



## SECTION 14

# STUD WELDING EQUIPMENT – RENTAL & NEW EQUIPMENT

FOR INQUIRIES, TO PLACE ORDERS,  
SERVICE AND TECHNICAL SUPPORT CONTACT  
ANY OF THE FOLLOWING:

OFFICE: 1-800-462-9353  
713-939-8903

EMAIL: [INFO@SUNBELTSTUDWELDING.COM](mailto:INFO@SUNBELTSTUDWELDING.COM)



**website** [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) **email** [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 **telephone** 1.800.462.9353 - Houston 713.939.8903 **fax** 713.939.9013



## SECTION 14

### STUD WELDING EQUIPMENT – RENTAL EQUIPMENT

FOR INQUIRIES, TO PLACE ORDERS,  
SERVICE AND TECHNICAL SUPPORT CONTACT  
ANY OF THE FOLLOWING:

OFFICE: 1-800-462-9353  
713-939-8903

EMAIL: [INFO@SUNBELTSTUDWELDING.COM](mailto:INFO@SUNBELTSTUDWELDING.COM)



**website** [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) **email** [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 **telephone** 1.800.462.9353 - Houston 713.939.8903 **fax** 713.939.9013

# Stud Welding Equipment

## RENT STUD WELDERS

Sunbelt Stud Welding has CD, Arc and Short Cycle stud welders available for rent to satisfy all applications.

Common stud types / applications are listed below:

### CD Applications:

- CD Threaded Studs
- CD Non Threaded Studs
- CD Tap Studs
- CD Cable Tie Bases
- CD Weld Pins
- Insulation Pins
- Power Point Pins
- Cupped Head Pins
- Tap studs

### Arc Applications:

- Headed Concrete Anchors
- Headed Shear Connectors
- Weld Thru Deck
- Deformed Bar Anchors
- Threaded Weld Studs
- Non Threaded Weld Studs
- Boiler Tube Pins
- Rectangular Weld Studs
- Collar Studs
- Shoulder Studs

### Short Cycle (SC) Applications:

- SC & CD Studs all types
- SC Collar Studs

We accept most major credit cards or we can assist with the credit approval process.

We have a full line of weld studs and accessories to go with your Stud Welder Rental!

For personnel assistance **call 1-800-462-9353** or email **info@sunbeltstudwelding.com**.  
We have the expertise to determine the right equipment for your needs!





## SECTION 14

# STUD WELDING EQUIPMENT – PROCESS & CAPABILITY SUMMARY

## CD EQUIPMENT • ARC EQUIPMENT • SHORT CYCLE EQUIPMENT

FOR INQUIRIES, TO PLACE ORDERS,  
SERVICE AND TECHNICAL SUPPORT CONTACT  
ANY OF THE FOLLOWING:

OFFICE: 1-800-462-9353  
713-939-8903

EMAIL: [INFO@SUNBELTSTUDWELDING.COM](mailto:INFO@SUNBELTSTUDWELDING.COM)



**website** [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) **email** [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 **telephone** 1.800.462.9353 - Houston 713.939.8903 **fax** 713.939.9013

# Stud Welding Equipment - New

| Equipment Process And Capability Summary       |  |            |                                   |      |             |   |
|--|--|------------|-----------------------------------|------|-------------|---|
| Model Designation                              | Page Number                                    | Automation | Maximum Capacity by Stud Diameter |      |             | Comments  |
|  |  |            | CD                                | Arc  | Short Cycle |   |
| CDi 508 & C08-FS gun                           | <a href="#">14.7</a>                           |            |                                   |      |             | 120V - 10 amps  |
| CDi 1502                                       | <a href="#">14.8</a>                           |            | 1/4"                              |      |             | 120V - 10 amps  |
| CDi 2302                                       | <a href="#">14.9</a>                           |            | 5/16"                             |      |             | 120V - 10 amps  |
| CDi 3102                                       | <a href="#">14.10</a>                          |            | 3/8"                              |      |             | 120V - 10 amps  |
| Pegasar 500 accu                               | <a href="#">14.11</a>                          |            |                                   |      |             | 100 - 240V - 10 amps                                      |
| C 06-3   | <a href="#">14.12</a>                          |            |                                   |      |             |   |
| CI 03  | <a href="#">14.13</a>                          |            | 12 gauge pins                     |      |             | CD Contact Gun  |
| C 08   | <a href="#">14.14</a>                          |            | 3/8"                              |      |             | CD Contact Gun  |
| CA 08  | <a href="#">14.15</a>                          |            | 3/8"                              |      |             | CD Gap Gun  |
| Visar 650                                      | <a href="#">14.16</a>                          |            |                                   | 3/8" | 1/4"        | 100-230V / 16 amps  |
| Visar 650 &<br>Visar 650 (Shield. gas version) | <a href="#">14.17</a><br><a href="#">14.18</a> |            |                                   |      |             |   |
| ARC 800  | <a href="#">14.19</a>                          | Optional   |                                   | 1/2" | 7/16"       | 230V / 50 amps - 400V / 35 amps - 575V / 25 amps          |
| IT 1002  | <a href="#">14.20</a>                          | Optional   |                                   | 1/2" | 1/2"        | 480 / 460V / 35 amps                                      |
| Visar 1200                                     | <a href="#">14.21</a>                          |            |                                   | 5/8" | 1/2"        | 200-600V (600V / 20 amps, 400V / 32 amps, 200V / 64 amps) |
| IT 2002  | <a href="#">14.22</a>                          | Optional   |                                   | 1"   | 5/8"        | 480 / 460V / 63 amps                                      |
| IT 3002  | <a href="#">14.23</a>                          |            |                                   | 1"   | 5/8"        | 480 / 460V / 125 amps                                     |
| A 12   | <a href="#">14.24</a>                          |            |                                   | 1/2" | 1/2"        | Arc Stud Welding Gun                                      |
| A 16   | <a href="#">14.25</a>                          |            |                                   | 5/8" | 5/8"        | Arc Stud Welding Gun                                      |
| A 22   | <a href="#">14.26</a>                          |            |                                   | 7/8" |             | Arc Stud Welding Gun                                      |
| <b>Nut Welding Systems</b>                     | <a href="#">14.27</a>                          |            |                                   |      |             |   |
| A 12 M   | <a href="#">14.27</a>                          |            |                                   |      |             |   |
| MARC Nut Welding System                        | <a href="#">14.28</a>                          |            |                                   |      |             |   |
| MARC Welding Nuts -<br>Type Hex <sup>Nut</sup> | <a href="#">14.29</a>                          |            |                                   |      |             |   |

(continued on next page)



# Stud Welding Equipment - New

| Equipment Process And Capability Summary |                       |            |                                   |       |             |                      |
|--|-----------------------|------------|-----------------------------------|-------|-------------|----------------------|
| Model Designation                        | Page Number           | Automation | Maximum Capacity by Stud Diameter |       |             | Comments             |
|  |                       |            | CD                                | Arc   | Short Cycle |                      |
| <b>Automatic Components</b>              | <a href="#">14.30</a> | Automation |                                   |       |             |                      |
| CDi 1502 AT                              | <a href="#">14.31</a> | Automation | 1/4"                              |       |             | 120V / 10 amps       |
| CDMi 2402                                | <a href="#">14.32</a> | Automation |                                   |       |             | 120V / 10 amps       |
| CDMi 2402 - Technical Data Sheet         | <a href="#">14.33</a> | Automation |                                   |       |             |                      |
| CDMi 2402 - Technical Data Sheet         | <a href="#">14.34</a> | Automation |                                   |       |             |                      |
| CDMi 3202                                | <a href="#">14.35</a> | Automation | 3/8"                              |       |             | 120V / 10 amps       |
| CDMi 3202 - Technical Data Sheet         | <a href="#">14.36</a> | Automation |                                   |       |             |                      |
| CDMi 3202 - Technical Data Sheet         | <a href="#">14.37</a> | Automation |                                   |       |             |                      |
| IT 90                                    | <a href="#">14.38</a> | Automation |                                   | 1"    | 5/8"        | 480 / 460V / 63 amps |
| KAH 412 LA                               | <a href="#">14.39</a> | Automation | 3/8"                              | 1/2"  | 1/2"        | Weld Head            |
| KAH 412                                  | <a href="#">14.40</a> | Automation | 3/8"                              | 1/2"  | 1/2"        | Weld Head            |
| PAH-1                                    | <a href="#">14.41</a> | Automation | 5/16"                             |       | 5/16"       | Weld Gun             |
| VBZ-3                                    | <a href="#">14.42</a> | Automation | 5/16"                             | 5/16" | 5/16"       | Stud Feeder          |
| PMB-LS2                                  | <a href="#">14.43</a> | Automation |                                   |       |             | Pneumatic Clamp      |
| PMB-S                                    | <a href="#">14.44</a> | Automation |                                   |       |             | Pneumatic Clamp      |
| <b>CNC Auto Feed Systems</b>             | <a href="#">14.45</a> | Automation |                                   |       |             |                      |
| PC-S Production Center                   | <a href="#">14.46</a> | Automation | 1/2"                              | 1/2"  | 1/2"        |                      |
| CPW Series                               | <a href="#">14.47</a> | Automation |                                   |       |             |                      |
| MPW 1010<br>CNC Multi Production Welder  | <a href="#">14.48</a> | Automation | 1/2"                              | 1/2"  | 1/2"        |                      |
| MPW 2010<br>CNC Multi Production Welder  | <a href="#">14.48</a> | Automation | 1/2"                              | 1/2"  | 1/2"        |                      |



# Stud Welding Equipment - CD

## CDI 508



- For construction sites and workshops (IP 23)
- Welds to M8 (5/16") on thin sheets
- Inverter-Capacitor Charging Technology
- Digital Display

M3 to M8 #4 to 5/16"

## C 08-FS



- Easy handling
- No settings necessary

M3 to M8 #4 to 5/16"

|                                     |  |
|-------------------------------------|--|
| Welding process                     | CD (Contact)   |
| Welding material                    | Mild Steel - Stainless Steel   |
| Welding range                       | M3 to M8, dia. 2 to 8 mm /<br>#4 to 5/16", dia. 14 ga to 5/16"   |
| Welding rate                        | M8 / 5/16" = 6 studs/min.<br>(voltage 220V)  |
| Capacitance                         | 50000 µF   |
| Welding time                        | 1 to 3 ms  |
| Energy                              | 1210 Ws  |
| Charging voltage                    | 54 to 220V   |
| Connection                          | 1 ~, 100 bis 240V, 50/60 Hz, 10 AT   |
| Connected load                      | 600 VA   |
| Power source                        | Capacitor  |
| Cooling type                        | F (temperature controlled cooling fan)   |
| IP Code                             | IP 23  |
| Dimension LxWxH<br>(without handle) | 363 x 163 x 257 mm /<br>14.3" x 6.4" x 10.1"   |
| Weight                              | 9.9 kg / 21.8 lbs  |
| Order No.                           | 92-10-0508<br>(Plug E+F; Europe + China),<br>sticker welding parameters, metric" *)<br><br>92-12-0508<br>(Plug B; USA + Canada),<br>sticker welding parameters, imperial" *)<br><br>92-40-095<br>(ground cable, 2.5 m,<br>25 mm <sup>2</sup> , 2x 10" vice grip) |

|                                    |  |
|------------------------------------|--|
| Welding process                    | CD (Contact)   |
| Stud material                      | Mild Steel - Stainless Steel   |
| Welding range                      | M3 to M8, dia. 2 to 8 mm /<br>#4 to 5/16", dia. 14 ga to 5/16"   |
| Stud length                        | 6 to 40 mm / 0.24" - 1.57";<br>longer studs (> 40 mm / 1.57") with<br>optional accessories             |
| Stud type                          | Any type or shape (special chucks if<br>required)  |
| Spring pressure                    | - - -  |
| Welding cable                      | 6.5 m / 21.33'; 25 mm <sup>2</sup> , SK 50, 7 poles  |
| Workplace noise level              | > 90 dB (A) may occur during welding<br>process  |
| IP Code                            | IP 20  |
| Dimension LxWxH<br>(without cable) | 170 x 40 x 140 mm /<br>6,7" x 1,6" x 5,5"  |
| Weight                             | 0,5 kg / 1,10 lbs  |
| Order No.                          | 92-20-290 (Leg assembly)<br><br>92-40-018 (accessories CD to 8 mm –<br>chucks M3 to M8, socket wrench) |



# Stud Welding Equipment - CD

## CDi 1502 TECHNICAL DATA SHEET



### CDi 1502

Stud Welding Unit (with digital display)  
For CD stud welding (capacitor discharge welding)  
according to current standards

Only power unit in its class (66.000  $\mu$ F), which officially fulfills the requirements of the Technical Bulletin 0903. Capacitor discharge stud welding with tip ignition" for studs diameter M8 with a required charging voltage of 220 V.

