
HBS

H B S – **t**he industry leader in pad welding and stud welding products

HBS combines innovation with proven and reliable products to meet a wide range of application needs for industry, be it for small portable equipment to fully automated needs on medium sized production lines.

Products and systems are designed to be fully cost effective providing the customer with technically sound equipment providing years of reliable, trouble free operation.

For nearly half a century HBS has been the industry leader in designing, developing, manufacturing, and distributing the finest stud welding equipment sold and serviced in more than 50 countries, world wide.

Because our business and strengths are in the field of welders, we are constantly alert to changing needs and conditions, in our market place. These changes relate to types of metals, standard and special application studs, and the efficiency and cost effectiveness of the welding power sources.

Our research goes far beyond the traditional and historical applications. Utilizing inputs from customers operating multiple environmental and regulatory conditions has caused us to go beyond the individual and collective capabilities of our dedicated R&D department. We regularly utilize information gained from commissioned studies at universities and welding institutions.

Capitalizing on these basic precepts, we recognized the need to find solutions to the high costs of electrical power drawn from both the mains and from on site Diesel Generators. The solution was to create a whole new line of welder power source as well as associated, purpose designed guns. The result of more than 5 years of development including two years of on site field-testing, we are proud to announce the first complete range of **HBS INVERTER PRODUCTS**.

Inverter

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ALL THE RIGHT TOOLS

The first complete line of Inverters developing welding currents up to 2,600 amps.

Cost effective systems operating efficiently from 125 KW diesel generators.

Producing high volume stud welding while reducing the rental or purchase price of diesel powered generators, lowering fuel consumption as much as 50% from the traditional 225 KW power sources.

Welding Range: #4 to 1" (M3 to M24)

ALL THE RIGHT TOOLS

Inverter Technology employs 2 major facilities

- The welding unit is precisely adjusted by use of inverter technology based on a consistent energy input, resulting in constant welding results even in the case of voltage fluctuations.

- The innovative inverter power source is characterized by an increased efficiency of 80%. This results in a reduced current consumption of 50%.

ALL THE RIGHT TOOLS

Energy Saving and Cost Effective

HBS Inverters

- 20 – 60% lighter in weight.
- Match Duty Cycle Rates at up to 50% less power requirement.
- Maximum Diesel Generator 125kW
  - Smaller
  - More mobile
  - Diesel Fuel consumption up to 50% less than the traditional 225KW
  - Gensets
- Long lead welding cables (+330ft)
- Welding Capacity of studs up to 1 inch
- 5 Choices of welding power units provides the right machine for the right application
- Welding power sources

ALL THE RIGHT TOOLS

Advantages

- Very high duty cycle even with the use of long cables.
- Exceptional welding quality together with process dynamics resulting in a very high arc stability. The unique hydraulic dampener system of the welding gun provides a permanently accurate plunging movement and therefore constant welding results.
- Large rubber wheels and 65% lighter than traditional large units makes each size of the HBS Inverter highly mobile in both Shop and Construction site applications.

ALL THE RIGHT TOOLS

Unique Features = More Advantages

- Library function for drawn-arc stud welding (preset welding current and welding time by selection of diameter).
- The special concrete anchor mode provides an optimum current profile which is specially modulated to welding of concrete anchors.
- The only guns equipped with a double hydraulic dampening system for lift and plunge in (A 16, A 25).
- Fatigue-proof operation as a result of ergonomic grip housings and light weight.

ALL THE RIGHT TOOLS

Features

- **Microcontroller** – for precise process times, optimal functional reliability and maximum operating convenience.
- **Function monitoring** – self running function test following switch on; monitoring of all internal system functions.
- **Lift test** – for gap welding guns and stud welding heads.
- **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 (IT 1002/90/130).
- **RS232 interface** – for data output; data and time of day are stored; welding parameters of each weld are logged (IT 1002/90/130).
- **4 gun connections** (optional IT 90).

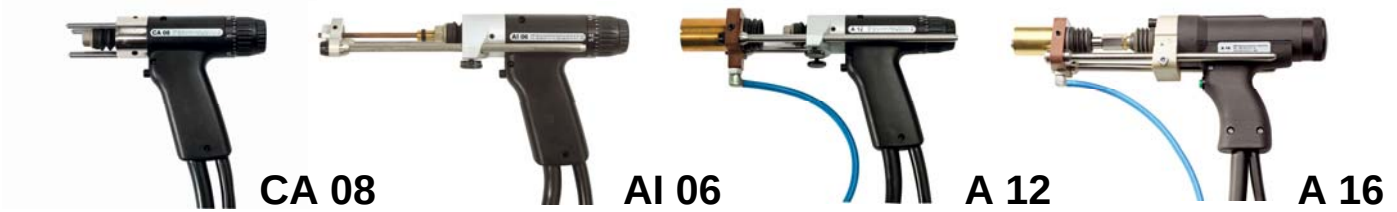
Stud welding unit - IT 1002

Welding range	#4 to 5/8" (M3 to MR16)
Welding current (AMPS)	1,000 A (max.)
Welding rate (Duty Cycle)	1/2" (M12) = 25 studs/min
Current adjustment range (Weld Power) Stick welding mode	100 to 1,000 A (stepless), electrode 50 to 400 A (stepless)
Welding time	5 to 1,000 msec (stepless)
Connected load (Input)	50 kVA (with 400/480 V mains), 40 kW
Dimension L x W x H	26“ x 11“ x 13.4“ (660 x 280 x 340 mm)
Weight	63.9 lbs (29 kg)

