

STANLEY
Engineered Fastening



NELSON[®]

EQUIPMENT CATALOGUE – EU

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 **UNI-BIS**
INDUSTRY SOLUTIONS



NELSON®

The Global Leader
For Stud Welding
Solutions

NELSON®

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Equipment Catalogue

Nelson Stud Welding offers powerful structural and non-structural fastening solutions for applications across multiple industries.

This catalogue highlights the main equipment solutions available in Europe.

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Since 1939, Nelson® has been creating powerful, cost-effective stud welding fasteners and equipment that improve productivity for construction, nuclear, shipbuilding, and industrial markets around the globe.

N1500i

Inverter

Portable Inverter: Weighing nearly 36kg, this machine is easy to move to the work site. The high frequency inverter design balances an auto compensating control system with a light weight.

Stud Expert™: The N1500i includes the Stud Expert™ feature that helps the operator easily set-up a welding application. This wizard makes set-up as simple as determining the diameter and material to be used.

Dot Matrix Screen: The N1500i uses the familiar Dot Matrix interface the customers have used for years. The standard functions and display icons haven't changed so the operator will need little or no training.

Process Monitoring: The N1500i welder includes quality monitoring features that allow the operators to evaluate each weld to ensure optimal quality.

Pulse Welding: The N1500i allows the user to design custom waveforms to optimize the welding process. The pulses created by the user make welding aluminum and other exotic materials possible by vaporizing oxides and contaminants on the base material surface.

Advanced Microprocessors & Communications: The N1500i uses advanced microprocessor control and will expand connectivity in the future for process control and weld data.

The N1500i FACS CE version will be released soon to further expand the inverter feature set.

At a Glance:

- CE compliant
- Integrated gas control
- Weld setting presets

System Components:

- Welder
- Gun cable extensions
- Ground cable
- Guns (NS40-SL, NS40-B, NS20-BHD)



N1500i

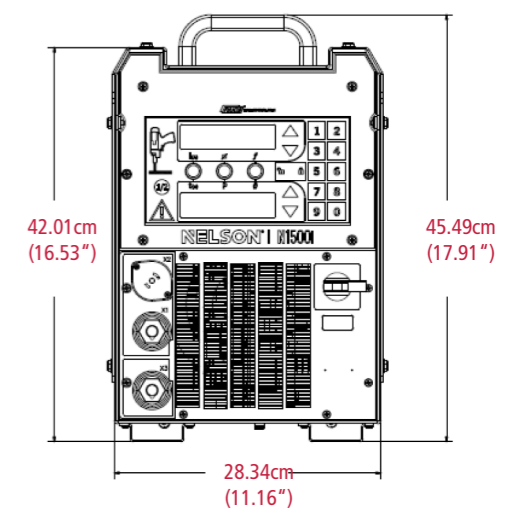
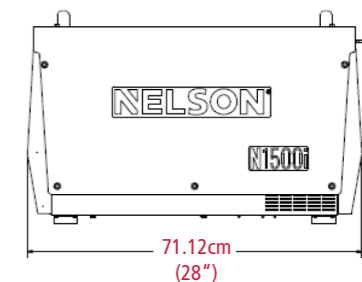
Inverter

Specifications

Welding Process	Drawn Arc, Short Cycle, Gas Arc	
Welding Current (I)	100A—1500A continuously adjustable	
Welding Time (T)	5ms—1000ms continuously adjustable	
Weight (welder only)	36kg (78lbs)	
Dimensions (L x W x H)	71 x 28 x 45cm (28 x 11 x 17")	
Enclosure Rating	IP23S	
Guns	NS40-SL, NS40-B, NS20-BHD	
Materials	Mild steel, stainless steel, aluminum, alloys, and high strength steel	
Weld Rates	19mm (3/4")	4 Studs/Min
	16mm (5/8")	8 Studs/Min
	13mm (1/2")	14 Studs/Min
	10mm (3/8")	28 Studs/Min
Max Stud Ø	5mm (3/16")	28 Studs/Min
	Steel/SS	19mm (3/4")
	Aluminum	13mm (1/2")
Input Power	3 Phase 400V 50Hz @ 63A	
	1 Phase 200V 50Hz@63A	
	Power plug: 63A CEE/4m	
Display	Dot Matrix	



The Dot Matrix friendly user interface has 10* preset buttons, bright alphanumeric displays, graphic gun, and weld quality indicator.



