lbs (1 gun conn.) 165 kg / 363.76 lbs (4 gun conn.)
Order No.	93-60-12096 (400 V - 1 gun connection)
	93-60-42096 (400 V - 4 gun connection)
	93-66-12096 (480/460 V - 1 gun connection)
	93-66-42096 (480/460 V - 4 gun connection)

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INVERTER ARC STUD WELDER - IT 90

FEATURES

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 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** (optional)

SUITABLE STUD WELDING GUNS

A 12 with ceramic leg assembly PSC-1	A 12 with gas shroud PSS-1/SC
A 12 with shielding gas leg assembly PSS-2	A 12-FL
A 16	A 22

GENERAL INFORMATION

Application

- Especially suitable for thicker sheets of about .093 inches (2 mm) or higher

Process Variants

- Drawn arc with ceramic ferrule (ARC)
- Drawn arc with shielding gas (ARC)
- Short-cycle (SC)

Equipment

- Inverter (2,000 A) with options for 4 outputs, process monitoring and shielding gas

ADVANTAGES

Structure

- **Extremely easy to operate**
- **Compact/Mobile** – highly mobile thanks to compact dimensions and low weight (50% less weight compared to conventional stud welding units)
- **Robust** – metal housing withstands rough treatment in shop and on site

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INVERTER ARC STUD WELDER - IT 90

ADVANTAGES (continued)

Safety

- With integrated **mains filter** (protection against voltage peaks)
- **Optimal for construction sites with large mains voltage fluctuations** – use 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 21**

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 (optional); digital display of current, welding and gas-preflow time; 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

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STUD WELDING GUN CA 08 WITH GAS SHROUD PSS-1/SC



DESCRIPTION

Application

- Especially suitable for metal sheets from 2 mm

Structure

- Rigid casing made of impact-resistant plastic
- Zero-play ball linear bearing for guiding the welding piston
- Sealed welding piston guidance
- Integrated lift and spring-loaded adjustment
- Stud length freely adjustable (up to 40 mm; from 40 mm with tripod)
- With distance ring - higher distance between flange of the welding element and chuck prevents depositing of welding melt on the chuck

Safety

- Lock-in spring adjustment
- High level of security to prevent the selected settings being changed inadvertently
- Guidance system protected against spatters

Welding

- Welding in restricted space
- Welding on painted sheets possible (clean, smooth and flat surfaces and grounding required)

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STUD WELDING GUN CA 08 WITH GAS SHROUD PSS-1/SC

TECHICAL DATA	
Welding range	M3 to M8 (M10 with special equipment), dia. 2 to 8 mm / #4 to 5/16" (7/16" with special equipment), dia. 14 ga to 5/16"
Stud length	6 to 40 mm / 0.24" to 1.57", longer studs with optional accessories
Stud type	Any type or shape (special chucks if required)
Lift	Adjustment range 4.5 mm / 0.18", lockable
Spring force	Adjustable, arresting
Welding cable	3 m / 9.84'; 25 mm ² , SK 50
IP Code	IP 20
Workplace noise level	Up to 90 dB (A) may occur during welding
Dimension LxWxH (without cable)	190 x 40 x 140 mm / 7.48" x 1.57" x 5.51"
Weight (without cable)	0.7 kg / 1.54 lbs
Order No.	92-20-283 (PSS-1/SC)

SUITABLE WELDERS
<ul style="list-style-type: none">• ARC 800• IT 1002

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STUD WELDING GUN A 12 with CERAMIC LEG ASSEMBLY PSC-1



DESCRIPTION

Application

- Especially suitable for thicker metal sheets from approx. 2 mm
- Automatic compensation of length tolerance of welding elements through integrated length adjustment
- ISO - especially suitable for welding on ARC-ISO-pins and ARC-fiberfix pins

Structure

- Rigid casing made of impact-resistant plastic
- Zero-play ball linear bearing for guiding the welding piston
- Sealed welding piston guidance
- Integrated lift and spring-loaded adjustment
- Stud length freely adjustable

Safety

- Lock-in lift adjustment
- High level of security to prevent the selected settings being changed inadvertently
- Guidance system protected against spatters