### Inverter-Capacitor Charging Technology

- Maximum welding rates
- Minimum energy consumption
- Minimum weight
- Maximum efficiency

| Technical Data      |  |
|---------------------|--|
| Automatic           | Option   |
| Welding range       | Studs #4 to 5/16", dia. 14 ga to 5/16"; cupped head pins dia. 14 ga and 12 ga; insulation pins dia. 14 ga and #4 (studs M3 to M8, dia. 2 to 8 mm; cupped head pins dia. 2 and 2.7 mm; insulation pins dia. 2 and 3 mm) |
| Welding material    | Mild steel, stainless steel, aluminum and brass  |
| Welding rate        | M3 = 40 studs/min. (Charging voltage 60 V)<br>M8 = 14 studs/min. (Charging voltage 200 V)<br>M8 = 12 studs/min. (Charging voltage 220 V)   |
| Capacitance         | 66,000 $\mu$ F   |
| Welding time        | 1 to 3 msec  |
| Energy              | 1,600 Ws   |
| Charging voltage    | 50 to 220 V (stepless voltage regulation)  |
| Primary power       | 115 V, 50/60 Hz, 10 AT   |
| Power source        | Capacitor  |
| Cooling type        | F (temperature controlled cooling fan)   |
| IP-code             | IP 23 (92-12-1502), IP 21 (92-12-1504)   |
| Dimension L x W x H | 15.75" x 8.07" x 9.84"<br>(400 x 205 x 250 mm)<br>without handle   |
| Weight              | 30.87 lbs (14 kg)  |
| Order No            | 92-12-1502<br>92-12-1504 (Automatic)   |

### General Information

#### Application

- Especially suitable for thin sheets (at least 0.5 mm)
- ISO – especially suitable for fixing heating, ventilation and air-conditioning mats (HVAC)

#### Process variants

- Contact welding
- Gap welding



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013



# Stud Welding Equipment - CD

## CDI 2302 TECHNICAL DATA SHEET



### CDi 2302

Stud Welding Unit (with digital display)  
For CD stud welding (capacitor discharge welding)  
according to current standards

### Inverter-Capacitor Charging Technology

- Maximum welding rates
- Minimum energy consumption
- Minimum weight
- Maximum efficiency

| Technical Data      |  |
|---------------------|--|
| Welding range       | #4 to 5/16" (7/16" limited),<br>dia. 14 ga to 5/16" (dia. 3/8" limited)<br>(M3 to M8 (M10 limited),<br>dia. 2 to 8 mm (dia. 10 mm limited))      |
| Welding material    | Mild steel, stainless steel, aluminum and brass  |
| Welding rate        | M3 = 33 studs/min.<br>(Charging voltage 60 V)<br>M8 = 12 studs/min.<br>(Charging voltage 170V)<br>M10 = 9 studs/min.<br>(Charging voltage 210 V) |
| Capacitance         | 99,000 $\mu$ F   |
| Welding time        | 1 to 3 msec  |
| Energy              | 2,400 Ws   |
| Charging voltage    | 50 to 220 V (stepless voltage regulation)  |
| Primary power       | 115 V, 50/60 Hz, 10 AT   |
| Power source        | Capacitor  |
| Cooling type        | F (temperature controlled cooling fan)   |
| IP-code             | IP 23  |
| Dimension L x W x H | 18.90" x 8.07" x 9.84"<br>(480 x 205 x 250 mm)<br>without handle   |
| Weight              | 37.48 lbs (17 kg)  |
| Order No            | 92-12-2302   |
| General Information |  |
| Application         | - Especially suitable for thin sheets (at least 0.5 mm)  |
| Process variants    | - Contact welding<br>- Gap welding   |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - CD

## CDI 3102 TECHNICAL DATA SHEET



### CDi 3102

Stud Welding Unit (with digital display)  
For CD stud welding (capacitor discharge welding)  
according to current standards

### Inverter-Capacitor Charging Technology

- Maximum welding rates
- Minimum energy consumption
- Minimum weight
- Maximum efficiency

| Technical Data      |   |
|---------------------|---|
| Welding range       | #4 to 7/16", dia. #4 to 3/8"<br>(M3 to M10, dia. 3 to 10 mm)  |
| Welding material    | Mild steel, stainless steel, aluminum and brass   |
| Welding rate        | M3 = 20 studs/min.<br>(Charging voltage 50 V)<br>M8 = 10 studs/min.<br>(Charging voltage 140 V)<br>M10 = 6 studs/min.<br>(Charging voltage 200 V) |
| Capacitance         | 132,000 µF  |
| Welding time        | 1 to 3 msec   |
| Energy              | 3,200 Ws  |
| Charging voltage    | 50 to 220 V (stepless voltage regulation)   |
| Primary power       | 115 V, 50/60 Hz, 10 AT  |
| Power source        | Capacitor   |
| Cooling type        | F (temperature controlled cooling fan)  |
| IP-code             | IP 23   |
| Dimension L x W x H | 18.90" x 8.07" x 9.84"<br>(480 x 205 x 250 mm)<br>without handle  |
| Weight              | 39.68 lbs (18 kg)   |
| Order No            | 92-12-3102  |
| General Information |   |
| Application         | - Especially suitable for thin sheets (at least 0.5 mm)   |
| Process variants    | - Contact welding<br>- Gap welding  |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - CD

## PEGASAR 500 ACCU - TECHNICAL DATA SHEET



### Pegasar 500 accu

Battery-powered stud welding unit  
For CD stud welding (capacitor discharge welding/  
contact welding) according to current standards

### Inverter-Capacitor Charging Technology

- Maximum welding rates
- Minimum energy consumption
- Minimum weight
- Maximum efficiency

| Technical Data                        |   |
|---------------------------------------|---|
| Welding range                         | Studs (mild steel, stainless steel): #4 to 1/4", dia. 1/8" to 1/4" (M3 to M6, dia. Ø 3 to 6 mm),<br>Studs (aluminum): #4 to #6, dia. 1/8" to 5/32" (M3 to M4, dia. 3 to 4 mm)   |
| Welding material                      | Mild steel, stainless steel, aluminum   |
| Welding rate                          | M3 = 40 studs/min. (Charging voltage 55 V)<br>M6 = 20 studs/min. (Charging voltage 95 V)  |
| Sheet thickness workpiece             | From 0.02" (0.5 mm)   |
| Capacitance                           | 100,000 µF  |
| Welding time                          | 1 to 3 ms   |
| Energy                                | 500 Ws  |
| Charging voltage                      | 50 to 100 V (stepless voltage regulation)   |
| Primary power                         | 100 V to 240 V, 50/60 Hz, 10 AT,<br>in battery operation: 25.55 V   |
| Ground cable                          | 8.2' (2.5 m), 25 mm <sup>2</sup> , 1 vice grip 10"<br>(not possible to extend),<br>(not included in delivery)   |
| Battery                               | 25.55 V / 5.7 Ah / 145.64 Wh (LiNiCoAlO <sub>2</sub> ) (not included in delivery)   |
| Number of weldings per battery charge | 400 welds M6  |
| Battery charging time                 | Max. 2.5 h  |
| Battery operating time                | At least 400 charging cycles  |
| Power source                          | Capacitor   |
| Cooling type                          | F (temperature controlled cooling fan)  |
| IP-code                               | With inserted battery: IP 44, without battery: IP 23  |
| Dimension L x W x H                   | 18.70" x 11.81" x 13.98"<br>(475 x 300 x 355 mm)<br>with handle   |
| Weight                                | 26.46 lbs (12 kg) incl. battery,<br>23.59 lbs (10.7 kg) without battery   |
| Suitable stud welding gun             | C 06-3, welding cable length 3 m (not possible to extend), (not included in delivery)   |
| Order No                              | 92-12-0500 (Pegasar 500 accu)<br><br>88-23-484 (Accu 150 – battery)<br>88-24-066 (ACCU CHARGER 150 - charging unit for battery type Accu 150)<br>92-40-154 (Ground cable)<br>92-20-275 (C 06-3 - stud welding gun)<br>92-40-050 (Accessories up to 6 mm - chucks M3 to M6, socket wrench)<br>92-40-118 (Accessories up to 1/4" - chucks #4, #6, #8, #10, 1/4", socket wrench) |

# Stud Welding Equipment - CD

## C 06-3 - TECHNICAL DATA SHEET



### C 06-3

Stud welding gun  
for CD stud welding (contact welding)  
according to current standards

| Technical Data             |   |
|----------------------------|---|
| Welding range              | #4 to 1/4", dia. 14 ga to 1/4"<br>(M3 to M6, dia. 2 to 6 mm),<br>depending on the used stud welding unit  |
| Stud length                | 0.24" to 1.57" (6 to 40 mm);<br>longer studs (> 40 mm) can be welded with optional accessories  |
| Stud material              | Depending on the used stud welding unit   |
| Stud type                  | Any type or shape<br>(special chucks if required)   |
| Sheet thickness workpiece  | From 0.02" (0.5 mm)   |
| Welding cable              | 9.84' (3 m)   |
| IP Code                    | IP 20   |
| Workplace noise level      | > 90 dB (A) may occur during welding  |
| Dimension L x W x H        | 6.70" x 1.57" x 5.51"<br>(170 x 40 x 140 mm)<br>without cable   |
| Weight                     | 1.10 lbs (0.5 kg) without cable   |
| Suitable stud welding unit | Pegasar 500 accu  |
| Order No                   | 92-20-275 (C 06-3)<br><br>92-40-050 (Accessories up to<br>6 mm – chucks M3 to M6, socket wrench)<br>92-40-118 (Accessories up to 1/4" –<br>chucks #4, #6, #8, #10, 1/4", socket wrench)<br>92-12-0500<br>(Pegasar 500 accu – stud welding unit) |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - CD

## CI 03 STUD WELDING GUN (FOR INSULATION)



### CI 03

Stud Welding Gun (for insulation)  
for CD stud welding  
according to current standards

| Technical Data  |  |
|---|--|
| Welding range   | Cupped head pins dia. 14 ga/12 ga<br>(dia. 2/2.7 mm)                     |
| Pin length  | 0.37" to 6.00" (9.5 to 152.4 mm)   |
| Pin material  | Mild steel, stainless steel  |
| Pin type  | Cupped head pins   |
| Spring pressure   | Adjustable, arresting  |
| Welding cable   | 32.81' (10 m)  |
| IP Code   | IP 20  |
| Workplace noise level   | > 90 dB (A) may occur during welding                                     |
| Dimension L x W x H   | 6.89" x 1.97" x 5.71"<br>(175 x 50 x 145 mm)<br>without cable and tripod |
| Weight  | 1.54 lbs (0.7 kg) without cable and tripod                               |
| Order No  | 92-20-254  |
| General Information   |  |
| <p>Application</p> <ul style="list-style-type: none"> <li>• Especially suitable for thin sheets (at least 0.5 mm)</li> <li>• ISO – especially suitable for welding on cupped head pins (for fixing heating, ventilation and air-conditioning mats - HVAC)</li> <li>• Especially suitable for insulation mats with and without aluminum cover. The cupped head pin has a special tip which permits particularly easy penetration of the insulation materials. Variably adjustable spring pressure allows the stud welding gun to be optimally adjusted to a wide range of material densities</li> <li>• The fixing method with cupped head pins replaces the complex procedure: weld on pin – press mat over pin – affix clip – pinch off or bend over projecting tip</li> </ul> |  |
| <p>Process variants</p> <ul style="list-style-type: none"> <li>• Contact welding</li> </ul>   |  |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - CD

## C 08 STUD WELDING GUN



### C 08

Stud Welding Gun  
for CD stud welding  
according to current standards

| Technical Data                     |  |
|------------------------------------|--|
| Welding range                      | #4 to 5/16", dia. 14 ga to 5/16"<br>(M3 to M8, dia. 2 to 8 mm)<br>other dimensions on request  |
| Stud length                        | 0.24" to 1.57" (6 to 40 mm);<br>longer studs can be welded with optional accessories   |
| Stud material                      | Mild steel, stainless steel  |
| Stud type                          | Any type or shape (special chucks if required)   |
| Spring pressure                    | Adjustable, arresting  |
| Welding cable                      | 21.33' (6.5 m)   |
| IP-Code                            | IP 20  |
| Workplace noise level              | > 90 dB (A) may occur during welding process   |
| Dimension LxWxH<br>(without cable) | 6.70" x 1.57" x 5.51"<br>(170 x 40 x 140 mm)<br>without cable  |
| Weight                             | 1.10 lbs (0.5 kg) without cable  |
| Order No.                          | 92-20-256  |
| General Information                |  |
| Application                        | <ul style="list-style-type: none"><li>• Especially suitable for thin sheets (at least 0.5 mm)</li><li>• ISO – especially suitable for welding on insulation pins with flange and ignition tip</li></ul>  |
| Process variants                   | <ul style="list-style-type: none"><li>• Contact welding</li></ul>  |
| Advantages                         |  |
| Structure                          | <ul style="list-style-type: none"><li>• Rigid casing made of impact-resistant plastic</li><li>• Torsion-resistant basic shell (casing) to accommodate all function elements (e.g. ball bearing guide) and accessories (e.g. foot ring)</li><li>• Zero-play ball linear bearing for guiding the welding piston</li><li>• Sealed welding piston guidance</li><li>• Ergonomic design</li><li>• Compact dimensions</li><li>• Stud length freely adjustable (up to 40 mm; from 40 mm with tripod)</li><li>• Mechanical structure tested in production</li></ul> |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - CD