Special features

- Process monitoring
- RS232 interface

Suitable stud welding guns



CA 08 **AI 06** **A 12** **A 16**

Stud welding unit - IT 2002

Welding range	#4 to 1'', (M3 to M24)
Welding current (AMPS)	2,000 A (max.)
Welding rate (Duty Cycle)	7/8'' = 7 studs/min, **Through deck welding** 3/4“ = 7 studs/min (200 feet, AWG 4/0), **Industrial application** 3/4“ = 8 to 9 studs/min
Current adjustment range (Weld Power)	300 to 2,000 A (stepless)
Welding time	5 to 1,500 msec (stepless)
Connected load (Input)	100 kVA (with 400/480 V mains), 80 kW
Dimension L x W x H	23.6“ x 19.7“ x 32.7“ (600 x 500 x 830 mm)
Weight	209.4 lbs (95 kg)

Suitable stud welding guns

A 16

A 25

Stud welding unit - IT 3002

Welding range	#4 to 1", (M3 to M24)
Welding current (AMPS)	2,600 A (max.)
Welding rate (Duty Cycle)	1" = 6 studs/min, **Through deck welding** 3/4“ = 12 studs/min (330 feet, AWG 4/0) **Industrial application** 3/4“ = 14 to 15 studs/min
Current adjustment range (Weld Power)	300 to 2,600 A (stepless)
Welding time	5 to 1,500 msec (stepless)
Connected load (Input)	150 kVA (with 400/480 V mains), 120 kW
Dimension L x W x H	25.6“ x 22“ x 50.8“ (650 x 560 x 1,290 mm)
Weight	352,8 lbs (160 kg)

Suitable stud welding guns

A 16

A 25

Stud welding unit - IT 90

Welding range	#4 to 1", (M3 to M24)
Welding current (AMPS)	2,000 A (max.)
Welding rate (Duty Cycle)	Dia. 7/8" = 7 studs/min
Current adjustment range (Weld Power)	300 to 2,000 A (stepless)
Welding time	5 to 1,500 msec (stepless)
Connected load (Input)	100 kVA (with 400/480 V mains), 80 kW
Dimension L x W x H	25.6“ x 22“ x 50.8“ (650 x 560 x 1,290 mm)
Weight	308.6 lbs (140 kg)

Special features

- Process monitoring
- RS232 interface
- 4 gun connections (optional)

Suitable stud welding guns (also suitable for stud welding heads - automation)

A 16

A 25

Stud welding unit - IT 130

Welding range	#4 to 1", (M3 to M24)
Welding current (AMPS)	2,500 A (max.)
Welding rate (Duty Cycle)	Dia. 1" = 6 studs/min
Current adjustment range (Weld Power)	300 to 2,500 A (stepless)
Welding time	5 to 1,500 msec (stepless)
Connected load (Input)	150 kVA (with 400/480 V mains), 120 kW
Dimension L x W x H	25.6“ x 22“ x 50.8“ (650 x 560 x 1,290 mm)
Weight	352.7 lbs (160 kg)

Special features

- Process monitoring
- RS232 interface

Suitable stud welding guns

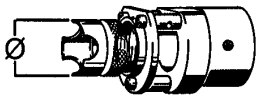
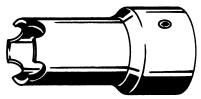
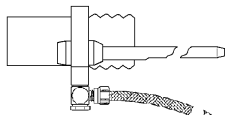
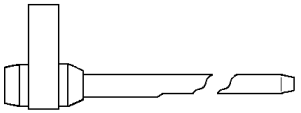
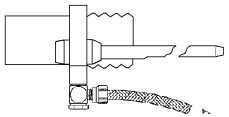
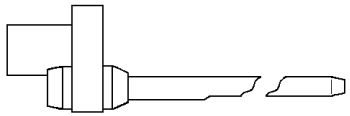
A 16