Welding

- Reproducible piston movement with minimized rebound effect for optimum welding quality via lift damper
- Welding in restricted space
- Welding on painted sheets possible (clean, smooth and flat surfaces and grounding required)
- Automatic length compensation

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STUD WELDING GUN A 12 with CERAMIC LEG ASSEMBLY PSC-1

TECHICAL DATA

Welding range	M3 to M8 (M10 with special equipment), dia. 2 to 8 mm / #4 to 5/16" (7/16" with special equipment), dia. 14 ga to 5/16"
Stud length	6 to 40 mm / 0.24" to 1.57", longer studs with optional accessories
Stud type	Any type or shape (special chucks if required)
Length compensation	3 mm / 0.12" automatic
Lift	Adjustment range 3 mm / 0.12", lockable
Spring force	Adjustable, arresting
Welding cable	4,8 m / 15.75', 35 mm ² , SK 50
IP Code	IP 20
Workplace noise level	Up to 90 dB (A) may occur during welding
Dimension LxWxH (without cable)	190 x 40 x 140 mm / 7.48" x 1.57" x 5.51"
Weight (without cable)	0.8 kg / 1.76 lbs
Order No.	93-20-276 (PPR-2/SC)

SUITABLE WELDERS

- ARC 800
- IT 1002
- Visar 650
- IT 90
- IT 2002
- Visar 1200

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STUD WELDING GUN A 12 with Gas Shroud PSS-1/SC



DESCRIPTION

Application

- Especially suitable for thicker metal sheets from approx. 2 mm
- Automatic compensation of length tolerance of welding elements through integrated length adjustment
- ISO - especially suitable for welding on ARC-ISO-pins and ARC-fiberfix pins

Structure

- Rigid casing made of impact-resistant plastic
- Zero-play ball linear bearing for guiding the welding piston
- Sealed welding piston guidance
- Integrated lift and spring-loaded adjustment
- Stud length freely adjustable

Safety

- Lock-in lift adjustment
- High level of security to prevent the selected settings being changed inadvertently
- Guidance system protected against spatters

Welding

- Reproducible piston movement with minimized rebound effect for optimum welding quality via lift damper
- Welding in restricted space
- Welding on painted sheets possible (clean, smooth and flat surfaces and grounding required)
- Automatic length compensation

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STUD WELDING GUN A 12 with Gas Shroud PSS-1/SC

TECHICAL DATA

Welding range	M3 to M8 (M10 with special equipment), dia. 2 to 8 mm / #4 to 5/16" (7/16" with special equipment), dia. 14 ga to 5/16"
Stud length	6 to 40 mm / 0.24" to 1.57", longer studs with optional accessories
Stud type	Any type or shape (special chucks if required)
Length compensation	3 mm / 0.12" automatic
Lift	Adjustment range 3 mm / 0.12", lockable
Spring force	Adjustable, arresting
Welding cable	4,8 m / 15.75', 35 mm ² , SK 50
IP Code	IP 20
Workplace noise level	Up to 90 dB (A) may occur during welding
Dimension LxWxH (without cable)	190 x 40 x 140 mm / 7.48" x 1.57" x 5.51"
Weight (without cable)	0.8 kg / 1.76 lbs
Order No.	93-20-277 (PSS-1/SC)

SUITABLE WELDERS

- ARC 800
- IT 90
- IT 2002
- IT 1002
- Visar 650 shielding gas version
- Visar 1200

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STUD WELDING GUN A 12 WITH SHIELDING GAS LEG ASSEMBLY PSS-2



DESCRIPTION

Application

- Especially suitable for thicker metal sheets from approx. 2 mm
- Automatic compensation of length tolerance of welding elements through integrated length adjustment
- ISO - especially suitable for welding on ARC-ISO-pins and ARC-fiberfix pins

Structure

- Rigid casing made of impact-resistant plastic
- Zero-play ball linear bearing for guiding the welding piston
- Sealed welding piston guidance
- Integrated lift and spring-loaded adjustment
- Stud length freely adjustable

Safety

- Lock-in lift adjustment
- High level of security to prevent the selected settings being changed inadvertently
- Guidance system protected against spatters

Welding

- Reproducible piston movement with minimized rebound effect for optimum welding quality via lift damper
- Welding in restricted space
- Welding on painted sheets possible (clean, smooth and flat surfaces and grounding required)
- Automatic length compensation