## CA 08 STUD WELDING GUN



### CA 08

Stud Welding Gun  
for CD and Arc stud welding  
according to current standards

| Technical Data                     |  |
|------------------------------------|--|
| Welding range                      | #4 to 5/16", dia. 14 ga to 5/16" (M3 to M8, dia. 2 to 8 mm) other dimensions on request  |
| Stud length                        | 0.24" to 1.57" (6 to 40 mm); longer studs can be welded with optional accessories  |
| Stud material                      | Mild steel, stainless steel, aluminum, brass   |
| Stud type                          | Any type or shape (special chucks if required)   |
| Stroke                             | Adjustment range 0.18" (4.5 mm), lockable  |
| Spring pressure                    | Adjustable, arresting  |
| Welding cable                      | 9.84' (3 m)  |
| IP-Code                            | IP 20  |
| Workplace noise level              | > 90 dB (A) may occur during welding process   |
| Dimension LxWxH<br>(without cable) | 7.48" x 1.57" x 5.51"<br>(190 x 40 x 140 mm)<br>without cable  |
| Weight                             | 1.54 lbs (0.7 kg) without cable  |
| Order No.                          | 92-20-255  |
| General Information                |  |
| Application                        | <ul style="list-style-type: none"><li>• Especially suitable for thin sheets (at least 0.5 mm)</li><li>• ISO – especially suitable for welding on insulation pins with flange and ignition tip</li></ul>  |
| Process variants                   | <ul style="list-style-type: none"><li>• Gap welding</li><li>• Short cycle drawn arc welding</li></ul>  |
| Advantages                         |  |
| Structure                          | <ul style="list-style-type: none"><li>• Rigid casing made of impact-resistant plastic</li><li>• Torsion-resistant basic shell (casing) to accommodate all function elements (e.g. ball bearing guide) and accessories (e.g. foot ring)</li><li>• Zero-play ball linear bearing for guiding the welding piston</li><li>• Sealed welding piston guidance</li><li>• Ergonomic design</li><li>• Compact dimensions</li><li>• Stud length freely adjustable (up to 40 mm; from 40 mm with tripod)</li><li>• Mechanical structure tested in production</li></ul> |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - Arc

## VISAR 650 – TECHNICAL DATA SHEET



### Visar 650

Stud welding unit  
For Arc stud welding  
(short cycle drawn arc welding  
(BH 10), drawn arc welding (BH 100))  
according to current standards

### Inverter-Capacitor Charging Technology

- Maximum welding rates
- Minimum energy consumption
- Minimum weight
- Maximum efficiency

| Technical Data            |  |
|---------------------------|--|
| Welding range             | BH 100: dia. 1/4 ga to 5/16" (dia. 2 to 8 mm),<br>#4 to 3/8" (M3 to M10) (type RD)<br>BH 10: dia. 1/4 ga to 1/4" (dia. 2 to 6 mm),<br>#4 to 1/4" (M3 to M6)  |
| Welding material          | Mild steel, stainless steel  |
| Welding rate              | M3 = 40 studs/min<br>M8 = 12 studs/min   |
| Welding current           | 650 A (max.)   |
| Current adjustment range  | 100 to 650 A   |
| Welding time              | 5 to 200 ms (stepless)   |
| Primary power             | 100 to 240 V, 1 phase, 50/60 Hz, 16 AT   |
| Primary plug              | 2-pin grounded safety plug   |
| Connected load            | 3 kVA  |
| Cooling type              | F (temperature controlled cooling fan)   |
| IP-code                   | IP 44  |
| Dimension L x W x H       | 18.66" x 13.27" x 13.82"<br>(474 x 337 x 351 mm)<br>with handle  |
| Weight                    | 39.68 lbs (18 kg)  |
| Suitable stud welding gun | A 12, welding cable length 15.91' (4.8 m) (not possible to extend),  |
| Order No                  | 93-66-0650 (Visar 650)<br>93-40-020 (Ground cable)<br>93-20-270 (A 12 – Stud welding gun)<br>93-40-022 (PSC-1 – Ceramic leg assembly)<br>88-24-466 (Toolbag) |

(Technical data may change)



6381 Windfern Road, Houston, TX 77040 **website** [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) **email** [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
**telephone** 1.800.462.9353 - Houston 713.939.8903 **fax** 713.939.9013



# Stud Welding Equipment - Arc

## VISAR 650 | VISAR 650 (SHIELD GAS VERSION)

### VISAR 650



- Robust inverter unit with single-phase mains connection (100 to 240 V)
- Compact lightweight unit (18 kg) with high protection class (IP 44)
- Current setting range from 25 to 650 A

M3 to M10 (type RD) - #4 to 7/16" (type RD)

### VISAR 650 (SHIELD. GAS VERSION)



Further development:

- with display and shielding gas connection
- USB port for saving and loading welding programs
- Comprehensive customer-specific setting options as well as detailed process optimisation and control

M3 to M10 (type RD) - #4 to 7/16" (type RD)

|   |  |        |         |                    |  |        |         |         |
|---|--|--------|---------|--------------------|--|--------|---------|---------|
| Welding process                             | Arc = Drawn arc stud welding,<br>SC = Short cycle stud welding   |        |         |                    | Arc = Drawn arc stud welding,<br>SC = Short cycle stud welding   |        |         |         |
| Welding material                            | Mild Steel - Stainless Steel   |        |         |                    | Mild Steel - Stainless Steel - Aluminum<br><sup>1)</sup> Welding element is not standardized according to DIN EN ISO 13918, but manufactured by the manufacturer's discretion. The welding parameters should be determined by test weldings. |        |         |         |
| Technology                                  | Inverter   |        |         |                    | Inverter   |        |         |         |
| Equipment                                   | x  |        |         |                    | x  |        |         |         |
| Welding with ceramic ferrule                | --   |        |         |                    | x  |        |         |         |
| Welding with shielding gas                  | --   |        |         |                    | x  |        |         |         |
| Process control                             | --   |        |         |                    | x  |        |         |         |
| Display                                     | --   |        |         |                    | Digital  |        |         |         |
| Welding range                               | Arc: M3 to M10 (type RD), dia. 2 to 8 mm /<br>#4 to 7/16" (type RD), dia. 14 ga to 5/16"<br>SC: M3 to M6, dia. 2 to 6 mm<br>#4 to 1/4", dia. 14 ga to 1/4" |        |         |                    | Arc: M3 to M10 (type RD), dia. 2 to 8 mm /<br>#4 to 7/16" (type RD), dia. 14 ga to 5/16"<br>SC: M3 to M6, dia. 2 to 6 mm<br>#4 to 1/4", dia. 14 ga to 1/4"   |        |         |         |
| Welding rate<br>(Duty cycle <sup>2)</sup> ) | 25 °C  | 100 %  | 50 %    | 35 %               | 25 °C  | 100%   | 50%     | 35%     |
|   | F  | 8/min. | 14/min. | 18/min.            | F  | 8/min. | 14/min. | 18/min. |
|   | [studs/<br>min]  |        |         |                    | [studs/<br>min]  |        |         |         |
|   | τ [ms]   | 160    | 160     | 160                | τ [ms]   | 160    | 160     | 160     |
|   | I <sub>2</sub> [A]   | 650    | 650     | 650                | I <sub>2</sub> [A]   | 650    | 650     | 650     |
| U <sub>2</sub> [V]                          | 30   | 30     | 30      | U <sub>2</sub> [V] | 30   | 30     | 30      |         |

2) 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.

100 % duty cycle = 10 min. of continuous welding, no shutdown due to over-temperature.

50 % duty cycle = 5 min. of welding followed by 5 min. pause.

35 % duty cycle = 3.5 min. of welding followed by 6.5 min. pause.

(continued on next page)

# Stud Welding Equipment - Arc

## VISAR 650 | VISAR 650 (SHIELD GAS VERSION) - (CONTINUED)

### VISAR 650



- Robust inverter unit with single-phase mains connection (100 to 240 V)
- Compact lightweight unit (18 kg) with high protection class (IP 44)
- Current setting range from 25 to 650 A

M3 to M10 (type RD) - #4 to 7/16" (type RD)

### VISAR 650 (SHIELD. GAS VERSION)



- Further development:
- with display and shielding gas connection
  - USB port for saving and loading welding programs
  - Comprehensive customer-specific setting options as well as detailed process optimization and control

M3 to M10 (type RD) - #4 to 7/16" (type RD)

|                                  |  |  |
|----------------------------------|--|--|
| Welding current                  | 650 A (max.)   | 650 A (max.)   |
| Current adjustment range         | 25 - 650 A   | 25 - 650 A   |
| Welding time                     | 5 - 200 ms (stepless)  | 5 - 200 ms (stepless)  |
| Primary power                    | 100 - 240 V, 1 phase, 50/60 Hz, 16 AT  | 100 - 240 V, 1 phase, 50/60 Hz, 16 AT  |
| Primary plug                     | 16 A, 2-pin grounded safety plug (plug type F; CEE 7/4)  | 16 A, 2-pin grounded safety plug (plug type F; CEE 7/4)  |
| Connected load                   | 3 kVA  | 3 kVA  |
| Cooling type                     | F (temperature controlled cooling fan)   | F (temperature controlled cooling fan)   |
| IP Code                          | IP 44  | IP 44  |
| Dimension LxWxH (without handle) | 474 x 337 x 351 mm / 18.66" x 13.27" x 13.82"  | 474 x 337 x 351 mm / 18.66" x 13.27" x 13.82"  |
| Weight                           | 18 kg / 40 lbs   | 18 kg / 40 lbs   |
| Suitable guns                    | A 12, A 12-FL (welding cable not possible to extend)   | A 12, A 12-FL (welding cable not possible to extend)   |
| Order No.                        | 93-60-0650 (Plug E+F; Europe + China)<br>93-66-0650 (Plug B; USA, Canada + China)<br><br>93-40-020 (Ground cable, 5 m, 25 mm <sup>2</sup> , 2 vice grips 10")<br>88-24-466 (Toolbag)<br>(Accessories and welding gun are not included) | 93-60-0652 (Plug E+F; Europe + China)<br>93-66-0652 (Plug B; USA, Canada + China)<br><br>93-40-020 (Ground cable, 5 m, 25 mm <sup>2</sup> , 2 vice grips 10")<br>88-24-466 (Toolbag)<br>(Accessories and welding gun are not included) |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - Arc

## ARC 800 STUD WELDING UNIT



### ARC 800

Stud Welding Unit  
for Arc stud welding  
according to current standards

| Technical Data      |  |
|---------------------|--|
| Gas/Automation      | Series/Option  |
| Welding range       | #4 to 1/2", dia. 14 ga to 3/8"<br>(M3 to MR12, dia. 2 to 10 mm)  |
| Welding material    | Mild steel, stainless steel  |
| Welding rate        | 7 to 17 studs/min<br>(depending on application and stud dia.)  |
| Welding current     | 800 A  |
| Welding time        | 5 to 1,000 msec  |
| Primary power       | 230/460 V 3 phases, 50/60 Hz, 50/35 AT or<br>575 V, 3 phases, 50/60 Hz, 25 AT<br>(alternative input voltages available)  |
| Power source        | Transformer/Rectifier  |
| Cooling type        | F (temperature controlled cooling fan)   |
| IP-code             | IP 23  |
| Dimension L x W x H | 18.50" x 9.06" x 8.66"<br>(470 x 230 x 220 mm)<br>without handle   |
| Weight              | 81.57 lbs (37 kg)  |
| Order No            | 93-16-0702A (Gas)<br>93-15-0702A (Gas)<br>93-16-0704A (Gas/Automation)<br>93-15-0704A (Gas/Automation)   |
| General Information |  |
| Application         | <ul style="list-style-type: none"> <li>Especially suitable for thicker sheets of about 2 mm or higher</li> </ul>   |
| Process variants    | <ul style="list-style-type: none"> <li>Short cycle drawn arc welding</li> <li>Drawn arc welding</li> </ul>   |
| Equipment           | <ul style="list-style-type: none"> <li>Welding with ceramic ferrule (series)</li> <li>Welding with shielding gas (series)</li> <li>Automatic (optional)</li> </ul> |



