



# AS 2104 series

Compact, small, lightweight ideal for the construction site ✓

ARC-procedure

# AS 2104 series



Now available: product video on



number	AS studwelder advantages
1	highest safety standards
2	digital operator interface
3	easy Touch buttons (useable with gloves)
4	infinitely variable welding time
5	labeled connections for flawless handling
6	robust welding and control cable connections





[www.bolzenschweissen.de](http://www.bolzenschweissen.de)

Even more power reserves :

**Maximum welding current values of 450A**

Proven performance components  
transformer, rectifier, thyristor

Re-activation lock on welded studs

**intuitive parameter selection** by  
integrated database

Individual storage of 16 welding-  
parameters

Easy error message for fast  
troubleshooting

day/ job counter

**complet digitalized interface**

robust case structure | dirt- proof  
control panels | and low power-to-  
weight ratio (30 kg)

**Extrem short welding times in a range  
of 5-1000ms**

#### Device protection

- **reliable protection** by automatic monitoring and fault diagnosis of phase failure, overtemperature, lifting magnet and control cable.
- testing of welding gun and magnetic lift settings without enabled welding current possible
- temperature-controlled cooling of cooling type F with overload cut-out
- Automatic start test and **digital monitoring** of the workpiece contact

# studwelder types of AS 2104 series

## AS 2104 (standard)

Art.-Nr. 19302104 technical data

welding application      Hub-Keramik:  
6-8  
Kurzzeit:  
2-5  
  
Bajonettstifte Ø 5mm  
Isostifte Ø2-5mm

welding range      - steel,  
- stainless steel,  
- suitable heat resistant  
materials

technology      Transformer rectifier

welding time      5-1000ms

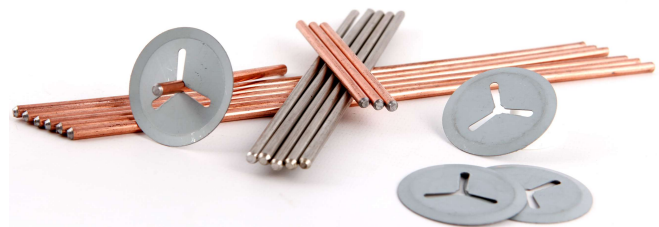
welding current      450A (not variable)

dimensions      L W H 420 x 240 x 280mm

Gewicht      30kg



Ideal for isolation applications



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# AS welding guns for AS 2104



**Art Nr: 192 20 025**

chuck mounting: M10  
pillar spacing: 45mm  
welding range: Ø2-12mm

**slides for:**

welding with ceramic ferrule	180 40 170
welding with shielding gas	180 40 174
Isolation applications	180 40 173

**Small drawn arc gun with stepless lift adjustment and stand mount. The infinitely variable stroke enables optimum adjustment, even for special tasks and improves the welding quality**



**Art Nr: 198 20 025**

chuck mounting: Ø10  
welding range: Ø2-8mm (M10)

**mounting for:**

threepod attachment	180 40 373
positional tube	082 40 513
shielding gas tube	182 40 532



**Short-cycle gun with infinitely variable lift adjustment and attachment for different equipment. The infinitely variable stroke enables optimum adjustment, even for special tasks and improves the welding quality.**



**Art Nr: 182 20 030**

chuck mounting: M10  
welding range Ø2-8mm (M10)

**slides for:**

welding with ceramic ferrule	180 40 170
welding with shielding gas	180 40 174
Isolation applications	180 40 173

**Small drawn arc pistol with automatic length compensation, fixed stroke 2mm and tripod mount. Even with heavily fluctuating stud lengths and surfaces, you always achieve the same arc length and the best welding quality.**

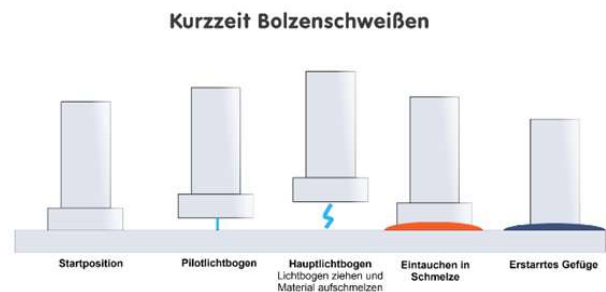
# procedures of ARC-studwelding

## drawn arc procedure

In the drawn arc process, the stud is lifted by the magnetic coil and drawing an arc between the stud and the workpiece. The subsequent immersion into the welding pool ensures an extremely stable joint if the lift and welding current are set correctly. Depending on the device, extreme welding currents of up to 1900 A can be generated. The advantage of drawn arc welding is that extreme stud sizes from Ø 2mm to 25mm can be welded.

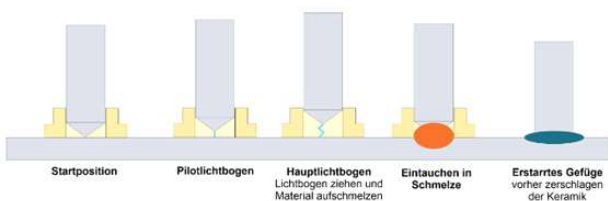
## short cycle procedure

The short-time process is characterized by its very short welding times. This process is used for stud diameters from 3-10 mm. Due to the flat welding penetration it is also ideal for thinner sheets (min. 1/8 D). The welding time here is 5-100ms with a current of up to 1900 A.



## ceramic ferrule

Hubzündungs Bolzenschweißen mit Keramik

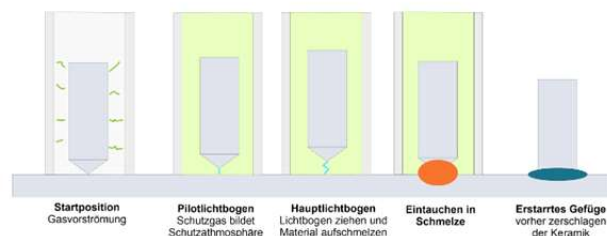


In the drawn arc ignition process, from a stud diameter of 5mm a ceramic ring is used to stabilize the arc and the welding pool. Here the ceramic ring procedure is highly suitable for construction sites, as it restricts the arc blowing effect better than the shielding gas procedure

## shielding gas

Gas-shielded welding is mostly used for stainless steel up to stud diameters of 12 mm. Here the shielding gas shields the welding pool from the atmosphere and prevents the absorption of nitrogen/oxygen, reduces oxidation and prevents the formation of pores. Furthermore, the the melting behavior, so that a lower welding penetration is achieved compared to welds with the ceramic ring procedure.

Hubzündungs Bolzenschweißen mit Schutzgas



More information about the ARC procedures at [www.bolzenschweissen.de](http://www.bolzenschweissen.de)