

**Hotline**  
Mo to Fr 08:00 o'clock AM to 04:00 o'clock PM

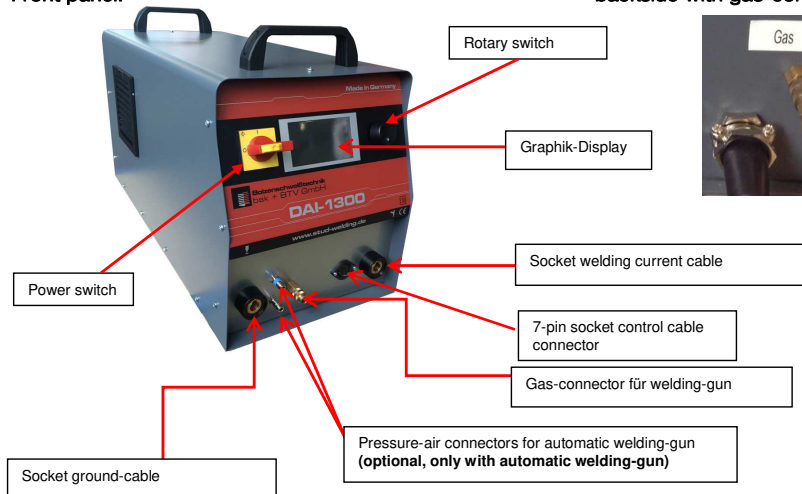
phone: +49(0)7138-81097-0  
info@stud-welding.de

For technical questions, especially about the device / gun please have ready in advance:  
Type of machine and serial number  
Error description

Please observe the detailed operating instructions for equipment and guns! There are knowledge of stud welding equipment and their components necessary. Stud welding work may be performed only by persons who have reached the age of 18. Observe all the necessary safety instructions.

Front panel:

backside with gas-connector:



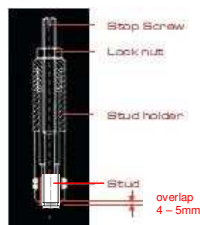
**Setting-up operation Inverter**

- Switch position power-switch to „0“
- 32A CEE - plug into the appropriate receptacle connect (Fuse: screwgate 25 AT / attention: no curcuit-braker breaker);
- Control-cable, ground-cable and welding-gun cable connecting to inverter and secure against twisting;
- fix the two locking pliers of the ground cable ideally evenly diagonally attach far from the weld on the workpiece to reduce magnetic blow.

**In case of protection-gas application:**

Connect gas on the rear side with a suitable hose to the pressure reducer a protective gas bottle and adjust the flow rate of gas to 4-6 l / min (recommended for steel and stainless steel mixed gas 82% Ar / 18% CO2). Caution: Gas bottle against falling over!

**Set up welding-gun(s)**



Note: Inverter switch on (switch to "I") and switch to "Lift test" (function "test" in set-menu "DAH-1300") or disconnect ground cable from the Inverter!

**Welding-gun DA-10M / GAP-M**

- select chuck (stud-holder) according the used welding-element;
- adjust stud-holder (see figure left);
- insert stud-holder in welding-gun;
- tighten and fixed with socket-wrench SW17.

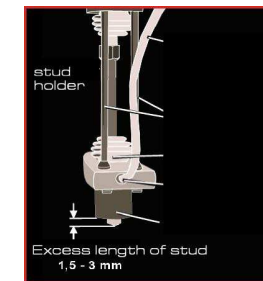
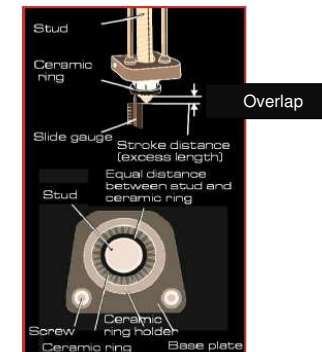


**Welding-guns DA-12M / DA-19M / DA-22M / DA-25M**

- select chuck (stud-holder) according the used welding-element;
- Screw the chuck on the double nipple
- Tighten the chuck with open-end wrench SW17 (Attention: counter with a spanner on the double nipple!)
- Place the corresponding tripod (gas or ceramic tripod) on the gun and fix it

**Ceramic tripod (does not apply to DA-10M / GAP-M)**

- Insert suitable ceramic ring holder in base plate and secure using a 2.5 mm socket wrench
- Insert stud into the stud holder as far as it will go
- Insert appropriate cermanic ring into ceramic ring holder while slightly turning it
- Adjust excess length (overlap, see table page 4) of stud or stroke distance according to figure and table by adjusting the tripod correspondingly and then tightening the locking screw.
- Align the base plate using the socket screws so that the stud and the ceramic ring is centered and the stud does not touch the ceramic ring when lifted. Otherwise it might inhibit the insertion
- Check the excess length and the free movement of the motion system by manually pushing the stud in against the spring in the gun. Or you can use the built-in lift test function by actuating the gun in the air.