6381 Windfern Road, Houston, TX 77040 **website** [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) **email** [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
**telephone** 1.800.462.9353 - Houston 713.939.8903 **fax** 713.939.9013

# Stud Welding Equipment - Arc

## IT 1002 STUD WELDING UNIT



### IT 1002

Stud Welding Unit for Arc stud welding according to current standards

### Inverter

- Maximum welding quality
- Maximum welding rates
- Minimum energy consumption
- Minimum weight
- Maximum efficiency

| Technical Data                 |  |
|--------------------------------|--|
| Gas/Automation/Process control | Series/Option/Option   |
| Welding range                  | #4 to 5/8", dia. 14 ga to 9/16"<br>(M3 to MR16, dia. 2 to 14 mm)   |
| Welding material               | Mild steel, Stainless steel, Aluminum  |
| Welding rate                   | 1/2" (M12) = 25 studs/min  |
| 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                  | 480/460V, 3 phases, 50/60 Hz, 35 AT (alternative input voltages available)   |
| Connected load                 | 50 KVA (with 400V mains), 40 kW  |
| Cooling type                   | F (temperature controlled cooling fan)   |
| IP-code                        | IP 23  |
| Dimension L x W x H            | 26" x 11" x 13.4"<br>(660 x 280 x 340 mm) without handle   |
| Weight                         | 63.9 lbs (29 kg)   |
| Order No                       | 93-66-1202 (Gas)<br>93-66-1204 (Gas/Automation)<br>93-66-1206 (Gas/Automation/Process control)   |
| General Information            |  |
| Application                    | <ul style="list-style-type: none"> <li>• Especially suitable for thicker sheets of about 2 mm or higher</li> </ul>   |
| Process variants               | <ul style="list-style-type: none"> <li>• Short cycle drawn arc welding</li> <li>• Drawn arc welding</li> </ul>   |
| Equipment                      | <ul style="list-style-type: none"> <li>• Welding with ceramic ferrule (series)</li> <li>• Welding with shielding gas (series)</li> <li>• Automation (optional)</li> <li>• Process sequence control (optional)</li> </ul> |



6381 Windfern Road, Houston, TX 77040 **website** [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) **email** [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
**telephone** 1.800.462.9353 - Houston 713.939.8903 **fax** 713.939.9013

# Stud Welding Equipment - Arc

## VISAR 1200

- 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 optimisation and control



M3 to M16 - #4 to 5/8"

|  |   |       |      |      |
|--|---|-------|------|------|
| Welding process  | Arc = Drawn arc stud welding,<br>SC = Short cycle stud welding  |       |      |      |
| Welding material   | Mild Steel - Stainless Steel - Aluminium<br><sup>1)</sup> Welding element is not standardized according to DIN EN ISO 13918, but manufactured by the manufacturer's discretion. The welding parameters should be determined by test weldings. |       |      |      |
| Technology   | Inverter  |       |      |      |
| Equipment  |   |       |      |      |
| Welding with ceramic ferrule   | x   |       |      |      |
| Welding with shielding gas   | x   |       |      |      |
| Process control  | x   |       |      |      |
| Display  | Digital   |       |      |      |
| Welding range  | M3 to M16, dia. 2 to 16 mm /<br>#4 to 5/8", dia. 14 ga to 9/16"   |       |      |      |
| Welding rate<br>(Duty cycle <sup>2)</sup> )  | 25 °C   | 100 % | 50 % | 35 % |
|  | F [studs/min]   | 11    | 16   | 21   |
|  | t [ms]  | 600   | 600  | 600  |
|  | I <sub>2</sub> [A]  | 1200  | 1200 | 1200 |
|  | U <sub>2</sub> [V]  | 30    | 30   | 30   |
| <sup>2)</sup> 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.<br>100 % duty cycle = 10 min. of continuous welding, no shutdown due to overtemperature.<br>50 % duty cycle = 5 min. of welding followed by 5 min. pause.<br>35 % duty cycle = 3.5 min. of welding followed by 6.5 min. pause. |   |       |      |      |
| Welding current  | 1 200 A (max.) at 50 V  |       |      |      |
| Current adjustment range   | 25 to 1 200 A (stepless)  |       |      |      |
| Welding time   | 5 to 1 500 ms (stepless)  |       |      |      |
| Primary power  | 200 to 600 V, 3 phases, 50/60 Hz  |       |      |      |
| Cooling type   | F (temperature controlled cooling fan)  |       |      |      |
| IP Code  | IP 43   |       |      |      |
| Dimension LxWxH (without handle)   | 472.5 x 355 x 358 mm / 18.60" x 13.98" x 14.09"   |       |      |      |
| Weight   | 20.5 kg / 45 lbs  |       |      |      |
| Suitable guns  | A 12, A 12-FL, A 16   |       |      |      |
| Order No.  | 93-60-0120 (Europe + China)<br>93-66-0120 (USA, Canada + China)<br>93-40-020 (Ground cable, 5 m, 25 mm <sup>2</sup> , 2x 10" vice grip)<br>88-24-466 (Toolbag)<br>(Accessories and welding gun are not included)                              |       |      |      |

# Stud Welding Equipment - Arc

## IT 2002 STUD WELDING UNIT



### IT 2002

Stud Welding Unit  
for Arc stud welding  
according to current standards

### Inverter

- Maximum welding quality
- Maximum welding rates
- Minimum energy consumption
- Minimum weight
- Maximum efficiency

| Technical Data   |  |
|--|--|
| Gas  | Option   |
| Welding range  | #4 to 1", dia. 14 ga to 1"<br>(M3 to M24, dia. 2 to 25 mm)                     |
| Welding material   | Mild steel, Stainless steel, Aluminum  |
| Welding rate   | Dia. 7/8" = 7 studs/min<br>(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<br>(alternative input voltages available) |
| Connected load   | 100 KVA (with 400 V mains), 80 kW  |
| Cooling type   | F (temperature controlled cooling fan)   |
| IP-code  | IP 23  |
| Dimension L x W x H  | 23.6" x 19.7" x 32.7"<br>(600 x 500 x 830 mm)<br>without handle                |
| Weight   | 209.4 lbs (95 kg)  |
| Order No   | 93-66-2201<br>93-66-2202 (Gas)   |
| General Information  |  |
| <b>Application</b> <ul style="list-style-type: none"> <li>• Especially suitable for thicker sheets of about 2 mm or higher</li> <li>• Especially suitable for welding of concrete anchors/shear connectors for job site applications</li> <li>• Suitable for through deck welding</li> </ul> |  |
| <b>Process variants</b> <ul style="list-style-type: none"> <li>• Short cycle drawn arc welding</li> <li>• Drawn arc welding</li> </ul>   |  |
| <b>Equipment</b> <ul style="list-style-type: none"> <li>• Welding with ceramic ferrule (series)</li> <li>• Welding with shielding gas (series)</li> </ul>  |  |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - Arc

## IT 3002 STUD WELDING UNIT



### IT 3002

Stud Welding Unit  
for Arc stud welding  
according to current standards

### Inverter

- Maximum welding quality
- Maximum welding rates
- Minimum energy consumption
- Minimum weight
- Maximum efficiency

| Technical Data  |   |
|---|---|
| Gas   | Option  |
| Welding range   | #4 to 1", dia. 14 ga to 1"<br>(M3 to M24, dia. 2 to 25 mm)  |
| Welding material  | Mild steel, Stainless steel, Aluminum   |
| Welding rate  | Dia. 1" = 6 studs/min<br>(dia. 25 mm = 6 studs/min)<br>Through deck welding<br>3/4" = 12 studs/min (300 feet, AWG 4/0)<br>Industrial application<br>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   | 480/460V, 3 phases, 50/60 Hz, 125 AT<br>(alternative input voltages available)  |
| Connected load  | 150 KVA (with 400V mains), 120 kW   |
| Cooling type  | F (temperature controlled cooling fan)  |
| IP-code   | IP 23   |
| Dimension L x W x H   | 25.6" x 22" x 50.8"<br>(650 x 560 x 1,290 mm)<br>without handle   |
| Weight  | 93-66-3211: 352.74 lbs (160 kg)<br>93-66-3221: 394.63 lbs (179 kg)  |
| Order No  | 93-66-3211 (1 Gun connection)<br>93-66-3221 (2 Gun connections)   |
| General Information   |   |
| Application <ul style="list-style-type: none"> <li>• Especially suitable for thicker sheets of about 2 mm or higher</li> <li>• Especially suitable for welding of concrete anchors/shear connectors for job site applications</li> <li>• Suitable for through deck welding</li> </ul> |   |
| Process variants <ul style="list-style-type: none"> <li>• Short cycle drawn arc welding</li> <li>• Drawn arc welding</li> </ul>   |   |
| Equipment <ul style="list-style-type: none"> <li>• Welding with ceramic ferrule (series)</li> </ul>   |   |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - Arc

## A 12 STUD WELDING GUN



### A 12

Stud Welding Gun  
for Arc stud welding  
according to current standards

| Technical Data   |   |
|--|---|
| Welding range  | #4 to 1/2", dia. 14 ga to 1/2"<br>(M3 to M12, dia. 2 to 12 mm)  |
| Stud length  | 0.39" to 15.74" (10 to 400 mm) depending on tripod  |
| Stud material  | Mild steel, Stainless steel   |
| Stud type  | Any type or shape<br>(special chucks if required)   |
| Length compensation  | 0.12" (3 mm) automatic  |
| Stroke Adjustment range  | 0.12" (3 mm), lockable  |
| Spring pressure  | Adjustable, arresting   |
| Welding cable  | 16.40' (5 m)  |
| IP-code  | IP 20   |
| Workplace noise level  | Up to 90 dB (A) may occur during welding  |
| Dimension L x W x H  | 7.87" x 2.56" x 5.51" (200 x 65 x 140 mm)<br>without cable, with foot piece   |
| Weight   | 1.76 lbs (0.8 kg) without cable and tripod  |
| Order No   | 93-20-270 (gun including foot piece)<br>93-40-021 (tripod gas complete)<br>93-40-022 (tripod ceramic ferrule (CF) complete) |
| General Information  |   |
| <b>Application</b> <ul style="list-style-type: none"> <li>• Especially suitable for thicker metal sheets from approx. 2 mm</li> <li>• ISO – especially suitable for welding on ARC-ISO and Fiberfix pins</li> <li>• Automatic compensation of length tolerance of welding elements through integrated length adjustment</li> </ul> |   |
| <b>Process variants</b> <ul style="list-style-type: none"> <li>• Short cycle drawn arc welding</li> <li>• Drawn arc welding with ceramic ring or shielded gas</li> </ul>   |   |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013



# Stud Welding Equipment - Arc

## A 16 STUD WELDING GUN (DAMPED)



### A 16

Stud Welding Gun (damped)  
for Arc stud welding  
according to current standards

| Technical Data  |  |
|---|--|
| Welding range   | Dia. #4 to 5/8" (dia. 3 to 16 mm)  |
| Stud length   | 0.39" to 9.45" (10 to 240 mm) depending on tripod                            |
| Stud material   | Mild steel, Stainless steel  |
| Stud type   | Any type or shape<br>(special chucks if required)                            |
| Length compensation   | 0.24" (6 mm) automatic   |
| Stroke Adjustment range   | 0.16" (4 mm),<br>(0.01" (0.25 mm) steps, arresting)                          |
| Damping   | Adjustable oildamper   |
| Welding cable   | 15.91', 1/0 (4.85 m, 50 mm <sup>2</sup> )                                    |
| IP-code   | IP 20  |
| Workplace noise level   | Up to 90 dB (A) may occur during welding                                     |
| Dimension L x W x H   | 10.24" x 2.91" x 8.66" (260 x 74 x 220 mm)<br>without cable, with foot piece |
| Weight  | 4.41 lbs (2 kg) without cable  |
| Order No  | 93-21-280  |
| General Information   |  |
| <b>Application</b> <ul style="list-style-type: none"> <li>• Especially suitable for thicker metal sheets from approx. 2 mm</li> <li>• Automatic compensation of length tolerance of welding elements through integrated length adjustment</li> </ul>  |  |
| <b>Process variants</b> <ul style="list-style-type: none"> <li>• Short cycle drawn arc welding</li> <li>• Drawn arc welding with ceramic ring or shielded gas</li> </ul>  |  |
| Advantages  |  |
| <b>Structure</b> <ul style="list-style-type: none"> <li>• Rigid casing made of impact-resistant plastic</li> <li>• Slide bearing for guiding the welding piston</li> <li>• Sealed welding piston guidance</li> <li>• Ergonomic design</li> <li>• Compact dimensions</li> <li>• Lift adjustment</li> <li>• Stud length freely adjustable</li> <li>• Mechanical structure tested in production</li> </ul> |  |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - Arc