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STUD WELDING GUN A 12 WITH SHIELDING GAS LEG ASSEMBLY PSS-2

TECHICAL DATA

Welding range	M3 to M12, dia. 2 to 12 mm / #4 to 1/2", dia. 14 ga to 1/2"
Stud length	10 to 400 mm / 0.39" to 15.74" (depending on leg assembly)
Stud type	Any type or shape (special chucks if required)
Length compensation	3 mm / 0.12" automatic
Lift	Adjustment range 3 mm / 0.12", lockable
Spring force	Adjustable, arresting
Welding cable	4,8 m / 15.75', 35 mm ² , SK 50
IP Code	IP 20
Workplace noise level	Up to 90 dB (A) may occur during welding
Dimension LxWxH (without cable)	200 x 65 x 140 mm / 7.87" x 2.56" x 5.51"
Weight (without cable)	0.8 kg / 1.76 lbs
Order No.	93-20-274 (Gas)

SUITABLE WELDERS

- ARC 800
- IT 90
- IT 2002
- IT 1002
- Visar 650 shielding gas version
- Visar 1200

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STUD WELDING GUN A 12-FL



DESCRIPTION

Application

- Especially suitable for thicker metal sheets from approx. 2 mm
- Automatic compensation of length tolerance of welding elements through integrated length adjustment
- ISO - especially suitable for welding on ARC-ISO-pins and ARC-fiberfix pins

Structure

- Rigid casing made of impact-resistant plastic
- Zero-play ball linear bearing for guiding the welding piston
- Sealed welding piston guidance
- Integrated lift and spring-loaded adjustment
- Stud length freely adjustable

Safety

- Lock-in lift adjustment
- High level of security to prevent the selected settings being changed inadvertently
- Guidance system protected against spatters

Welding

- Reproducible piston movement with minimized rebound effect for optimum welding quality via lift damper
- Welding in restricted space
- Welding on painted sheets possible (clean, smooth and flat surfaces and grounding required)
- Automatic length compensation

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STUD WELDING GUN A 12-FL

TECHICAL DATA	
Welding range	M3 - M12 / Ø 2 - 12 mm #4 - 1/2", Ø 14 ga - 1/2" ARC ISO pins dia. 3 to 6 mm / dia. #4 to 1/4"
Stud length	10 to 400 mm / 0.39" to 15.74" (depending on leg assembly)
Stud type	ARC insulation pin, ARC fiberfix pin, ARC threaded stud, ARC pin
Lift	Fixed 6 mm / 0.24"
Spring force	Fixed
Welding cable	5 or 10 m / 16,40' or 32,81', 35 mm ² , SK 50
IP Code	IP 20
Workplace noise level	Up to 90 dB (A) may occur during welding
Dimension LxWxH (without cable)	200 x 65 x 140 mm / 7.87" x 2.56" x 5.51"
Weight (without cable)	0.8 kg / 1.76 lbs
Order No.	93-20-260 (excluding leg assembly, 5 m cable length)

SUITABLE WELDERS

- ARC 800
- IT 90
- IT 2002
- IT 1002
- Visar 650
- Visar 650 shielding gas version
- Visar 1200

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STUD WELDING GUN A 16



DESCRIPTION

Application

- Especially suitable for the thicker metal sheets from approx. 2 mm
- Automatic compensation of length tolerance of welding elements through integrated length adjustment

Structure

- Rigid casing made of impact-resistant plastic
- Slide bearing for guiding the welding piston
- Sealed welding piston guidance
- Lift adjustment
- Stud length freely adjustable

Safety

- Lock-in lift adjustment
- High level of security to prevent the selected settings being changed inadvertently
- Guidance system protected against spatters

Welding

- Welding on painted sheets possible (clean, smooth and flat surfaces and grounding required)
- Ideal for high clock sequences with big diameters
- Automatic length compensation
- Damped plunging in the weld pool with installed oil damper