N800i

Inverter

Portable Inverter: Weighing nearly 18kg, this machine is the lightest drawn arc stud welder in the Nelson equipment family. This optimizes the portability for making it easy to for one person to carry the welder to the work site.

Stud Expert™: The N800i includes the Stud Expert™ feature that helps the operator easily set-up a welding application. This wizard makes set-up as simple as determining the diameter and material to be used.

Dot Matrix Screen: The N800i uses the familiar Dot Matrix interface the customers have used for years. The standard functions and display icons haven't changed so the operator will need little or no training.

Process Monitoring: The N800i welder includes quality monitoring features that allow the operators to evaluate each weld to ensure optimal quality.

Pulse Welding: The N800i allows the user to design custom waveforms to optimize the welding process. The pulses created by the user make welding aluminum and other exotic materials possible by vaporizing oxides and contaminants on the base material surface.

Advanced Microprocessors & Communications: The N800i uses advanced microprocessor control to regulate the constant current and weld gun parameters. future for process control and weld data.

The N800i FACS CE version will be released soon to further expand the inverter feature set.

At a Glance:

- CE compliant
- Integrated gas control
- Weld setting presets

System Components:

- Welder
- Gun cable extensions
- Ground cable
- Guns (NS40-SL, NS40-B)

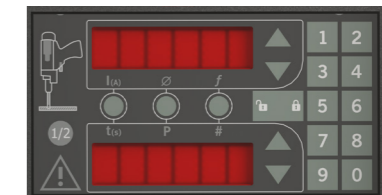


N800i

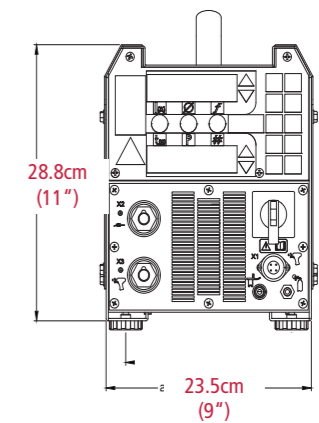
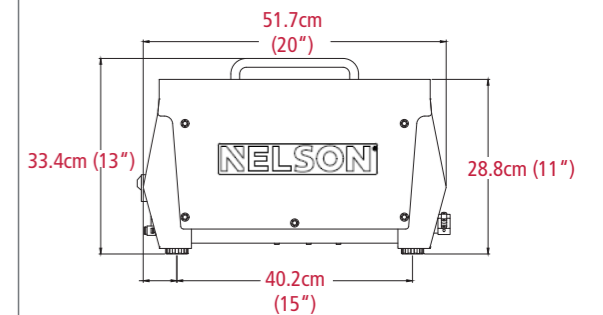
Inverter

Specifications

Welding Process	Drawn Arc, Short Cycle, Gas Arc	
Welding Current (I)	100A—800A	
Welding Time (T)	5ms—1000ms continuously adjustable	
Weight (welder only)	18kg (40lbs)	
Dimensions (L x W x H)	33 x 28 x 51cm (13 x 11 x 20")	
Enclosure Rating	IP23S	
Guns	NS40-SL, NS40-B	
Materials	Mild steel, stainless steel, aluminum, alloys, and high strength steel	
Weld Rates	13mm (1/2")	3 Studs/Min
	10mm (3/8")	6 Studs/Min
	5mm (3/16")	12 Studs/Min
Max Stud Ø	Steel/SS	13mm (1/2")
	Aluminum	10mm (3/8")
Input Power	3 Phase 400V 50Hz @ 32A	
	Power plug: 32A CEE/3m	
Display	Dot Matrix	



The Dot Matrix friendly user interface has 10* preset buttons, bright alphanumeric displays, graphic gun, and weld quality indicator.



N550c FACS

Flexible Arc Control System Arc Charger

Portable Arc Charger: Weighing about 40kg, this machine is easy to move to the work site. The welder has an optional wheel kit that allows the operator to roll the unit anywhere.

Stud Expert™: The N550c FACS includes the Stud Expert™ feature that helps the operator easily set-up a welding application. This wizard makes set-up as simple as determining the diameter, and material to be used.