## A 22 STUD WELDING GUN (DAMPED)



### A 22

Stud Welding Gun (damped)  
for Arc stud welding  
according to current standards

| Technical Data          |  |
|-------------------------|--|
| Welding range           | Dia. 9/16" to 7/8" (dia. 1") (dia. 14 to 22 mm (dia. 25 mm))   |
| Stud length             | 0.39" to 15.35" (10 to 390 mm) depending on tripod   |
| Stud material           | Mild steel, Stainless steel  |
| Stud type               | Any type or shape (special chucks if required)   |
| Length compensation     | 0.35" (9 mm) automatic   |
| Stroke Adjustment range | 0.24" (6 mm), (0.01" (0.25 mm) steps, arresting)   |
| Damping                 | Adjustable oil damper  |
| Welding cable           | 15.91', 3/0 (4.85 m, 95 mm <sup>2</sup> )  |
| IP-code                 | IP 20  |
| Workplace noise level   | Up to 90 dB (A) may occur during welding   |
| Dimension L x W x H     | 10.24" x 2.91" x 8.66"<br>(260 x 74 x 220 mm)<br>without cable, with foot piece  |
| Weight                  | 4.41 lbs (2 kg) without cable  |
| Order No                | 93-21-290  |
| General Information     |  |
| Application             | <ul style="list-style-type: none"> <li>• Especially suitable for thicker metal sheets from approx. 2 mm</li> <li>• Especially suitable for through deck welding</li> <li>• Automatic compensation of length tolerance of welding elements through integrated length adjustment</li> </ul>  |
| Process variants        | <ul style="list-style-type: none"> <li>• Drawn arc welding with ceramic ring</li> </ul>  |
| Advantages              |  |
| Structure               | <ul style="list-style-type: none"> <li>• Rigid casing made of impact-resistant plastic</li> <li>• Slide bearing for guiding the welding piston</li> <li>• Sealed welding piston guidance</li> <li>• Ergonomic design</li> <li>• Compact dimensions</li> <li>• Lift adjustment</li> <li>• Stud length freely adjustable</li> <li>• Mechanical structure tested in production</li> <li>• Reduced heating of the stud welding gun body thanks to externally positioned welding current cable</li> </ul> |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - ARC

## A 12 M - NUT & STUD WELDING GUN



### A 12 M

For welding on weld nuts type Hex<sup>Nut</sup>

For welding on perforated and unperforated sheet metal

Particularly suitable for workshop and assembly areas

| Technical Data            |   |
|---------------------------|---|
| Welding range             | MARC welding nuts type HexNut M6 to M12<br>Hexagon nuts DIN 934 M6 to M12<br>SC welding elements M5 to M10, dia. 5 to 8 mm / 3/16" to 3/8", dia. 3/16" to 5/16"<br>CD welding elements M5 to M10, dia. 5 to 8 mm / 3/16" to 3/8", dia. 3/16" to 5/16"                           |
| Sheet metal thickness     | Nut welding: 1 to 3 mm / 0.04" to 0.12"<br>Stud welding: min. 1 mm / min. 0.04"<br>(other sheet thicknesses on request)   |
| Welding elements material | MARC welding nuts type HexNut: Stainless steel (A2-50)<br>Hexagon nuts DIN 934: Stainless steel (A2-50,-70 / A4-50,-70, A5-50,-70)<br>SC welding elements: Mild steel, stainless steel, type PT / UT / IT<br>CD welding elements: Mild steel stainless steel, type PS / US / IS |
| Welding elements type     | MARC welding nuts type HexNut, hexagon nuts according to DIN 934<br>SC welding elements and CD welding elements according to DIN EN ISO 13918   |
| Welding sequence          | Up to 4 weld nuts/min.<br>The maximum welding sequence is limited by a large number of parameters.  |
| Length compensation       | 3 mm / 0.12", automatic   |
| Lift                      | Adjustment range 3 mm / 0.12", arresting  |
| Spring force              | Adjustable, arresting   |
| Welding cable             | Welding gun: 4.85 m connecting cable, 35 mm <sup>2</sup><br>1.73 m field former cable, 10 mm <sup>2</sup> (0.61 m welding current connection, 0.85 m control cable connection)<br>Ground cable: 5 m, 25 mm <sup>2</sup>   |
| Workplace noise level     | Up to 90 dB (A) may occur during welding  |
| Dimension L x W x H       | 200 x 65 x 140 mm / 7.87" x 2.56" x 5.51" (without cable, with leg assembly)<br>Shielding gas leg assembly D = 60 mm<br>Protective hose L = 4300 mm   |
| Weight                    | 0.8 kg / 1.76 lbs (without cable)   |
| General Information       |   |
| Design                    | <ul style="list-style-type: none"> <li>• Robust housing made of impact resistant plastic</li> <li>• Backlash-free ball linear bearing for guiding the welding piston</li> <li>• Sealed welding piston guide</li> <li>• Integrated lift and spring force adjustment</li> </ul>   |
| Safety                    | <ul style="list-style-type: none"> <li>• Locking spring adjustment</li> <li>• High safety against unintentional change of selected settings</li> <li>• Guide protected against welding spatter</li> </ul>   |
| Welding                   | <ul style="list-style-type: none"> <li>• Automatic length compensation</li> </ul>   |

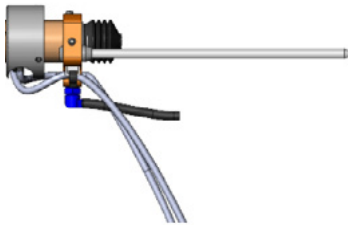
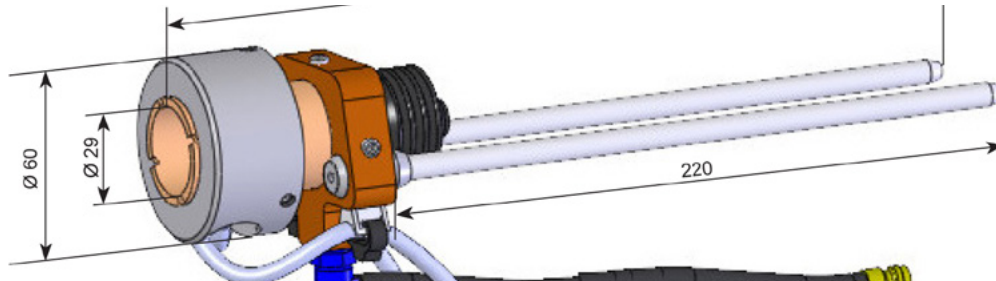


6381 Windfern Road, Houston, TX 77040 **website** [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) **email** [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
**telephone** 1.800.462.9353 - Houston 713.939.8903 **fax** 713.939.9013

# Stud Welding Equipment - ARC

## A 12 M - NUT & STUD WELDING GUN

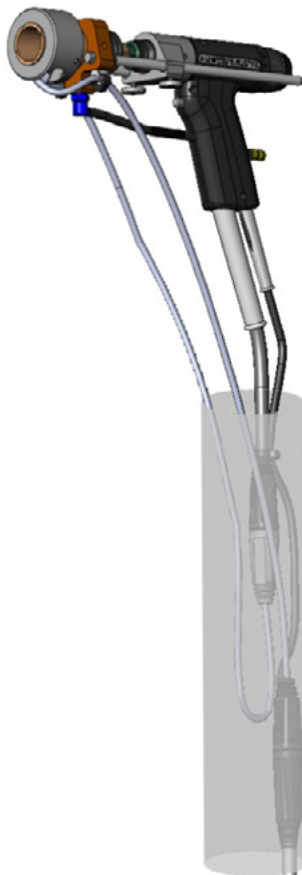
Equipment for A 12 M



Shielding gas leg assembly with field former

D = 60,  
Legs 8 x 220  
With shielding gas connection

Order number: 88-26-880



Protective hose for A 12 M to protect the welding cables and the field former cable from dirt, dust and welding sparks

Length: 430 cm  
Width: 13.5 cm

Order number: 80-10-2769



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - Arc

## MARC NUT WELDING SYSTEM

### Nut welding systems for welding with magnetic rotating arc

- For welding of welding nuts of type Hex<sup>Nut</sup>
- For welding on perforated and unperforated metal sheets
- Especially suitable for workshop and assembly area
- Up to 4 welding nuts/min



Nut and Stud Welding Gun - A 12 M



Stud Welding Unit - IT 1002

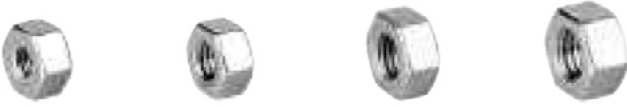
|                            | Nuts M6 to M12 - Studs M5 to M10 / 3/16" to 3/8   |
|----------------------------|---|
| Suitable stud welding unit | IT 1002   |
| Welding process            | Drawn arc welding with magnetically impelled electric arc and shielding gas   |
| Welding range              | MARC welding nuts type HexNut M6 to M12<br>Hexagon nuts DIN 934 M6 to M12<br>SC welding elements M5 to M10, dia. 5 to 8 mm / 3/16" to 3/8", dia. 3/16" to 5/16"<br>CD welding elements M5 to M10, dia. 5 to 8 mm / 3/16" to 3/8", dia. 3/16" to 5/16"   |
| Wall thickness             | Nut welding: 1 to 3 mm / 0.04" to 0.12"<br>Stud welding: min. 1 mm / min. 0.04"<br>(other sheet thicknesses on request)   |
| Welding element material   | MARC welding nuts type HexNut: Stainless steel (A2-50)<br>Hexagon nuts DIN 934: Stainless steel (A2-50,-70 / A4-50,-70, A5-50,-70)<br>SC welding elements: Mild steel, stainless steel, type PT / UT / IT<br>CD welding elements: Mild steel stainless steel, type PS / US / IS                         |
| Welding element type       | MARC welding nuts type HexNut, hexagon nuts according to DIN 934<br>SC welding elements and CD welding elements according to DIN EN ISO 13918   |
| Welding rate               | Nut welding: up to 4 welding nuts/min.<br>Stud welding: M10 = 25 studs/min<br>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              | Welding gun: 4.85 m connecting cable, 35 mm <sup>2</sup><br>1.73 m field former cable, 10 mm <sup>2</sup> (0.61 m welding current connection, 0.85 m control cable connection)<br>Ground cable: 5 m, 25 mm <sup>2</sup>   |
| IP Code                    | IT 1002: IP 23, A 12 M: IP 20   |
| Workplace noise level      | Up to 90dB (A) may occur during welding   |
| Dimension LxWxH            | 200 x 65 x 140 mm / 7.87" x 2.56" x 5.51" (without cable, with leg assembly)<br>Shielding gas leg assembly D = 60 mm<br>Protective hose L = 4300 mm   |
| Weight                     | 0.8 kg / 1.76 lbs (without cable)   |
| Order No.                  | 93-20-242 (Welding gun AM 12A)<br>93-60-1202 (Welding unit IT 1002)<br>93-40-020 (Ground cable, 5m 25 mm <sup>2</sup> , 2 vice grips 10")<br>Complete equipment for AM 12 A:<br>93-40-0030068 for HexNut M6<br>93-40-003008 for HexNut M8<br>93-40-003010 for HexNut M10<br>93-40-003012 for HexNut M12 |



# Stud Welding Equipment - Arc

## MARC NUT WELDING SYSTEM

|           |   |
|-----------|---|
| Order No. | <p>93-20-242 (Welding gun AM 12A)<br/>           93-60-1202 (Welding unit IT 1002)<br/>           93-40-020 (Ground cable, 5m 25 mm<sup>2</sup>, 2 vice grips 10")</p> <p>Complete equipment for AM 12 A:<br/>           93-40-0030068 for HexNut M6<br/>           93-40-003008 for HexNut M8<br/>           93-40-003010 for HexNut M10<br/>           93-40-003012 for HexNut M12</p> <p>Accessories – Nut welding<br/>           88-16-881 Nut fixture DIN 934 M6<br/>           88-16-882 Nut fixture DIN 934 M8<br/>           88-16-883 Nut fixture DIN 934 M10<br/>           88-16-884 Nut fixture DIN 934 M12</p> |
|-----------|---|

| Dimension of welding element |   |  |                 |                 |                 |
|------------------------------|---|--|-----------------|-----------------|-----------------|
|                              |   | M6   | M8              | M10             | M12             |
|                              | Dimension   | M6   | M8              | M10             | M12             |
|                              | Height HexNut   | 8  | 8               | 9               | 11              |
|                              | Width across flats  | AF14   | AF14            | AF17            | AF19            |
| Bore diameter                | Bore diameter - metal sheet<br>(based on DIN EN ISO 4032) | 10.6+0.1...+0.4  | 10.6+0.1...+0.4 | 12.6+0.1...+0.4 | 14.9+0.1...+0.4 |
| Tightening torque            | ( $\mu$ - 0,18)   | 3.8  | 9.5             | 19.0            | 33.0            |



# Stud Welding Equipment - Arc

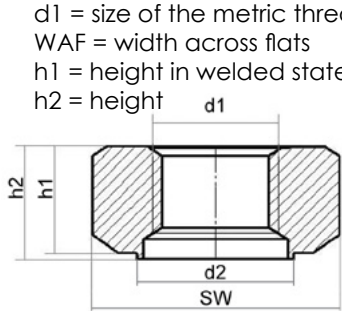
## MARC WELDING NUTS - TYPE HEX<sup>NUT</sup>

### MATERIAL A2-50

Equipping the Welding Gun

Select a chuck and the corresponding chuck adaptor suitable for your welding element.