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STUD WELDING GUN A 16

TECHICAL DATA

Welding range	Dia. 3 to 16 mm / dia. #4 to 5/8"
Stud length	10 to 240 mm / 0.39" to 9.45" (depending on leg assembly)
Stud type	Any type or shape (special chucks if required)
Length compensation	6 mm / 0.24" automatic
Lift	Adjustment range 4 mm / 0.16", (0.25 mm / 0.01" steps, arresting)
Spring force	Oildamper
Welding cable	4.8 m / 15.75', 50 mm ² / 1/0, SK 50
IP Code	IP 20
Workplace noise level	Up to 90 dB (A) may occur during welding
Dimension LxWxH (without cable, with foot piece)	260 x 74 x 220 mm / 10.24" x 2.91" x 8.66"
Weight (without cable)	2 kg / 4.41 lbs
Order No.	93-20-280C (excluding leg assembly)

SUITABLE WELDERS

- ARC 800
- IT 90
- IT 2002
- IT 1002
- Visar 1200

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STUD WELDING GUN A 22



DESCRIPTION

Application

- Especially suitable for the thicker metal sheets from approx. 2 mm
- Automatic compensation of length tolerance of welding elements through integrated length adjustment
- Especially suitable for through deck welding

Structure

- Rigid casing made of impact-resistant plastic
- Slide bearing for guiding the welding piston
- Sealed welding piston guidance
- Lift adjustment
- Stud length freely adjustable
- Reduced heating of the welding gun body thanks to externally positioned welding current cable

Safety

- Lock-in lift adjustment
- High level of security to prevent the selected settings being changed inadvertently
- Guidance system protected against spatters

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STUD WELDING GUN A 22

DESCRIPTION

Welding

- Welding on painted sheets possible (clean, smooth and flat surfaces and grounding required)
- Ideal for high clock sequences with big diameters
- Automatic length compensation
- Damped plunging in the weld pool with installed oil damper

TECHICAL DATA

Welding range	Dia. 14 to 22 mm (dia. 25 mm) / dia. 9/16" to 7/8" (dia. 1")
Stud length	10 to 390 mm / 0.39" to 15.35" (depending on leg assembly)
Stud type	Any type or shape - (special chucks if required)
Length compensation	9 mm / 0.35" automatic
Lift	Adjustment range 6 mm / 0.24", (0.25 mm / 0.01" steps, arresting)
Spring force	Adjustable oildamper
Welding cable	4.8 m / 15.75', 95 mm ² / 3/0, SKK 95
IP Code	IP 20
Workplace noise level	Up to 90 dB (A) may occur during welding
Dimension LxWxH (without cable, with foot piece)	260 x 74 x 220 mm / 10.24" x 2.91" x 8.66"
Weight (without cable)	2 kg / 4.41 lbs
Order No.	93-20-290C (excluding leg assembly) 93-21-290C (US version, excluding leg assembly)

SUITABLE WELDERS

- IT 90
- IT 2002

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STUD WELDING GUN AM 12 A



DESCRIPTION

Application

- For welding of welding nuts of type HexNut
- For welding on perforated and unperforated metal sheets
- Especially suitable for workshop and assembly area

Structure

- Rigid casing made of impact-resistant plastic
- Zero-play ball linear bearing for guiding the welding piston
- Sealed welding piston guidance
- Integrated lift and spring-loaded adjustment

Safety

- Lock-in lift adjustment
- High level of security to prevent the selected settings being changed inadvertently
- Guidance system protected against spatters
- Temperature monitoring

Welding

- Reproducible piston movement with minimized rebound effect for optimum welding quality via lift damper
- Welding on painted sheets possible (clean, smooth and flat surfaces and grounding required)
- Automatic length compensation

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STUD WELDING GUN AM 12 A

TECHICAL DATA

Welding range	Welding nuts of type HexNut M6 to M12
Wall thickness	1 to 3 mm / 0.04" to 0.12" (other sheet thicknesses on request)
Welding element material	A2-50
Welding element type	MARC welding nut - type HexNut
Welding rate	Up to 4 welding nuts/min. The maximum welding sequence is limited by a number of parameters.
Length compensation	3 mm / 0.12", automatic
Lift	Adjustment range 3 mm / 0.12", lockable
Spring pressure	Adjustable, arresting
Welding cable	5 m / 16.40'
IP Code	IP 20
Workplace noise level	Up to 90 dB (A) may occur during welding
Dimension LxWxH	320 x 70 x 200 mm / 12.60" x 2.76" x 7.87" (without cable, with leg assembly)
Weight	0.9 kg / 1.98 lbs (without cable)