Dot Matrix Screen: The new FACS equipped N550c uses the familiar Dot Matrix interface the customers have used for years. The standard functions and display icons haven't changed so the operator will need little or no training.

Process Monitoring: The N550c FACS welder includes quality monitoring features that allow the operators to evaluate each weld to ensure optimal quality.

Pulse Welding: The N550c allows the user to design custom waveforms to optimize the welding process. The pulses created by the user make welding aluminum and other exotic materials possible by vaporizing oxides and contaminants on the base material surface.

Short Cycle (SC) Capabilities: The short cycle features allow the users to weld sheet metal applications with Lg flange, fir tree, and ground studs.



The N550c FACS CE version utilizes the new Flexible Arc Control System (FACS).

At a Glance:

- CE compliant
- Household input power
- Weld setting presets

System Components:

- Welder
- Gun cable extensions
- Ground cable
- Guns (NS40-SL, NS40-B)

N550c FACS

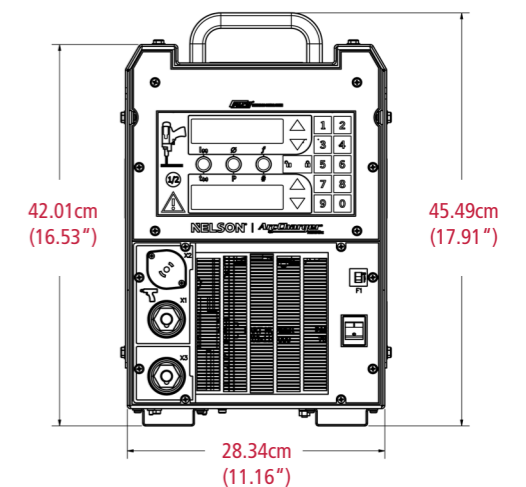
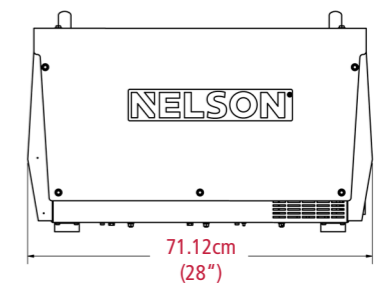
Flexible Arc Control System Arc Charger

Specifications

Model	N550c	N550c SC	
Welding Process	Drawn Arc, Short Cycle, Gas Arc		
Welding Current (I)	100A–550A	100A–1500A	
Welding Time (T)	20–320ms	20–50ms	
Weight (welder only)	34kg (86lbs)		
Dimensions (LxWxH)	71 x 28 x 45cm (28 x 11 x 17")		
Enclosure Rating	IP23S		
Guns	NS40-SL and NS40-B		
Materials	Mild steel, stainless steel, aluminum, alloys, high strength steel		
Weld Rates	13mm (1/2")	N/A Studs/Min	14 Studs/Min
	10mm (3/8")	8 Studs/Min	16 Studs/Min
	8mm (5/16")	14 Studs/Min	18 Studs/Min
	6mm (1/4")	28 Studs/Min	20 Studs/Min
Max Stud Ø	Steel/SS	10mm (3/8")	13mm (1/2")
	Aluminum	10mm (3/8")	TBD
Input Power	1 Phase 230V 50 Hz @ 8A		
Display	Dot Matrix		



The Dot Matrix friendly user interface has 10* preset buttons, bright alphanumeric displays, graphic gun, and weld quality indicator.



The N550c is available with a wheel kit for easy transportation.

N4000 / N6000

Transformer Rectifier - Nelweld

Dot Matrix: The Nelweld N4000/6000 stud welders use the familiar Dot Matrix interface the customers have used for years. The standard functions and display icons haven't changed so the operator will need little or no training.

Rugged Design: The robust design of the Nelweld stud welders allow the customers to work in extreme environments and support cable extensions over 100m in length.

Six Gunner: The Nelweld N4000/6000 stud welders have the optional outlet expander to multiplex one outlet into six outlets. The Six Gunner mounts to the top of the Nelweld, and can be easily up-graded in the field.

High Duty Cycle Dual Outlet: The Nelweld welder control has been designed to have a very high duty cycle for large diameter studs utilizing dual outlets. This allows two operators to weld quickly when a fast application is required.

Advanced Microprocessors & Communications: The N4000/6000 units use advanced microprocessor control to regulate the constant current and weld gun parameters.