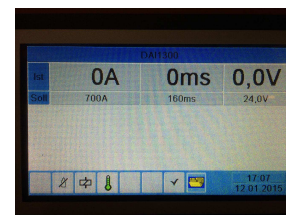
**Lift-adjustment (does not apply to DA-10M and DA-12M):**

- **DA-19M...DA-25M:** therefore cap unscrew and with the setting scale (see brass-scale from 2mm...6mm at the gun) adjust the correct lift of the welded stud (it depends in graphics page 4).
- **GAP-M:** First adjustment of zero-lift with the setting screw at the top of the gun, than adjustment of correct lift regarding table page 4.

Guns are now ready to use!

**Setting-up operation Inverter**

After switching on (mains switch to "I") and self-test of the inverter, the actual values of welding current, welding time and arcing voltage be on the top line of the display in the main menu appears in the line below the corresponding desired values by default. The values for welding current and welding time can be infinitely adjusted by pressing the rotary control on the respective field.



Schweißstrom: 0A...1000A  
Schweißzeit: 0ms...1500ms



With correct operation of the inverter and correctly connecting of connection-cable and the ground-cable adjacent symbols in the illustrated color light up (from left to right):

**Solenoid (black), temperature indicator (green), standby message (black) and library symbol (yellow).**

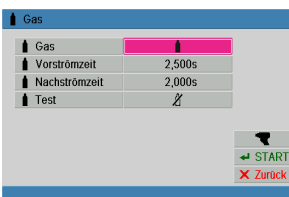
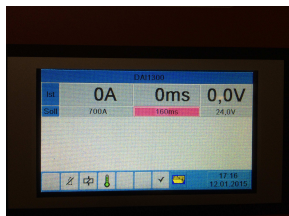
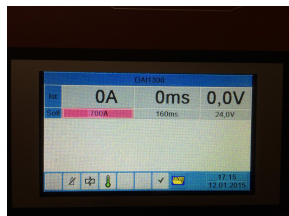
**Using of the fixed library for current, time and / or gas**

Select a permanently stored and related to the stud diameter parameters [set out by in the "Library (fixed)"] by scrolling the encoder to a stud type ("RD", "PS", pin or "SD"), mark in the table, pressing on the rotary encoder and switch to "START" or "Back" returns to the main menu. The welding parameters are taken to the main menu.

**The inverter is now ready to use.**

**Welding-current I(A) manual setting**

1. Rotate encoder to the position "welding current" in the main menu;
2. Press on the rotary encoder (the field changes to the color "Magenta");
3. Set the value for **welding current** by turning the rotary encoder;
4. Pressing the encoder, the field returns to the color "blue" and the set value is taken over.



**Welding-time t(ms) manual setting**

1. Rotate encoder to the position "welding current" in the main menu;
2. Press on the rotary encoder (the field changes to the color "Magenta");
3. Set the value for **welding time** by turning the rotary encoder;
4. Pressing the encoder, the field returns to the color "blue" and the set value is taken over.

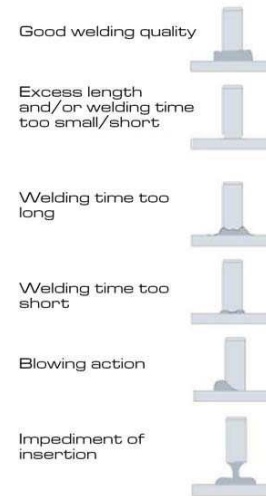
**Protection-Gas: pre - and post-time gas manuel setting**

1. In the submenu "gas" the inert gas **Select** function by scrolling, pressing and turning (to the right) to the symbol "gas bottle" using the rotary control (bottle symbol with black activation);
2. Set the same principle **pre-flow** and **post-flow**;
3. **"START"** or **"Back"** again switch to the main menu: **The activation of the gas module** is indicated by the black bottle symbol in the bottom status bar of the main-display.

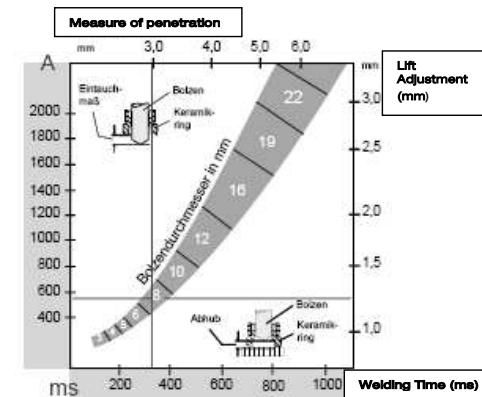
The inverter is now also ready to weld. Note that it can be welded only if you are in the main menu of the inverter!

**Setting graphics and tables / evaluation of welding results**

**Evaluation of welding results:**



**Graphic für stud-type RD (reduced studs):** About-settings of welding current, lift and depth of immersion as a function of the bolt diameter:



For example: M8 (approximately):  
Ca. 600A, 320 ms, 1,3 mm lift, 3 mm depth of immersion

**Table lift-settings f. gun GAP-M for stud-type „PS“ (short -cycle):**

Stud-type	PS M 3	PS M 4	PS M 5	PS M 6	PS M 8	PS M 10
Stahl unalloyed	1	1	1,3	1,5	2	2
Cr-Ni-Steel	1	1	1,3	1,5	2	2
Heat resistance Steels	1	1	1,3	1,5	2	2

All measurements in Millimeter

**Graphic for stud-type „SD“ (shear-connectors):** About-settings of welding current, lift and depth of Immersion as a function of the bolt diameter:

