

NELSON Stud Welding Units

Technical Information

NELSON
STUD WELDING

A FabriSteel Company

ALPHA 850

**Light, strong,
secure, robust**

Universal Usage

- Drawn Arc up to a full 12 mm Dia.
- Short Cycle up to 8 (10) mm Dia.
- Inert Gas (Option)
- Base material thickness ≥ 0.6 mm
- Mobile and portable

High Welding Reliability

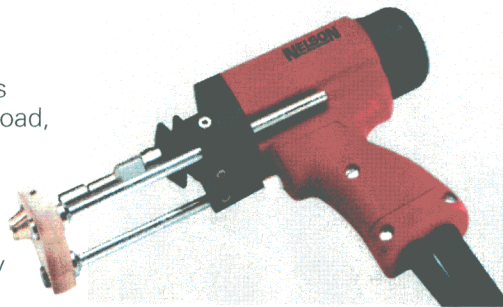
- 25% "Power-Reserve"
- Weld Current and Weld Time infinitely adjustable
- Constant-Current stabilization up to maximum output!

User-friendly and Service-friendly

- Control of functions and self-diagnosis through LED's
- Unique self-shut-off at overload, phase loss and short circuit in gun circuitry
- NELSON-Quick-Service Guarantee
- Electrically and mechanically robust



Available with wheels and Lifting Rings

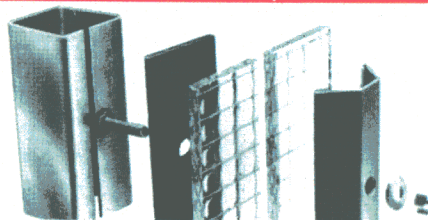


**The world's strongest unit
in this size category**
with: ● Time and Current infinitely adjustable
● Constant-Current Stabilizer
● Plus 25% "Power Reserve"

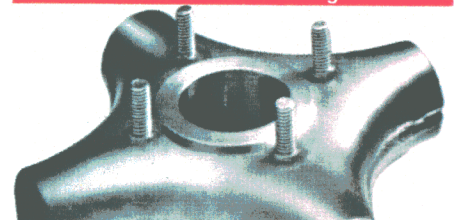
*The NELSON Stud Welding Process provides secure connections – **fast and economically** – in a single, split-second operation without the need for holes.*



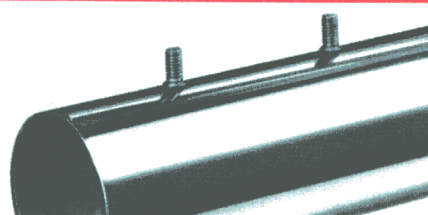
Efficient and totally secure



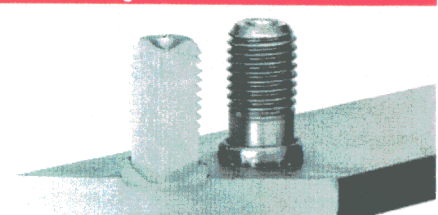
No hole – no leaking



Keeps surfaces intact – no distortion



Homogeneous full fusion weld



Stud Welding – invented by Ted Nelson 60 years ago – today is used to weld billions of studs annually. From small workshops to fully automated large scale production. Stud welding is technically and economically superior

over traditional fastening methods:

- Eliminates costly and time consuming drilling, threading or electrode welding
- Absolutely secure weld: stronger than stud and base metal

- No drill hole – therefore:
 - Less susceptible to rust
 - No sealing required
 - No material weakening
- Highly accurate positioning

NELSON
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The Name for Stud Welding

Stud Welding Units Alpha 850

High Welding Performance

● The high output power was intentionally set high at 850 Amps (or 500 Amps) in order to weld 12 mm diameter studs (or 8 mm) without any risk – even with long cables, high duty cycle and under adverse conditions such as an unstable mains supply.

- The combination of
 - Infinitely adjustable Weld Current
 - Constant-Current stabilization
 - Infinitely adjustable Weld Time

ensures the most secure weld under any condition.

- The **NELSON Power Reserve** automatically ensures secure welds even under continuous high duty cycle.

Ease of Operation, Service-friendly

- The infinitely adjustable Current x Time Optimization is not only an indispensable safety feature – it also ensures ease of operation.
- The functions of the unit are constantly monitored and indicated through LED's.
- Built-in Double-Triggering Prevention avoids accidental retriggering after weld.
- The unit shuts off automatically in the event of overheating, phase loss and/or short-circuit in the gun circuitry.
- LED's allow instant „Trouble-shooting“.

Technical Data

ALPHA 850

Duty Cycle under continuous operation – Drawn Arc –

(Standard 5 m Gun Cable)

Weld Current

Power incl. Reserve

Weld Time

Size (H x W x D)

Weight Unit

Weight Gun (NS 40)

Fusing

Supply

Enclosure

Input Voltage

Stud

S 12

MP 12

MR 12

S 8

Weld Dia.

12.00 mm

10.80 mm

9.50 mm

8.00 mm

Duty Cycle

3 per min.

5 per min.

7 per min.

10 per min.

200 – 850 Amps., stepless with constant-current stabilization 1050 Amps.

0,01 – 1 s, stepless

325 x 370 x 550 mm (excl. handle)

64 kg (with cable)

2,4 kg (with cable)

35 Amps./per phase, HRC

415 Volts AC

IP 23

220/380, 415, 500, 200/400, 220/440 V + Options, 50/60 Hz.

Options:

- Inert Gas*
- Automatic Stud Feeder
- Wheels

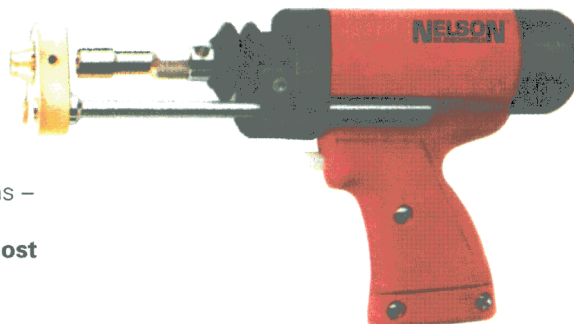
*In accordance with DVS 0902, § 2.2 welding standard, studs 10 mm dia. and larger require a ceramic ferrule.

Stud welding with inert gas, without ferrule only below 10 mm dia., only in gravity positions and only under special conditions. Please contact our technical advisors!!

The Superior NS 40 Welding Gun

makes your work even more precise, secure and easy

A reliable welding gun is the prerequisite of a secure, reliable weld. The ALPHA-System includes the NS 40 Gun – an improvement of the legendary NS 30 Gun. It has – under toughest working conditions – acquired the reputation as the **world's most-used, most reliable, everlasting stud welding gun.**



NS 40 B-1
Drawn Arc

NS 40 SL
Short Cycle



Thanks to its ergonomically formed handle, the stable gun body lies firmly in the hand.

NELSON
STUD WELDING

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