Welding elements for nut welding (MARC welding nuts):



A 12 M - Suitable welding gun for manual stud feeding

| WAF | d1  | d2 <sup>-0.1</sup><br>in mm | Suitable for<br>d <sub>hole</sub> in mm | h1<br>in mm | h2<br>in mm |
|-----|-----|-----------------------------|---|-------------|-------------|
| 14  | M6  | 10.5                        | 10.7 to 11.0                            | 7.5         | 8           |
| 14  | M8  | 10.5                        | 10.7 to 11.0                            | 7.5         | 8           |
| 17  | M10 | 12.5                        | 12.7 to 13.0                            | 8.5         | 9           |
| 19  | M12 | 14.8                        | 15.0 to 15.3                            | 10.5        | 11          |

|          |       | Diameter    |              |             |             |
|----------|-------|-------------|--------------|-------------|-------------|
|          |       | M6          | M8           | M10         | M12         |
|          |       | Order No.   | Order No.    | Order No.   | Order No.   |
| Material | A2-50 | 60-06-0082* | 60-08-0082A* | 60-10-0092* | 60-12-0112* |

| Sleeve Fixture | 88-22-532 | 88-21-107 | 88-21-108 | 88-21-109 |
|----------------|-----------|-----------|-----------|-----------|
|                |           |           |           |           |

Chuck adapter - 88-26-647  
for M8 - Internal thread



Hex<sup>Nut</sup>



| Hex <sup>Nut</sup> | Nut fixture (Hex <sup>Nut</sup> ) |
|--------------------|-----------------------------------|
| 0 d <sub>l</sub>   |                                   |
| M6                 | 88-22-532                         |
| M8                 | 88-21-107                         |
| M10                | 88-21-108                         |
| M12                | 88-21-109                         |



Chuck adapter for use with studs on only.

Minimum order quantity, delivery time and price upon request.



6381 Windfern Road, Houston, TX 77040 **website** [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) **email** [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
**telephone** 1.800.462.9353 - Houston 713.939.8903 **fax** 713.939.9013



## SECTION 14

# STUD WELDING EQUIPMENT – AUTOMATIC COMPONENTS

FOR INQUIRIES, TO PLACE ORDERS,  
SERVICE AND TECHNICAL SUPPORT CONTACT  
ANY OF THE FOLLOWING:

OFFICE: 1-800-462-9353  
713-939-8903

EMAIL: [INFO@SUNBELTSTUDWELDING.COM](mailto:INFO@SUNBELTSTUDWELDING.COM)



**website** [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) **email** [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 **telephone** 1.800.462.9353 - Houston 713.939.8903 **fax** 713.939.9013



# Stud Welding Equipment - Automatic Components

## CDI 1502 AT



### Stud Welding Unit (with digital display)

For capacitor discharge stud welding according to current standards.

- Entry level automation for semi-automatic use.
- Simple library function for ease of use.

### Unbeatable new power pack

- With efficient inverter-capacitor charging technology.
- Enormous time and energy savings (30 % less energy!)
- Highest cycle sequence of its class (up to 40 studs/min.)
- 20 % energy reserve due to 220 V charging voltage.
- Simple operation & minimal weight (20% lighter than previous model).
- Extreme long life due to robust and functional industrial design.

### Highest level of quality and safety

- Capacitor formation recorded - Quality control for consistent capacitor quality through automated formation.
- Shock-proof capacitor battery - No contact of the capacitors to the device housing; sparkover (short circuit) is therefore not possible!
- Cooling channel - Protects the electronic components from getting soiled. Ideal cooling of the inverter charging p.c. board for high sequence cycles.

| Technical Data      |  |
|---------------------|--|
| Welding material    | Mild steel, stainless steel, aluminum and brass  |
| Equipment           | Automation   |
| Display             | Digital  |
| Welding range       | Studs: M3 to M8, dia. 2 to 8 mm / #4 to 5/16", dia. 14 ga to 5/16"<br>Cupped head pins: dia. 2 and 2.7 mm / 14 ga and 12 ga<br>Insulation pins: dia. 2 and 3 mm / 14 ga and #4 |
| Welding rate        | M3 / #4 = 40 studs/min. (voltage 60V)<br>M8 / 5/16" = 14 studs/min. (voltage 200V)   |
| Capacitance         | 66,000 µF  |
| Welding time        | 1 to 3 msec  |
| Energy              | 1,600 Ws   |
| Charging voltage    | 50 to 220 V (stepless voltage regulation)  |
| Primary power       | 230 V/115 V*, 50/60 Hz, 10 AT (slow blow)<br>(*alternative primary power see order number below)   |
| Connected load      | 600 VA   |
| Power source        | Capacitor  |
| Cooling type        | F (temperature controlled cooling fan)   |
| IP-code             | IP 21  |
| Dimension L x W x H | 15.75" x 8.07" x 9.84"<br>(400 x 205 x 250 mm)<br>without handle   |
| Weight              | 30.87 lbs (14 kg)  |
| Suitable guns       | PAH-I  |
| Order No            | 92-10-1504B (230 V)<br>92-12-1504B (115 V)<br>92-13-1504B (100 V)  |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - Automatic Components

## CDMi 2402 TECHNICAL DATA SHEET



### CDMi 2402

Stud Welding Unit  
for CD stud welding  
(capacitor discharge welding)  
according to current standards

### Inverter-Capacitor Charging Technology

- Maximum welding rates
- Minimum energy consumption
- Minimum weight
- Maximum efficiency

| Technical Data      |   |
|---------------------|---|
| Automation          | Series  |
| Welding range       | #4 to 5/16" (7/16" limited),<br>dia. 14 ga to 5/16" (dia. 3/8" limited)<br>M3 to M8 (M10 limited),<br>dia. 2 to 8 mm (dia. 10 mm limited)   |
| Welding material    | Mild steel, Stainless steel, Aluminum, Brass  |
| Welding rate        | M3 = 40 studs/min. (Charging voltage 60 V)<br>M8 = 21 studs/min. (Charging voltage 170 V)<br>(M10 = 17 studs/min. (Charging voltage 210 V)) |
| Capacitance         | 99 000 µF/33 000 µF*  |
| Welding time        | 1 to 3 msec   |
| Energy              | 2 400 Ws/800 Ws*  |
| Charging voltage    | 50 to 220 V (steplless voltage regulation)  |
| Primary power       | 115 V, 50/60 Hz, 10 AT  |
| Power source        | Capacitor   |
| Cooling type        | F (temperature controlled cooling fan)  |
| IP-Code             | IP 21   |
| Dimension L x W x H | 22.44" x 11.22" x 11.42"<br>(570 x 285 x 290 mm) without handle   |
| Weight              | 57.32 lbs (26 kg)<br>* with change over of capacitors   |
| Order No            | 92-12-22412 (Automation)  |
| General Information |   |
| Application         | • Especially suitable for thin sheets (at least 0.5 mm)   |
| Process variants    | • Contact welding<br>• Gap welding  |
| Equipment           | • Automation (series)<br>• Menu navigation in various languages: German, English, French, Italian, Russian, Portuguese, Spanish and Chinese |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - Automatic Components

## CDMI 2402 TECHNICAL DATA SHEET

### 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 LCD display
- Function control – All functions are visible on the operator panel via LED or display

#### Structure

- Compact
- Robust – metal housing withstands rough treatment in shop and on site
- Industrial plugs – standardised and sturdy plugs
- Two ground connections – direct coupling of several stud welding machines possible when installed in complex welding systems

#### Safety

- With integrated mains filter (protection against voltage peaks)
- Optimal for construction sites with large mains voltage fluctuations – use even with critical voltage supply (- 25 % + 20 %)
- Fulfills the requirements according to DIN EN 60974-10: 2008-09 - EMC test
- Fulfills the requirements according to DIN EN 60974-1: 2013-06 - Logged high voltage test
- Logged capacitor forming for quality control of the stud welding capacitors
- Controlled capacitor forming – step-by-step charging of capacitors after long standstill times for longer service life of capacitors
- Retriggering lock-out – prevents welding on a welding element that has already been welded
- Thermal control of inverter-capacitor charging unit and internal temperature of stud welding unit– automatic switch-off in the event of overheating
- Temperature controlled cooling fan – 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 cooling air stream – protection of the electronic components against contamination and ideal cooling of the inverter-capacitor charging circuit board for high cycle sequences
- Shock-resistant operation panel – operation panel protected by protruding casing
- Shock-resistant capacitors – capacitors protected by shock proofing elements
- Accessory: Control guard made of acrylic glass (lockable) – prevents damage and unauthorised access

#### Welding

- Graphic display – clear operator guidance via large LCD display
- Setting of charging voltage in V and charging energy in Ws – when changing the charging voltage, the charging energy is automatically adjusted
- Process sequence control – detection and evaluation of influencing variables of the welding process via the process control (CP); after every welding, a comparison of the reference CP value and the actual values is performed; display of the actual and target value; welding stop when limit values are exceeded can be activated; limit values can be selected in steps; manual entry of CP value possible
- 15 programs can be stored – in every program, the parameters (charging voltage, capacity, CP settings and automatic settings) can be selected digitally via a superior control system and specific to the application
- Remote control of the stud welding machines via standardised RS232 interface possible – the stud welding machines can be controlled directly via the PC or CNC welding systems
- Library function – library with stored welding parameters for different diameter and material combinations for a quick start of the welding process
- User-specific settings– weld counter (display of previously executed welds); menu navigation in various languages; units (metric, imperial); date; time; setting of the transmission rate of the interfaces

(continued on next page)



# Stud Welding Equipment - Automatic Components

## CDMI 2402 TECHNICAL DATA SHEET

### Advantages

#### Welding

Gun / welding head test – functionality check of the welding guns or the welding heads with a lifting test (check of the lifting function of the gap welding guns and bolt welding heads without contact with the workpiece); functionality check of the welding guns or the welding heads by recording the movement time of the solenoid from triggering to the contact with the workpiece

- Reading out of CP values via standardised RS232 interface – for the output of data such as the date, time and welding parameters of each weld with the superior control system; welding parameters of every weld are logged
- Powerful – built-in power reserves
- Inverter-capacitor charging technology – makes high cycle rates possible
- Trouble-free changing of welding voltage polarity possible by reconnecting welding current and ground cables
- Use of special capacitors (developed for stud welding)
- Capacitance switching – 33 000  $\mu\text{F}$  or 99 000  $\mu\text{F}$

#### Suitable stud welding guns/heads

- C 08
- CA 08
- PAH-I
- KAH 412
- KAH 412 LA

Issue 06/14

(Technical data may change)



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - Automatic Components

## CDMi 3202 TECHNICAL DATA SHEET



### CDMi 3202

Stud Welding Unit  
for CD stud welding  
(capacitor discharge welding)  
according to current standards

### Inverter-Capacitor Charging Technology

- Maximum welding rates
- Minimum energy consumption
- Minimum weight
- Maximum efficiency

| Technical Data      |   |
|---------------------|---|
| Automation          | Series  |
| Welding range       | #4 to 7/16", dia. 14 ga to 3/8"<br>M3 to M10, dia. 2 to 10 mm   |
| Welding material    | Mild steel, Stainless steel, Aluminum, Brass  |
| Welding rate        | M3 = 43 studs/min. (Charging voltage 50 V)<br>M8 = 25 studs/min. (Charging voltage 140 V)<br>(M10 = 18 studs/min. (Charging voltage 200 V)) |
| Capacitance         | 132 000 µF/66 000 µF*   |
| Welding time        | 1 to 3 msec   |
| Energy              | 3 200 Ws/1 600 Ws*  |
| Charging voltage    | 50 to 220 V (stepless voltage regulation)   |
| Primary power       | 115 V, 50/60 Hz, 10 AT  |
| Power source        | Capacitor   |
| Cooling type        | F (temperature controlled cooling fan)  |
| IP-Code             | IP 21   |
| Dimension L x W x H | 22.44" x 11.22" x 11.42"<br>(570 x 285 x 290 mm) without handle   |
| Weight              | 59.53 lbs (27 kg)<br>* with change over of capacitors   |
| Order No            | 92-12-23212 (Automation)  |
| General Information |   |
| Application         | • Especially suitable for thin sheets (at least 0.5 mm)   |
| Process variants    | • Contact welding<br>• Gap welding  |
| Equipment           | • Automation (series)<br>• Menu navigation in various languages: German, English, French, Italian, Russian, Portuguese, Spanish and Chinese |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - Automatic Components

## CDMI 3202 TECHNICAL DATA SHEET

### 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 LCD display
- Function control – All functions are visible on the operator panel via LED or display

#### Structure

- Compact
- Robust – metal housing withstands rough treatment in shop and on site
- Industrial plugs – standardised and sturdy plugs
- Two ground connections – direct coupling of several stud welding machines possible when installed in complex welding systems

#### Safety

- With integrated mains filter (protection against voltage peaks)
- Optimal for construction sites with large mains voltage fluctuations – use even with critical voltage supply (- 25 % + 20 %)
- Fulfils the requirements according to DIN EN 60974-10:2008-09 - EMC test
- Fulfils the requirements according to DIN EN 60974-1:2013-06 - Logged high voltage test
- Logged capacitor forming for quality control of the stud welding capacitors
- Controlled capacitor forming – step-by-step charging of capacitors after long standstill times for longer service life of capacitors
- Retriggerring lock-out – prevents welding on a welding element that has already been welded
- Thermal control of inverter-capacitor charging unit and internal temperature of stud welding unit– automatic switch-off in the event of overheating
- Temperature controlled cooling fan – 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 cooling air stream – protection of the electronic components against contamination and ideal cooling of the inverter-capacitor charging circuit board for high cycle sequences
- Shock-resistant operation panel – operation panel protected by protruding casing
- Shock-resistant capacitors – capacitors protected by shock proofing elements
- Accessory: Control guard made of acrylic glass (lockable) – prevents damage and unauthorised access

#### Welding

- Graphic display – clear operator guidance via large LCD display
- Setting of charging voltage in V and charging energy in Ws – when changing the charging voltage, the charging energy is automatically adjusted
- Process sequence control – detection and evaluation of influencing variables of the welding process via the process control (CP); after every welding, a comparison of the reference CP value and the actual values is performed; display of the actual and target value; welding stop when limit values are exceeded can be activated; limit values can be selected in steps; manual entry of CP value possible
- 15 programs can be stored – in every program, the parameters (charging voltage, capacity, CP settings and automatic settings) can be selected digitally via a superior control system and specific to the application
- Remote control of the stud welding machines via standardised RS232 interface possible – the stud welding machines can be controlled directly via the PC or CNC welding systems
- Library function – library with stored welding parameters for different diameter and material combinations for a quick start of the welding process
- User-specific settings– weld counter (display of previously executed welds); menu navigation in various languages; units (metric, imperial); date; time; setting of the transmission rate of the interfaces

(continued on next page)



# Stud Welding Equipment - Automatic Components

## CDMI 3202 TECHNICAL DATA SHEET

### Advantages

#### Welding

Gun / welding head test – functionality check of the welding guns or the welding heads with a lifting test (check of the lifting function of the gap welding guns and bolt welding heads without contact with the workpiece); functionality check of the welding guns or the welding heads by recording the movement time of the solenoid from triggering to the contact with the workpiece

- Reading out of CP values via standardised RS232 interface – for the output of data such as the date, time and welding parameters of each weld with the superior control system; welding parameters of every weld are logged
- Powerful – built-in power reserves
- Inverter-capacitor charging technology – makes high cycle rates possible
- Trouble-free changing of welding voltage polarity possible by reconnecting welding current and ground cables
- Use of special capacitors (developed for stud welding)
- Capacitance switching – 66 000  $\mu\text{F}$  or 132 000  $\mu\text{F}$

#### Suitable stud welding guns/ heads

- C 08
- CA 08
- PAH-I
- KAH 412
- KAH 412 LA

Issue 06/14

(Technical data may change)



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - Automatic Components

## IT 90 STUD WELDING UNIT



### IT 90

Stud Welding Unit  
for Arc stud welding  
according to current standards

### Inverter

- Maximum welding quality
- Maximum welding rates
- Minimum energy consumption
- Minimum weight
- Maximum efficiency

| Technical Data   |  |
|--|--|
| Gas/Automation/Process control                                   | Series/Series/Series   |
| Welding range  | #4 to 1", dia. 14 ga to 7/8"<br>(M3 to M24, dia. 2 to 22 mm)   |
| Welding material   | Mild steel, Stainless steel, Aluminum  |
| Welding rate   | Dia. 7/8" = 7 studs/min<br>(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<br>(alternative input voltages available)   |
| Connected load   | 100 KVA (with 400 V mains) 80 kW   |
| Cooling type   | F (temperature controlled cooling fan)   |
| IP-Code  | IP 21  |
| Dimension L x W x H  | 25.6" x 22" x 50.8"<br>(650 x 560 x 1,290 mm)<br>without handle  |
| Weight   | 93-66-12096: 315.26 lbs (143 kg)<br>93-66-42096: 363.76 lbs (165 kg)   |
| Order No   | 93-66-12096<br>(Gas/Automation/Process control/I Gun connection)<br>93-66-42096<br>(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)                              |  |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013



# Stud Welding Equipment - Automatic Components

## KAH 412 LA AUTOMATIC STUD WELDING HEAD WITH LENGTH COMPENSATION

### KAH 412 LA

Automatic Stud Welding Head with length compensation for CD or Arc stud welding with automatic stud feeding according to current standards

| Technical Data         |  |
|------------------------|--|
| Welding range          | #4 to 5/16", dia. #4 to 5/16" (M3 to M8, dia. 3 to 8 mm);<br>dia. 3/8" to 1/2" (dia. 10 to 12.7 mm) with modification only |
| Stud length            | 0.31" to 1.57" (8 to 40 mm) other lengths on request   |
| Stud material          | Mild steel, Stainless steel, Aluminum, Brass   |
| Total stroke of piston | 0.28"  |
| Spring pressure        | Arresting  |
| IP-Code                | IP 20  |
| Workplace noise level  | > 90 dB (A) may occur during welding   |
| Dimension L x W x H    | 14.76" x 2.60" x 5.71" (375 x 66 x 145 mm) with chuck and quick change system  |
| Weight                 | 7.50 lbs (3.4 kg)  |
| Order No               | 94-37-412 (with length compensation)   |

| General Information |   |
|---------------------|---|
| Application         | <ul style="list-style-type: none"><li>• Especially suitable for thin sheets (at least 0.5 mm)</li><li>• Automatic compensation of length tolerance of welding elements and height tolerance of the work piece through integrated length adjustment</li></ul>  |
| Process variants    | <ul style="list-style-type: none"><li>• Gap welding</li><li>• Short cycle drawn arc welding</li><li>• Drawn arc welding (optional)</li></ul>  |
| Advantages          |   |
| Structure           | <ul style="list-style-type: none"><li>• Rigid casing made of metal</li><li>• Torsion-resistant aluminum-casing to accommodate all function elements and accessories</li><li>• Zero-play ball linear bearing for guiding the welding piston, to ensure maximum precision and reproducibility for welds</li><li>• Sealed welding piston guidance</li><li>• Compact dimensions</li><li>• Integrated lift and spring-loaded adjustment</li><li>• Stud length is freely adjustable (up to 40 mm; other lengths available on request)</li><li>• Infinitely adjustable spring-loaded adjustment can be read off the scale directly</li><li>• Prisma clamping system for fast exchange of the complete stud welding head</li><li>• Pushbutton detent system to facilitate changing the feeding tube</li><li>• Mechanical structure tested in production</li></ul> |



# Stud Welding Equipment - Automatic Components

## KAH 412 AUTOMATIC STUD WELDING HEAD WITH DIGITAL DISPLAY

### KAH 412

Automatic Stud Welding Head with Digital Display for CD or Arc stud welding with automatic stud feeding according to current standards

| Technical Data        |   |
|-----------------------|---|
| Welding range         | #4 to 5/16", dia. #4 to 5/16" (M3 to M8, dia. 3 to 8 mm);<br>dia. 3/8" to 1/2" (dia. 10 to 12.7 mm) with modification only  |
| Stud length           | 0.31" to 1.57" (8 to 40 mm) other lengths on request  |
| Stud material         | Mild steel, Stainless steel, Aluminum, Brass  |
| Stroke                | Adjustment range 0.20" (5 mm), arresting  |
| Spring pressure       | Arresting   |
| IP-Code               | IP 20   |
| Workplace noise level | > 90 dB (A) may occur during welding  |
| Dimension L x W x H   | 14.76" x 2.60" x 5.71" (375 x 66 x 145 mm) with chuck and quick change system   |
| Weight                | 7.50 lbs (3.4 kg)   |
| Order No              | 94-31-412C  |
| General Information   |   |
| Application           | <ul style="list-style-type: none"> <li>Especially suitable for thin sheets (at least 0.5 mm)</li> </ul>   |
| Process variants      | <ul style="list-style-type: none"> <li>Contact welding (optional)</li> <li>Gap welding</li> <li>Short cycle drawn arc welding</li> <li>Drawn arc welding (optional)</li> </ul>  |
| Advantages            |   |
| Structure             | <ul style="list-style-type: none"> <li>Rigid casing made of metal</li> <li>Torsion-resistant aluminum-casing to accommodate all function elements and accessories</li> <li>Zero-play ball linear bearing for guiding the welding piston, to ensure maximum precision and reproducibility for welds</li> <li>Sealed welding piston guidance</li> <li>Compact dimensions</li> <li>Integrated lift and spring-loaded adjustment</li> <li>Stud length is freely adjustable (up to 40 mm; other lengths available on request)</li> <li>Digital display (1/100 mm) for the position of the welding piston using integrated measuring system</li> <li>Direct reading for the adjusted plunge and lift dimension</li> <li>Infinitely adjustable spring-loaded adjustment can be read off the scale directly</li> <li>Prisma clamping system for fast exchange of the complete stud welding head</li> <li>Push button detent system to facilitate changing the feeding tube</li> </ul> |



# Stud Welding Equipment - Automatic Components

## PAH-1 STUD WELDING GUN



### PAH-1

Stud Welding Gun  
for CD or Arc stud welding with automatic  
stud feeding according to current standards

| Technical Data        |   |
|-----------------------|---|
| Welding range         | #4 to 5/16", dia. #4 to 5/16"<br>(M3 to M8, dia. 3 to 8 mm)   |
| Stud length           | 0.31" to 1.18" (8 to 30 mm)   |
| Stud material         | Mild steel, Stainless steel, Aluminum, Brass  |
| Stroke                | Adjustment range 0.20" (5 mm)   |
| Welding cable         | 9.84' (3 m)   |
| IP-Code               | IP 20   |
| Workplace noise level | > 90 dB (A) may occur during welding  |
| Dimension L x W x H   | 11.61" x 2.36" x 6.70"<br>(295 x 60 x 170 mm)<br>without cable  |
| Weight                | 3.09 lbs (1.4 kg) without cable   |
| Order No              | 94-20-025   |
| General Information   |   |
| Application           | • Especially suitable for thin sheets (at least 0.5 mm)   |
| Process variants      | • Contact welding (optional)<br>• Gap welding<br>• Short cycle drawn arc welding  |
| Advantages            |   |
| Structure             | • Rigid casing made of impact-resistant plastic<br>• Slide bearing for guiding the welding piston<br>• Sealed welding piston guidance<br>• Ergonomic design<br>• Adjustable lift<br>• Stud length convertible (up to 30 mm)<br>• Mechanical structure tested in production<br>• Electronically controlled |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - Automatic Components