SUITABLE WELDERS

- IT 1002

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STUD WELDING HEAD KAH 412



DESCRIPTION

Application

- Especially suitable for thin metal sheets from 0.5 mm

Structure

- Zero-play ball linear bearing for guiding the welding piston, to ensure maximum precision and reproducibility for welds
- Sealed welding piston guidance
- Integrated lift and spring-loaded adjustment
- Digital display (1/100 mm) for the position of the welding piston using integrated measuring system
- Direct reading for the adjusted plunge and lift dimension
- Pushbutton detent system to facilitate changing the feeding tube
- Electronically controlled

Safety

- Lock-in spring adjustment
- Lock-in lift adjustment
- High level of security to prevent the selected settings being changed inadvertently
- Guidance system protected against spatters

Welding

- Individual adjustment options for optimum welding results
- Welding on painted sheets possible (clean, smooth and flat surfaces and grounding required)
- Manual or fully automatic stud feed possible (welding element is automatically pushed through the feed tube in the chuck)

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STUD WELDING HEAD KAH 412

TECHICAL DATA

Welding range	M3 to M8, dia. 3 to 8 mm; #4 to 5/16", dia. #4 to 5/16" (dia. 10 to 12.7 mm; dia. 3/8" to 1/2" with modification only)
Stud length	8 to 40 mm; 0.31" to 1.57" (other lengths on request)
Stud type	Welding elements with flange according to current standards (other studs on request)
Spring Pressure	Arresting
IP Code	IP 20
Workplace noise level	> 90 dB (A) may occur during welding
Dimension LxWxH (without cable)	375 x 66 x 145 mm, 14.76" x 2.60" x 5.71" with chuck and quick change system
Weight	3.4 kg; 7.50 lbs
Order No.	94-31-412C Equipped for one standard stud dimension according to customer request.

SUITABLE WELDERS

- MPW-Series
- CPW-Series
- ARC 800 AT
- IT 1002 AT
- IT 90 AT

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STUD WELDING HEAD KAH 412 LA



DESCRIPTION

Application

- Especially suitable for thin metal sheets from 0.5 mm
- Automatic compensation of length tolerance of welding elements through integrated length adjustment

Structure

- Zero-play ball linear bearing for guiding the welding piston, to ensure maximum precision and reproducibility for welds
- Sealed welding piston guidance
- Integrated lift and spring-loaded adjustment
- Pushbutton detent system to facilitate changing the feeding tube
- Electronically controlled

Safety

- Lock-in spring adjustment
- Lock-in lift adjustment
- High level of security to prevent the selected settings being changed inadvertently
- Guidance system protected against spatters

Welding

- Individual adjustment options for optimum welding results
- Reproducible piston movement with minimized rebound effect for optimum welding quality via lift damper
- Automatic length compensation
- Welding on painted sheets possible (clean, smooth and flat surfaces and grounding required)
- Manual or fully automatic stud feed possible (welding element is automatically pushed through the feed tube in the chuck)

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STUD WELDING HEAD KAH 412 LA

TECHICAL DATA

Welding range	M3 to M8, dia. 3 to 8 mm; #4 to 5/16", dia. #4 to 5/16" (dia. 10 to 12.7 mm; dia. 3/8" to 1/2" with modification only)
Stud length	8 to 40 mm; 0.31" to 1.57" (other lengths on request)
Stud type	Welding elements with flange according to current standards (other studs on request)
Stroke/Length compensation	0.2"/0.08", 0.16"/0.12"
Spring Pressure	Arresting
IP Code	IP 20
Workplace noise level	> 90 dB (A) may occur during welding
Dimension LxWxH (without cable)	375 x 66 x 145 mm, 14.76" x 2.60" x 5.71" with chuck and quick change system
Weight	3.4 kg; 7.50 lbs
Order No.	94-37-412 Equipped for one standard stud dimension according to customer request.

SUITABLE WELDERS

- MPW-Series
- CPW-Series
- ARC 800 AT
- IT 1002 AT
- IT 90 AT

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