The Nelson Nelweld FACS CE version will be released soon to further expand the welder feature set.

At a Glance:

- CE compliant
- Very high duty cycle
- Weld setting presets

System Components:

- Welder
- Gun cable extensions
- Ground cable
- Guns (NS40-SL, NS40-B, NS20-BHD)



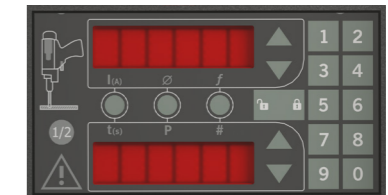
Nelson Nelweld N6000

N4000 / N6000

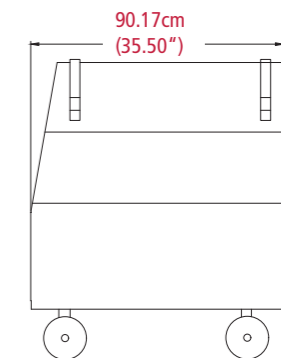
Transformer Rectifier - Nelweld

Specifications

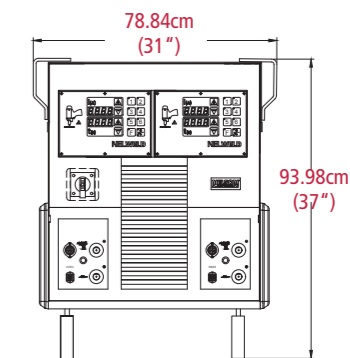
Model	N4000	N6000
Welding Process	Drawn Arc	
Welding Current (A)	300-2100	300-2500
Welding Time (ms)	20-1000	20-1500
Weight (welder only)	330kg (727lbs)	480kg (1058lbs)
Dimensions (LxWxH)	61x 68 x 85cm (24 x 27 x 33")	78 x 90 x 93cm (27 x 30 x 35")
Enclosure Rating	IP23S	
Guns	NS40-SL, NS40-B and NS20-BHD	
Materials	Mild steel, stainless steel, aluminum, alloys, high strength steel	
Welding Performance	22mm (8.66") 4 Studs/min	25mm (9.84") 10 Studs/min
Input Power	3 Phase 400V 50Hz @100A Power plug: 125A CEE/5m	
Display	Dot Matrix	



The Dot Matrix friendly user interface has 10* preset buttons, bright alphanumeric displays, graphic gun, and weld quality indicator.



Nelson Nelweld N6000



Nelson Nelweld N6000

ALPHA 850

Transformer Rectifier

Simple User Interface: The Alfa 850 has a straightforward and uncomplicated user control panel to make it easy to set-up the welder to stud weld. It contains one knob for setting the current and another for setting the weld time.

Rugged Design: The rugged design of the Alfa 850 stud welders allow the customers to work in extreme environments and support cable extensions over 30m in length.

LED Indicators & Features: The Alfa 850 includes LEDs to indicate the welder status, and simplify troubleshooting during service. The welder also includes the chuck saver feature that prevents operators from accidentally triggering the gun after a weld, as well as features that automatically protect the welder from overheating and electrical damage.

Wheels: The Alfa 850 comes configured with heavy duty wheel set to allow the installers to easily move the welders into the right location.

Short Cycle Mode: The Alfa 850 is designed to work with the NS40-SL gun when welding on thin sheet metal in Short Cycle mode.

The Alfa 850 welder is a cost effective welding system with a proven track record for reliability.

At a Glance:

- CE compliant
- High duty cycle
- Short Cycle mode

System Components:

- Welder
- Gun cable extensions
- Ground cable
- Guns (NS40-SL & NS40-B)



ALPHA 850

Transformer Rectifier

Specifications

Welding Process	Drawn Arc, Short Cycle	
Welding Current (I)	200A—850A	
Welding Time (T)	10ms-1000ms	
Weight (welder only)	64kg (141lbs)	
Dimensions (L x W x H)	77 x 75 x 52cm (30.3 x 29.5 x 20.5")	
Enclosure Rating	IP23S	
Guns	NS40-SL, NS40-B	
Materials	Mild steel, stainless steel, alloys, and high strength steel	
Weld Rates	12mm (1/2")	6 Studs/Min
	10mm (3/8")	5 Studs/Min
	9.5mm (4/16")	7 Studs/Min
	8mm (5/16")	110 Studs/Min
Max Stud Ø	Steel/SS	13mm (1/2")
Input Power	3 Phase 400V 50Hz @ 32A	
	Power plug: 32A CEE/3m	



INTRA 1400 / INTRA 2100

Transformer Rectifier

Simple User Interface: The Intra 1400/2100 has a straightforward and uncomplicated user control panel to make it easy to set-up the welder to stud weld. It contains one knob for setting the current and another for setting the weld time.