## VBZ-3 FULLY AUTOMATIC STUD FEEDER



### VBZ-3

Fully Automatic Stud Feeder for welding elements with flange according to current standards

| Technical Data          |  |
|-------------------------|--|
| Stud diameter           | #4 to 5/16", dia. #4 to 5/16" (M3 to M8, dia. 3 to 8 mm) other diameter on request   |
| Stud length             | 0.31" to 1.97" (8 to 50 mm)  |
| Feed speed              | Up to 30 studs/min (depending on welding element and feeding tube)   |
| Air pressure connection | 6 bar/800 liter/min  |
| Electrical supply       | 115V, 60 Hz, 1.8 A (alternative input voltages available)  |
| IP-Code                 | IP 20  |
| Dimension L x W x H     | 18.50" x 12.20" x 11.02"<br>(470 x 310 x 280 mm)   |
| Weight                  | 52.91 lbs (24 kg)  |
| Order No                | 94-66-103B (for dia. 3 mm)<br>94-66-104B (for dia. 4 mm)<br>94-66-105B (for dia. 5 mm)<br>94-66-106B (for dia. 6 mm)<br>94-66-171B (for dia. 7,1 mm)<br>94-66-108B (for dia. 8 mm)<br>94-66-153B (for X-mas tree stud dia. 5)<br>94-66-163B (for X-mas tree stud dia. 6)   |
| General Information     |  |
| Application             | <ul style="list-style-type: none"> <li>Feeding unit VBZ-3 for quick, fully automatic feeding for welding elements with flange according to current standards</li> <li>Fully automatically feeding of welding elements from dia. 3 to dia. 8 mm (with flange); (other dia. on request)</li> <li>Length from 8 to 50 mm (no rebuilding)</li> </ul> |
| Options                 | <ul style="list-style-type: none"> <li>Additional regulation of exhaust air by a throttle is possible; this allows ideal adjustment of air flow required for various sizes of welding elements</li> <li>Special feeding units on request</li> </ul>  |
| Advantages              |  |
| Features                | <ul style="list-style-type: none"> <li>Feeding bowl with special coating, to reduce abrasion and noise</li> <li>Exhaust air is pulse controlled, no permanent air consumption</li> </ul>   |



website [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) email [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 telephone 1.800.462.9353 - Houston 713.939.8903 fax 713.939.9013

# Stud Welding Equipment - Automatic Components

## PMB-LS2 PNEUMATIC CLAMP



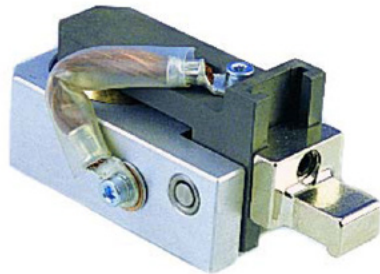
**PMB-LS2**  
Pneumatic Clamp

| Technical Data  |   |
|---|---|
| Clamping movement   | Double action air cylinder through curved sector control  |
| Horizontal clamping way   | 0.30" (7.5 mm)  |
| Vertical clamping way   | 0.16" (4 mm)  |
| Max. thickness of work piece  | Through elevation adjustment of clamp up to 0.39" (10 mm) |
| Width of clamp  | 0.59" (15 mm)   |
| Air pressure connection   | Up to 6 bar   |
| Clamp pressure  | 300 N at 6 bar  |
| Dimension L x W x H   | 3.54" x 1.97" x 1.97" (90 x 50 x 50 mm)                   |
| Weight  | 1.10 lbs (500 g)  |
| Order No  | 90-60-120   |
| General Information   |   |
| Description   |   |
| <ul style="list-style-type: none"><li>• Pneumatic work piece clamps PMB-LS2 guarantees fast and accurate clamping of the work</li><li>• The patented horizontal and vertical movement of clamp fingers allow work piece loading from top or front</li><li>• Integrated ground connection to the clamp</li><li>• Forward- and clamp-movement through curved sector control</li><li>• Bellows are protecting the motor apparatus of fouling</li></ul> |   |

Issue 04/08  
(Technical data may change)

# Stud Welding Equipment - Automatic Components

## PMB-S PNEUMATIC CLAMP



### PMB-S

Pneumatic Clamp

| Technical Data  |   |
|---|---|
| Clamping movement   | Single action air cylinder                                |
| Vertical clamping way   | 0.16" (4 mm)  |
| Max. thickness of work piece  | Through elevation adjustment of clamp up to 0.79" (20 mm) |
| Width of clamp  | 0.59" (15 mm)   |
| Air pressure connection   | Up to 6 bar   |
| Clamp pressure  | 300 N at 6 bar  |
| Dimension L x W x H   | 3.86" x 1.77" x 1.65" (98 x 45 x 42 mm)                   |
| Weight  | 1.01 lbs (460 g)  |
| Order No  | 90-60-01 I  |
| General Information   |   |
| Description   |   |
| <ul style="list-style-type: none"><li>• Compact pneumatic clamp with vertical movement</li><li>• Ground connection to the clamp</li><li>• In- and output of the work piece only from the front side</li></ul> |   |



## SECTION 14

# STUD WELDING EQUIPMENT – CNC AUTO FEED SYSTEMS

FOR INQUIRIES, TO PLACE ORDERS,  
SERVICE AND TECHNICAL SUPPORT CONTACT  
ANY OF THE FOLLOWING:

OFFICE: 1-800-462-9353  
713-939-8903

EMAIL: [INFO@SUNBELTSTUDWELDING.COM](mailto:INFO@SUNBELTSTUDWELDING.COM)



**website** [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) **email** [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
6381 Windfern Road, Houston, TX 77040 **telephone** 1.800.462.9353 - Houston 713.939.8903 **fax** 713.939.9013

# Stud Welding Equipment - CNC Systems

## PC-S PRODUCTION CENTER STANDARD MANUAL

### PC-S

Production Center Standard Manual

| Technical Data                            |  |
|---|--|
| T-slot work plate                         | 19.69" x 14.76" (500 x 375 mm)   |
| Welding range                             | #4 to 5/16", dia. #4 to 5/16"<br>(M3 to M8, dia. 3 to 8 mm);<br>dia. 3/8" to 1/2" (dia. 10 to 12.7 mm) only possible<br>with modification  |
| Stud length                               | 0.31" to 1.57" (8 to 40 mm) other dimensions on<br>request   |
| Stud feeding *)                           | Manual or automatic stud feeding (optional)<br>*) not included in delivery   |
| Positioning (accuracy)<br>of welded studs | ± 0.008" (± 0.2 mm)  |
| Working stroke of stud welding head       | Z-max. = 4.92" (125 mm), z-adjustable = 0.16" to<br>1.77" (4 to 45 mm) bottom end stop   |
| Stud welding head *)                      | KAH 412<br>alternative: KAH 412 LA (mechanical length<br>compensation - gap),<br>*) not included in delivery                               |
| Max. number of stud welding heads         | 1  |
| Connection                                | Electrical: 115V, 16 A, 60 Hz<br>Pneumatic: 6 bar min/10 bar max./inner hose dia. 1/4"<br>(dia. 6 mm)                                      |
| Dimension L x W x H                       | 47.24" x 39.37" x 78.74"<br>(1,200 x 1,000 x 2,000 mm) without cover,<br>55.12" x 39.37" x 86.61"<br>(1,400 x 1,000 x 2,200 mm) with cover |
| Weight Approx.                            | 330.69 lbs (150 kg)  |
| Order No                                  | 90-70-5028D  |

| General Information   |  |
|---|--|
| <b>Application</b><br>• All variations of stud welding<br>• With manual or automatic stud feeding (30% faster)  |  |
| <b>Options</b><br>• Different stud welding units<br>• Automatic stud feeder VBZ-3<br>• Work piece fixtures<br>• Machine protection cover<br>• Custom made handling systems<br>• Pneumatic clamp |  |



6381 Windfern Road, Houston, TX 77040 **website** [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) **email** [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
**telephone** 1.800.462.9353 - Houston 713.939.8903 **fax** 713.939.9013



# Stud Welding Equipment - CNC Systems

## CPW SERIES



### CNC Production Welder

- Entry-level CNC stud welding machine with 1 welding head
- High speed with highest positioning accuracy by robust machine base frame
- Working with different work piece heights on a working range of 600 x 420 x 120 mm

M3 to M8 (dia. 10/12/12,7 mm only possible with modification)

#4 to 5/16" (dia. 3/8" to 1/2" only possible with modification)

|                                     |   |
|-------------------------------------|---|
| Working range                       | 600 x 420 x 120 mm / 23.6" x 16.5" x 4.7"   |
| T-slot work plate                   | 800 x 490 mm / 31.5" x 19.3"  |
| Welding range                       | M3 to M8, dia. 3 to 8 mm<br>(dia. 10/12/12,7 mm only possible with modification)<br>#4 to 5/16", dia. #4 to 5/16" (dia. 3/8" to 1/2" only possible with modification) |
| Stud length                         | 8 to 40 mm / 0.31" to 1.57" (other lengths on request)  |
| Welding capacity                    | Up to 30 studs/min (depending on configuration)   |
| Traverse speed                      | 25 m/min (X-Y), 20 m/min (Z) / 82'/min X-Y, 65,6'/min Z   |
| Stud feeding                        | Automatic stud feeding (up to 3 different stud length per welding head)   |
| Positioning accuracy of welded stud | ± 0,2 mm / ± 0,008"   |
| Positioning and repeat accuracy     | ± 0,05 mm / ± 0,002"  |
| Stud welding head                   | KAH 412<br>KAH 412 LA (mechanical length compensation - gap)  |
| Max. number of stud welding heads   | 1   |
| Connections                         | Electrical: 400V, 16 A, 50 Hz;<br>Pneumatic: 6 bar min./ 10 bar max./ inner hose dia. 6 mm  |
| Motor-driven Z-axis                 | Z = 0 to 120 mm / 0 to 4.7" (free programmable because of servo drive technology)   |
| Controller                          | High performance PLC IEC 61131-3  |
| Display                             | 9" Touchscreen  |
| Keyboard                            | Touch   |
| Dimension LxWxH                     | 1600 x 950 x 1900 mm / 63" x 37.4" x 74.8"  |
| Weight                              | Approx. 640 kg / 1410,96 lbs  |
| Order No.                           | According to project  |

# Stud Welding Equipment - CNC System

## MPW 1010/2010 CNC MULTI PRODUCTION WELDER



### MPW

CNC Multi Production Welder

| Technical Data                      |  |
|-------------------------------------|--|
| Working range                       | 49.21" x 41.34" (1,250 x 1,050 mm) MPW 1010;<br>49.21" x 88.58" (1,250 x 2,250 mm) MPW 2010<br>(maximum working range for up to 3 welding heads)               |
| Welding range                       | #4 to 5/16", dia. #4 to 5/16" (M3 to M8, dia. 3 to 8 mm);<br>dia. 3/8" to 1/2" (dia. 10 to 12.7 mm) only possible with<br>modification                         |
| Stud length                         | 0.31" to 1.57" (8 to 40 mm) other lengths on request   |
| Welding capacity                    | Up to 40 studs/min (depending on stud welding unit, stud type<br>and positioning of stud)  |
| Traverse speed                      | 196.85'/min (60 m/min)   |
| Stud feeding                        | Automatic stud feeding (up to 3 different stud length per welding<br>head)   |
| Positioning accuracy of welded stud | ± 0.0059" (± 0.15 mm) for steel and ± 0.008" (± 0.2 mm) for<br>aluminum (depending on work piece and stud geometry)  |
| Positioning and repeat accuracy     | ± 0.002" (± 0.05 mm)   |
| Stud welding head                   | KAH 412<br>Optional: KAH 412 LA<br>(mechanical length compensation - gap)  |
| Max. number of stud welding heads   | 4 (up to 3 stud lengths per welding head possible)   |
| Connections                         | Electrical: 400 V, 16 A (32 A), 50 Hz<br>Pneumatic: 6 bar min./10 bar max./inner hose dia. 1/4" (dia. 6<br>mm)   |
| Motor-driven Z-axis                 | Z = 0 to 4.53" (0 to 115 mm) free programmable because of<br>servo drive technology  |
| Dimension LxWxH                     | 90.55" x 92.52" x 86.61" (2,300 x 2,350 x 2,200 mm) MPW<br>1010;<br>137.80" x 92.52" x 86.61" (3,500 x 2,350 x 2,200 mm) MPW<br>2010                           |
| Order No.                           | According to project   |
| General Information                 |  |
| Application                         | <ul style="list-style-type: none"> <li>• Basic milling operations (optional)</li> <li>• Special applications like gluing, foaming etc. (on request)</li> </ul> |
| Process variants                    | <ul style="list-style-type: none"> <li>• Tip ignition (CD)</li> <li>• Drawn arc welding (Arc)</li> <li>• Short cycle drawn arc welding (SC)</li> </ul>         |



6381 Windfern Road, Houston, TX 77040 **website** [www.sunbeltstudwelding.com](http://www.sunbeltstudwelding.com) **email** [info@sunbeltstudwelding.com](mailto:info@sunbeltstudwelding.com)  
**telephone** 1.800.462.9353 - Houston 713.939.8903 **fax** 713.939.9013