

# NELSON Stud Welding Units

Technical Information

**NELSON**<sup>®</sup>  
STUD WELDING

## INTRA 1400 INTRA 2100

**Secure, robust,  
powerful**

### INTRA 1400

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

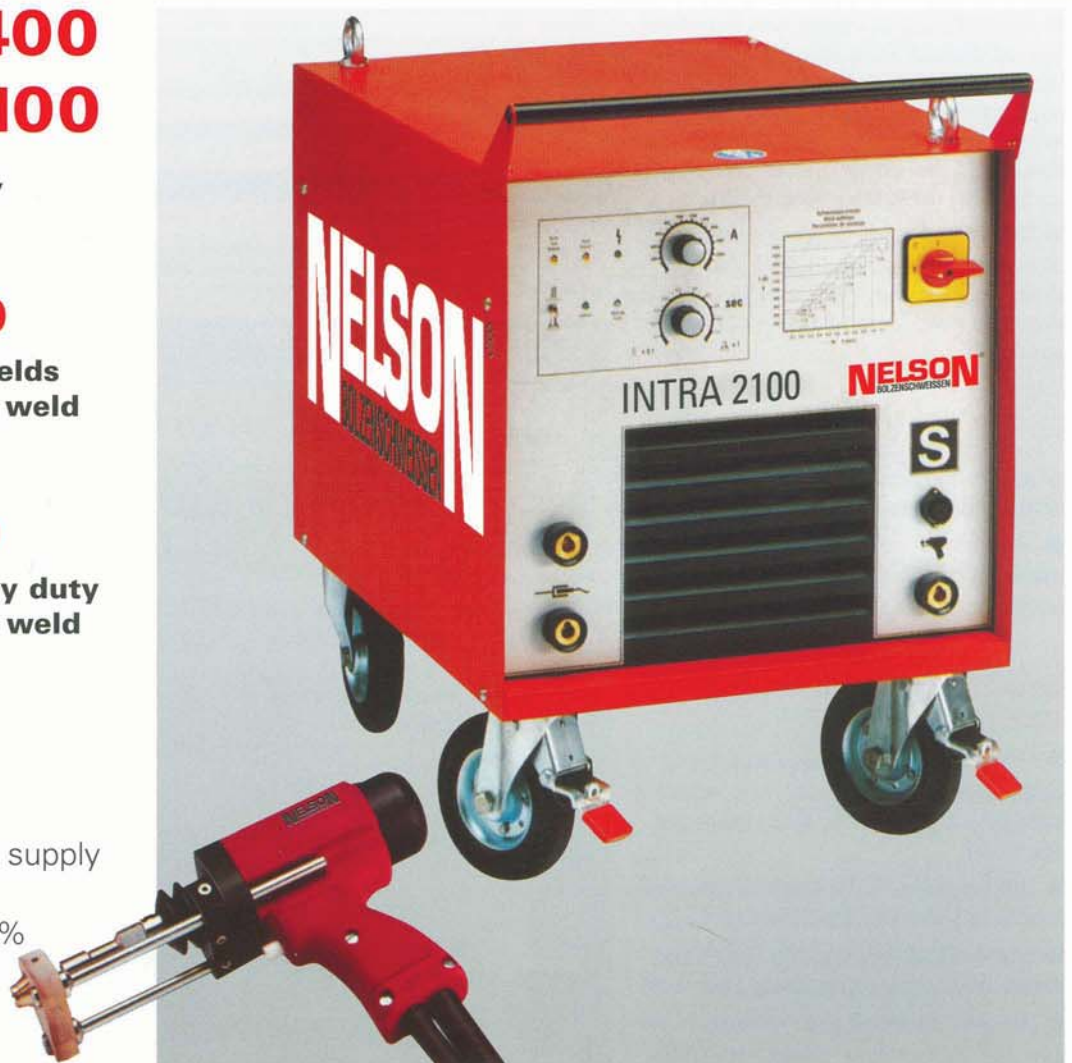
### INTRA 2100

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**<sup>®</sup>  
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				
Duty Cycle under continuous operation – Drawn Arc – (Standard 5 m Gun Cabel)	Stud <b>S 16</b> <b>MP 16</b> <b>MR 16</b> <b>S 10</b>	Weld Dia. <b>16.00 mm</b> <b>14.60 mm</b> <b>13.20 mm</b> <b>10.00 mm</b>	Duty Cycle 6 per min. 8 per min. 10 per min. ∞	Stud <b>KB 7/8"</b> <b>S 16</b> <b>MP 16</b> <b>S 10</b>	Weld Dia. <b>22.20 mm</b> <b>16.00 mm</b> <b>14.60 mm</b> <b>10.00 mm</b>	Duty Cycle 3 per min. 6 per min. 8 per min. ∞
Weld Current	200–1400 Amps, stepless with constant-current stabilization		200–2100 Amps, stepless with constant-current stabilization		2350 Amps	
Power incl. Reserve	1750 Amps		0,01–1 s, stepless		0,01–1 s, stepless	
Weld Time	0,01–1 s, stepless		520 x 750 x 770 mm		520 x 750 x 770 mm	
Size (H x W x D)	190 kg (with cable)		4,5 kg (with cable)		248 kg (with cable)	
Weight Unit	4,5 kg (with cable)		63 A träge (380 V)		63 A träge (380 V)	
Weight Gun (NS 40)	63 A CEE		IP 23		63 A CEE	
Fusing	230/400 V + Options, 50/60 Hz.					
Supply						
Enclosure						
Input Voltage						

#### 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 SL**  
Short Cycle



- 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.

**NELSON**  
STUD WELDING

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