A 25

Stud welding guns

Gun typ	Welding range	Length adjustment (automatic)	Setting			Welding cable			Weight
			Spring pressure	Lift (max.) (Adjustment range)	Damp-ing	Length	Cross section (mm²)	Connec-tor (mm²)	
CA 08	#4 to 5/16“	--	Adjustable, arresting	0.18” (lockable)	--	9.84‘	25	50	1.54 lbs
A 12	#4 to 1/2"	0.12“	Adjustable, arresting	0.12“ (lockable)	--	16.4'	35	50	1.8 lbs
A 16	Dia. #4 to 5/8"	0.16"	--	0.16" (0.01" steps, arresting)	Oil damping system for lift and plunge	16', 1/0	50	50	4.4 lbs
A 25	Dia. 5/8“ to 1“	0.35“	--	0.24" (0.01" steps, arresting)	Oil damping system for lift and plunge	5', 4/0	120	120	4.4 lbs
AI 06	ARC-ISO pins 12 ga to 1/4”	0.12“	Adjustable, arresting	0.12“ (lockable)	--	32.81'	35	50	1.8 lbs

Stud welding guns

Gun typ	Branch	Application	Appropriate Power units	Accessories
CA 08	Industry application		IT 1002	 Centering device  entering tube
A 12	Industry application		IT 1002	 Ceramic tripod  Gas tripod
A 16	Industry application Heavy duty Job site application		IT 90, IT 130 IT 1002, IT 2002, IT 3002	 Ceramic tripod  Gas tripod
A 25	Industry application Heavy duty Job site application		IT 90, IT 130 IT 2002, IT 3002	 Ceramic tripod
AI 06	Insulation application		IT 1002	 Tripod for insulation pins

Stud welding guns

CA 08

Designed for:

- Mild steel, stainless steel, aluminum and brass
- Applications on thin metal sheets from .02” (0.5 mm)

A 12

Designed for:

- Mild steel and stainless steel
- Applications on thicker metal sheets from approx. .08” (2 mm)
- ISO – especially suitable for welding on ARC-ISO and Fiberfix pins
- Welding on painted sheets

AI 06

Designed for:

- Mild steel and stainless steel
- Applications on thicker metal sheets from approx. .08” (2 mm)
- ISO - especially suitable for welding on ARC-ISO and Fiberfix pins

Stud welding guns

A 16

Designed for:

- Mild steel and stainless steel
- Applications on thicker metal sheets from approx. .08” (2 mm)
- Ideal for high clock sequences with big diameters
- Oil damping system for lift and plunge in

A 25

Designed for:

- Mild steel and stainless steel
- Applications on thicker metal sheets from approx. .08” (2 mm)

- Especially suitable for through deck welding
- Heavy duty stud welding gun for job site application
- Oil damping system for lift and plunge in

Statistical comparisons

PRODUCT	AMPS	DUTY CYCLE	WELD POWER (stepless)	INPUT	SIZE (inches)	Weight (pounds)
HBS IT 1002	1000	1/2" = 25 studs/min	100 – 1000 amps 5 – 1000 msec	400/480 V (50 KVA, 40 kW)	26x11x13.4	63.8
Proweld 1200i	1200	5/8” - 5 studs/min	200 - 1200 amps .02 –1.2 sec	400/480 V (30 amp gen)	18x10.5/19.5	80.0
Nelweld N1500i	1500	5/8“ - 8 studs/min	50 – 1500 amps 5 – 1000 msec	208/480 V	10.6x16.5x28	77.0
Proweld ARC 1850	1850	3/4” - 10/min	100 – 1900 amps	230/480/575 V (100 amp gen)	26x24x23	500
HBS IT 2002	2000	7/8" = 7 studs/min **TDW -** 3/4“ = 7 studs/min (200 feet, AWG 4/0) **IA -** 3/4“ = 8 to 9 studs/min	300 – 2000 amps 5 – 1500 msec	400/480 V (100 KVA, 80 kW)	23.6x19.7x32.7	209
Nelweld 6000	2500	7/8” - 13/min	300 – 2500 amps	230/480/575 V (225 kW gen)	28x31x35.5	1050
HBS IT 3002	2600	1" = 6 studs/min **TDW** 3/4“ = 12 studs/min (330 feet, AWG 4/0) **IA** 3/4“ = 14 to 15 studs/min	300 – 2600 amps	400/480 V (150 KVA/120 kW)	25.6x22x50.8	353
Proweld ARC 3000	3000	7/8” - 15/min	400 – 3000 amps .1 – 1.6 sec	230/480/575 V (225 kW gen)	36x28x40	950

TDW - Through deck welding, **IA** - Industrial application

Technical data sheets

Stud welding units	
IT 1002	IT 1002
IT 2002	IT 2002
IT 3002	IT 3002
IT 90	IT 90
IT 130	IT 130

Stud welding guns	
CA 08	CA 08
A 12	A 12
A 16	A 16
A 25	A 25
AI 06	AI 06

EUROPE

NORTH AMERICA

SOUTH AMERICA

ASIA

AUSTRALIA

AFRICA

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