Rugged Design: The rugged design of the Intra 1400/2100 stud welders allow the customers to work in extreme environments and support cable extensions over 50m in length.

LED Indicators & Features: The Intra 1400/2100 includes LEDs to indicate the welder status, and simplify troubleshooting during service. The welder also includes the chuck saver feature that prevents operators from accidentally triggering the gun after a weld, as well as features that automatically protect the welder from overheating and electrical damage.

Wheels: The Intra 1400/2100 comes configured with heavy duty wheel set to allow the installers to easily move the welders into the right location.

The Intra1400/2100 welder is a cost effective welding system with a proven track record for reliability.

At a Glance:

- CE compliant
- High duty cycle
- Robust design

System Components:

- Welder
- Gun cable extensions
- Ground cable
- Guns (NS40-B & NS20-BHD)

Nelson Intra 1400



INTRA 1400 / INTRA 2100

Transformer Rectifier

Specifications

Model	INTRA 1400	INTRA 2100
Welding Process	Drawn Arc, Short Cycle	
Welding Current (I)	200–1400A	200–2100A
Welding Time (T)	10ms-1000ms	
Weight (welder only)	190kg (419lbs)	548kg (547lbs)
Dimensions (L x W x H)	77 x 75 x 52cm (30.3 x 29 x 20")	
Enclosure Rating	IP23S	
Guns	NS40-B & NS20-BHD	
Materials	Mild Steel, stainless steel, alloys, and high strength steel	
Weld Rates	22mm (7/8") n/a	3 Studs/Min
	16mm (5/8")	6 Studs/Min
	14mm (0.55")	8 Studs/Min
	13mm (1/2")	10 Studs/Min
Max Stud Ø	Steel/SS 16mm (5/8")	22mm (7/8")
Input Power	3 Phase 400V 50Hz @ 63A	
	1 Phase 200V 50Hz@63A	
	Power plug: 63A CEE/4m	



NS40-SL

Standard duty stud gun for welding on sheet metal applications

Durable Gun Body: Constructed from thermo-plastic resin for maximum strength and longevity.

Lift Adjustment: Mechanical adjustment for lift heights in increments of 0.25mm with detents on the core screw. Adjusting the core screw clockwise increases the lift height, counter clockwise reduces the lift height.

Lift Mechanism: Assures reliable control of lift height for highly repeatable weld arc length over millions of welds.

Leg Design And Diameter: Stainless steel legs with milled flats resists galling from leg screws and allows free movement of leg assembly during plunge adjustment. The 8mm (5/16") diameter stainless legs resist flexing with longer length studs.

Ergonomic Shape: Shape and balance reduces operator fatigue.

At a Glance:

The NS40-SL works with all the Nelson drawn arc welders configured for Short Cycle mode such as the inverters, N550c, and Alfa 850.

Gun Components:

- Legs
- Feet
- Spark shields
- Chucks



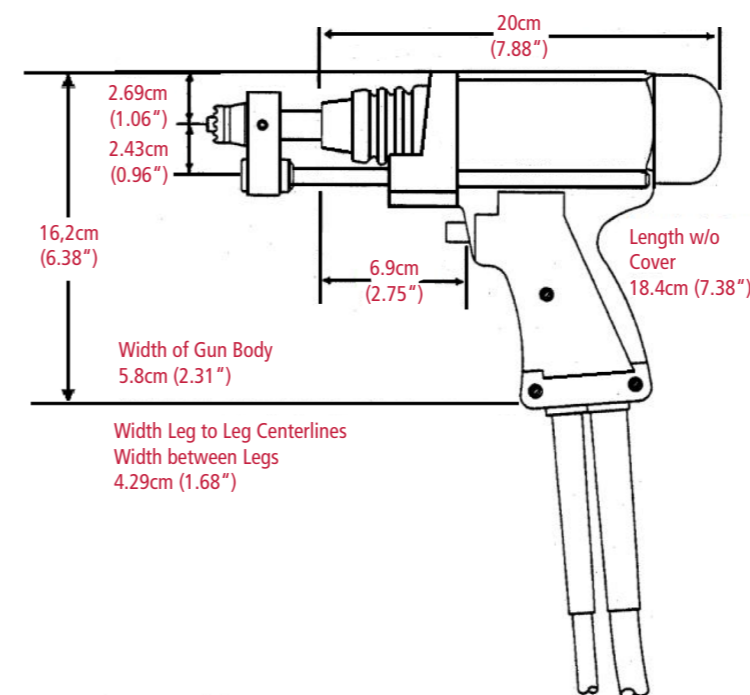
NS40-SL

Standard duty stud gun for welding on sheet metal applications

Specifications

Model	NS40-SL
Length (less accessories)	20cm (7.88")
Working Weight	2.3kg (5lbs)
Shipping Weight	3.1kg (6lbs)
Lift Height Range	10mm (3/8")

The Nelson NS40-SL a rugged, standard duty Drawn Arc stud welding gun designed specifically to weld studs up to 12mm diameter. It can be used to weld smaller diameter studs using the Gas Arc or Short Cycle welding procedure.



Applications:

- Welding of medium diameter studs for construction, shipbuilding and industrial applications.
- Gas Arc welding of small diameter studs for improved weld appearance.
- Short Cycle welding of small diameter studs to sheet metal.

NS40-B

Standard duty stud gun for welding drawn arc applications with a ferrule

Durable Gun Body: Constructed from thermo-plastic resin for maximum strength and longevity.

Lift Adjustment: Mechanical adjustment for lift heights in increments of 0.25mm with detents on the core screw. Adjusting the core screw clockwise increases the lift height, counter clockwise reduces the lift height.

Lift Mechanism: Assures reliable control of lift height for highly repeatable weld arc length over millions of welds.

Leg Design And Diameter: Stainless steel legs with milled flats resists galling from leg screws and allows free movement of leg assembly during plunge adjustment. The 8mm (5/16") diameter stainless legs resist flexing with longer length studs.

Ergonomic Shape: Shape and balance reduces operator fatigue.

Plunge Dampener: The NS40-B can be equipped with an optional plunge dampener for welding studs larger than 10mm. This feature known as Tranquil Arc slows the stud plunging into the molten metal to reduce weld spatter.

At a Glance:

The NS40-B works with all the Nelson drawn arc welders such as the inverters, Arc Charger, N4000/6000, Intra 1400/2100, and Alfa 850.

Gun Components:

- Legs
- Feet
- Ferrule grips
- Plunge dampener
- Chucks



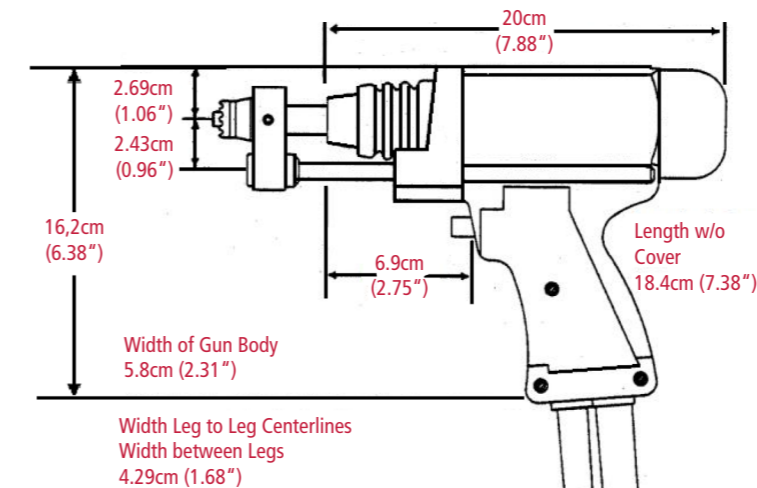
NS40-B

Standard duty stud gun for welding drawn arc applications with a ferrule

Specifications

Model	NS40-B
Length (less accessories)	20cm (7.88")
Working Weight	2.3kg (5 lbs)
Shipping Weight	3.1kg (6 lbs)
Lift Height Range	10mm (3/8")

The Nelson NS40-B a rugged, standard duty Drawn Arc stud welding gun designed specifically to weld studs up to 12mm diameter. It can be used to weld smaller diameter studs using the Gas Arc or Short Cycle welding procedure.



