

# NELSON Stud Welding Units

Technical Information

**NELSON**  
STUD WELDING

A FabriSteel Company

## INTRA 1400 INTRA 2100

**Secure, robust,  
powerful**

### INTRA 1400

For full strength welds  
up to a full 16 mm weld  
diameter

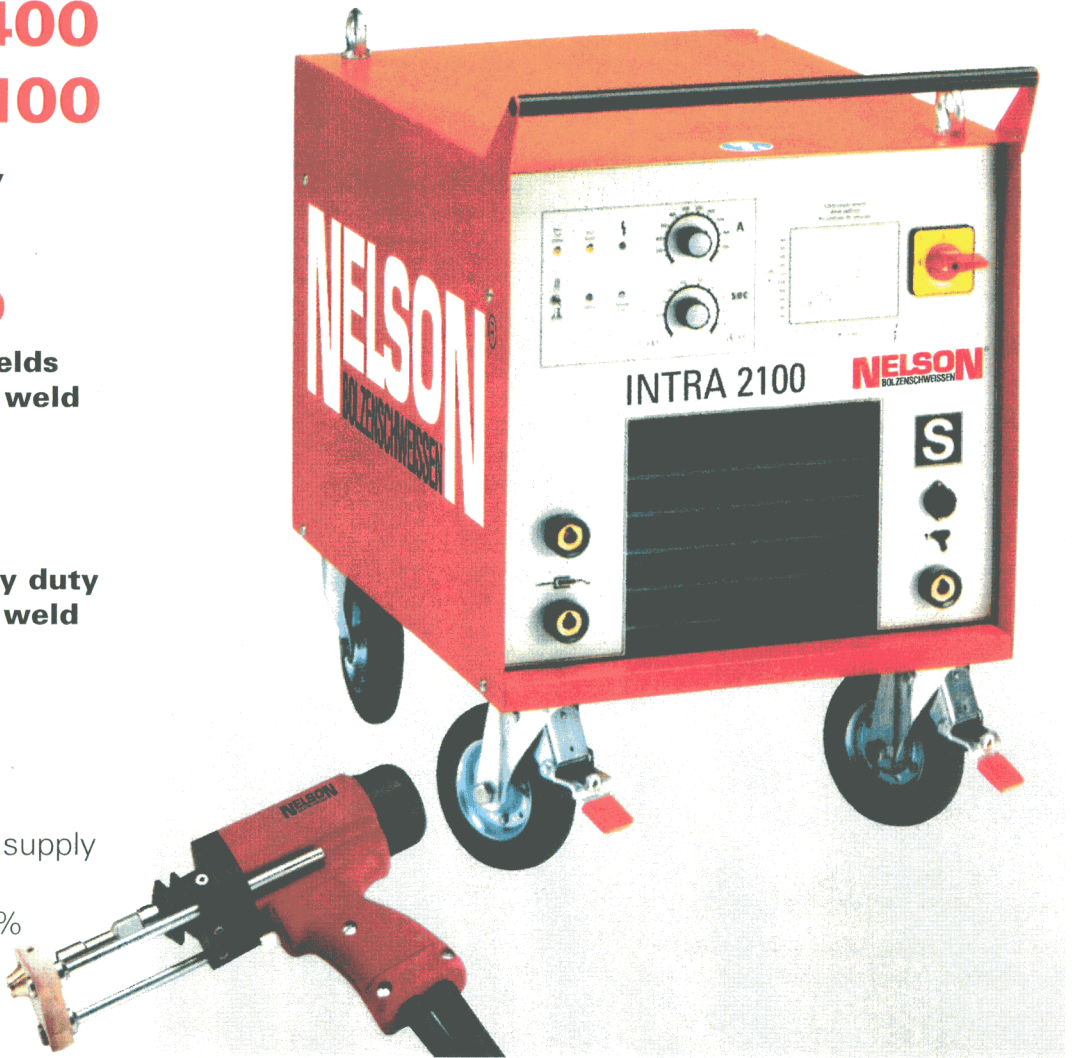
### INTRA 2100

For extremely heavy duty  
up to a full 22 mm weld  
diameter,

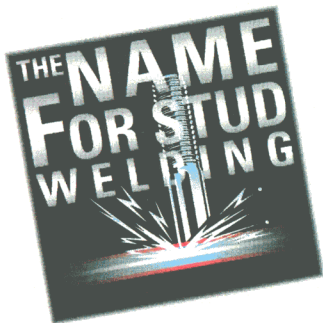
even

- under duty cycle
- long cables
- an unstable mains supply

through 25% and 12%  
Power Reserves and  
high Temperature  
Stability.



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



#### Universal Usage

- Drawn Arc up to a full 22 mm diam.
- Short Cycle up to 8 (10) mm dia.
- Inert Gas (Option)
- Automatic Stud Feeder (Option)

#### User-friendly and Service-friendly

- Indication of functions and selfdiagnosis through LED's
- Unique self-shut-off at overload, phase loss, and short circuit in gun circuitry
- Quick „Trouble-Shooting“ through LED's and Test Points
- NELSON-Quick-Service Guarantee

#### Highest Welding Reliability

- 25% and 12% Power-Reserve respectively for heavy duty even under continuous operation
- Weld Current and Weld Time infinitely adjustable
- Constant-Current stabilization up to maximum output!
  - controls electronically the rated output during welding
  - compensates unstable mains supply up to max. tolerance

#### Tough and Safe

- Electrically and mechanically robust
- Solid state Reliability
- Safety-tested

**NELSON**  
STUD WELDING

**The Name for Stud Welding**

## Stud Welding Units

### INTRA 1400

### INTRA 2100

#### Highest Welding Reliability

● The high output power was intentionally set high at 1400 Amps in order to weld full 16 mm dia. studs securely in accordance with the EN 14555 welding standard – even with long cables, high duty cycle and under adverse conditions such as an unstable mains supply.

● The 2100 Amps output allows full strength welds up to a full 22 mm dia. in accordance with the EN 14555 welding standard even under extreme conditions.

● The combination of  
 – **Infinitely adjustable Weld Current**  
 – **Constant-Current stabilization**  
 – **Infinitely adjustable Weld Time**  
 ensures the most secure weld under almost 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 and PCB test points allow instant "Trouble-shooting".

#### Technical Data INTRA 1400 INTRA 2100

	INTRA 1400	INTRA 2100
<b>Duty Cycle under continuous operation – Drawn Arc –</b> (Standard 5 m Gun Cable)	<b>Stud</b> <b>S 16</b> <b>MP 16</b> <b>MR 16</b> <b>S 10</b>	<b>Weld Dia.</b> <b>16.00 mm</b> <b>14.60 mm</b> <b>13.20 mm</b> <b>10.00 mm</b>
	<b>Duty Cycle</b> 6 per min. 8 per min. 10 per min. ∞	<b>Stud</b> <b>KB 7/8"</b> <b>S 16</b> <b>MP 16</b> <b>S 10</b>
	<b>Weld Dia.</b> 16.00 mm 14.60 mm 10.00 mm	<b>Duty Cycle</b> 3 per min. 6 per min. 8 per min. ∞
<b>Weld Current</b>	200–1400 Amps, stepless with constant-current stabilization 1750 Amps	200–2100 Amps, stepless with constant-current stabilization 2350 Amps
<b>Power incl. Reserve</b>	1750 Amps	2350 Amps
<b>Weld Time</b>	0,01–1 s, stepless	0,01–1 s, stepless
<b>Size (H x W x D)</b>	520 x 750 x 770 mm	520 x 750 x 770 mm
<b>Weight Unit</b>	190 kg (with cable)	248 kg (with cable)
<b>Weight Gun (NS 40)</b>	4,5 kg (with cable)	4,5 kg (with cable)
<b>Fusing</b>	63 A träge (380 V)	63 A träge (380 V)
<b>Supply</b>	63 A CEE	63 A CEE
<b>Enclosure</b>	IP 23	IP 23
<b>Input Voltage</b>	220/440 V + Options, 50/60 Hz.	

#### Options:

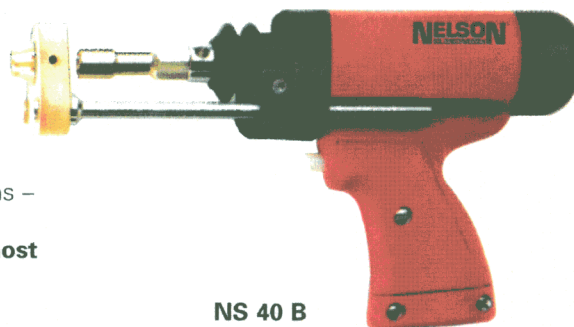
##### ● Automatic Stud Feeder ● Inert Gas\*

\*In accordance with DEN 14555, § 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**  
Drawn Arc

NS 40 B-1 without hydraulic damper, for studs up to 12 mm diam.

NS 40 B-2 without hydraulic damper, with larger welding cable cross-section, for studs up to 12 mm diam.

NS 40 B-3 with hydraulic damper, for studs up to 16 mm diam.

NS 40 B-4 with hydraulic damper and larger welding cable cross-section, for studs up to 16 mm diam.

**NS 40 SL**  
Short Cycle



# NELSON®

STUD WELDING

## Germany

(European Headquarters)



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