Applications:

- Welding of medium diameter studs for construction, shipbuilding and industrial applications.
- Gas Arc welding of small diameter studs for improved weld appearance.
- Short Cycle welding of small diameter studs to sheet metal.

NS20-BHD

Heavy duty stud gun for welding drawn arc applications with a ferrule

Durable Gun Body: Constructed from thermo-plastic resin for maximum strength and longevity.

Lift Adjustment: Mechanical adjustment for lift heights in increments of 0.25mm with detents on the core screw. Adjusting the core screw clockwise increases the lift height, counter clockwise reduces the lift height.

Lift Mechanism: Assures reliable control of lift height for highly repeatable weld arc length over millions of welds.

Leg Design And Diameter: Stainless steel legs with milled flats resists galling from leg screws and allows free movement of leg assembly during plunge adjustment. The 10mm (3/8") diameter stainless legs resist flexing with longer length studs.

Ergonomic Shape: Shape and balance reduces operator fatigue.

Plunge Dampener: The NS40-BHD can be equipped with an optional plunge dampener for welding studs larger than 10mm. This feature known as Tranquil Arc slows the stud plunging into the molten metal to reduce weld spatter.

At a Glance:

The NS20-BHD works with all the large diameter Nelson Drawn Arc welders such as the N1500i, Nelwelds N4000/6000, and Intra 1400/2100.

Gun Components:

- Legs
- Feet
- Ferrule grips
- Plunge dampener
- Chucks



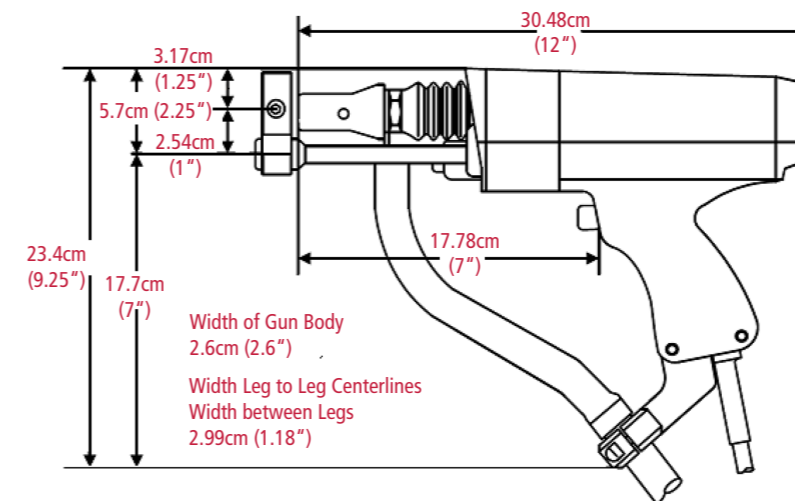
NS20-BHD

Heavy duty stud gun for welding drawn arc applications with a ferrule

Specifications

Model	NS20-BHD
Length (less accessories)	30.5cm (12")
Basic Weight	3.1kg (6 lbs)
Working Weight	4.3kg (9 lbs)
Shipping Weight	5kg (11 lbs)
Lift Height Range	22mm (7/8")

The Nelson NS20-BHD is a rugged, standard duty Drawn Arc stud welding gun designed specifically to weld studs up to 25mm (6/8") diameter. It can be used to weld smaller diameter studs using the Gas Arc or Short Cycle welding procedure.



Applications

- Welding of large diameter studs for construction, shipbuilding and industrial applications.
- Shear connector stud through galvanized metal decking.
- Long studs is permitted by use of rigid extension accessories.

NELSON®

Options



Six Gunner



Wheelkit



Extension Cables

Accessories



Ferrules



Chucks



Feet



Grips

STANLEY

Engineered Fastening

Stanley Engineered Fastening — a division of Stanley Black & Decker — is the global leader in precision fastening and assembly solutions. Our industry-leading brands, Avdel®, Integra™, Nelson®, Optia™, POP®, STANLEY® Assembly Technologies and Tucker®, elevate what our customers create. Backed by a team of passionate and responsive problem-solvers, we empower engineers who are changing the world.

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