



Welding and Joining



Contents

SPOT WELDING	03
WELDING	04
RIVETING	05
12500 INVERTER SPOT WELDING MACHINE with "C" GUN	06
14500 INVERTER SPOT WELDING MACHINE with "C" GUN	08
12500 INVERTER SPOT WELDING MACHINE with "X" GUN	10
14500 INVERTER SPOT WELDING MACHINE with "X" GUN	12
ARMS FOR A C GUNS	14
ARMS FOR A X GUNS	15
200A Q5.2 SYNERGIC INVERTER WELDING MACHINE	16
320A SYNERGIC INVERTER WELDING MACHINE	18
PNEUMATIC-HYDRAULIC RIVETING MACHINE	20
ELECTRO-HYDRAULIC RIVETING MACHINE	22

SPOT WELDING

It allows two or more pieces of steel, even with different thickness at the point where they are held in contact, to be joined together by means of an electric current.

It can be of different types:

- Double-sided (the pieces are clamped between two electrodes by a gun)
- Single-sided (the operator applies the pressure manually)

Changing the time, the force of the gun and the current, allows welds with the following characteristics:

- Contact resistance
- Width of nugget
- Metal heating
- Strength



WELDING

It allows two pieces of the same metal to be continuously joined together using a filler material and protection gas.

It can be of different types:

- MIG/MAG
- braze welding
- pulsed arc
- double-pulsed arc.

By modifying the inductance and welding arc values, it is possible to obtain a weld with the following characteristics:

- Width
- Depth
- Temperature



RIVETING

It allows two or more pieces of material, even dissimilar metals, to be joined by means of glues and rivets.

It can be of different types:

- Self-piercing (does not require a previously drilled hole)
- Flow form (pressed into the hole created by the previous rivet being replaced)
- Blind (requires a hole and is used where access is only possible from one side)
- Threaded (allows the application of a threaded insert in an existing hole)

Riveting takes place after removing the existing rivet.

Each manufacturer requires specific rivets and dedicated punches to press them.

It is also possible to use different types of rivets when replacing the same panel.





12500 INVERTER SPOT WELDING MACHINE with “C” GUN water-cooled with spotter

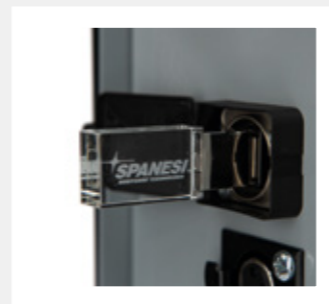
- Capable of manual welding (also Single Point)
- 50 preset welding programs + 50 more available.
- Hoist for gun support.
- Multifunctional display with membrane keyboard.
(Arms not included)



ROTATING ROD
With slide



HOIST
For gun support



USB
Welding report



MULTIFUNCTIONAL DISPLAY
With membrane keyboard

FEATURES

01. Extremely precise welds thanks to inverter technology on all types of steel, including HSS and UHSS.
02. Pre-set programs for results that meet OEM requirements.
03. The operator can adjust current, pressure and duration for even more precise results.
04. Dedicated software that allows welding data to be exported, for easy reading and storage.
05. Transformer integrated in the welding machine.
06. Lightweight and easy to handle gun (7 kg) that can be used comfortably in all positions.
07. Quick and easy arm replacement without shutting down the machine.
08. Support rod with slide lock for comfortable and safe working.
09. Hoist to support the Welding gun.
10. Water cooling for safe operation by preventing components (transformer, cables, gun, arms, electrodes) from overheating.
11. Easy mobility throughout repair facility.
12. Easily accessible side pockets for storing the arms.
13. Convenient toolbox complete with all spotter accessories.

Technical specifications

Rated power at 50%	25 kVA	Welding on mild steel	3+3 mm
Max. secondary short-circuit current	13 kA	Force at the electrodes (maximum) with 8.5 bar pressure	480 daN
Three-phase input voltage +/- 10%	400 V	Length of gun cable	2500 mm
Rated frequency	50/60 Hz	Gun cable section	150 mm²
Delayed fuses	32 A	Electrode cone diameter	12 mm
Secondary voltage without load	16 V	Single-sided gun	2500 mm
Connection power 400/200V (three-phase power supply)	20 kVA	Length of ground cable	2500 mm
Gun weight	7 kg	Spotter cable section	150 mm²
Cooling tank capacity	8 L		

Optional



10004402
X gun adapter



14500 INVERTER SPOT WELDING MACHINE with AUTOMATIC "C" GUN water-cooled

- Automatic welding with pre-set programs.
- Capable of manual welding (during which the operator selects materials and thicknesses)
- No. of welding programs.
- Touch screen control panel.
- Automatic thickness recognition.
- Automatic material recognition. (Arms not included)



ROTATING ROD
With gun support slide



HOIST
For gun support



USB
Welding report



TRANSFORMER
Installed inside the gun



TOUCH SCREEN
Advanced user interface

FEATURES

01. Extremely precise welds thanks to inverter technology on all types of steel, including HSS and UHSS.
02. Pre-set programs for results that meet OEM requirements.
03. The operator can adjust current, pressure and duration for even more precise results.
04. Dedicated software that allows welding data to be exported, for easy reading and storage.
05. Transformer integrated in the welding gun.
06. Lightweight and easy to handle gun (9 kg) that can be used comfortably in all positions.
07. Quick and easy arm replacement without shutting down the machine.
08. Support rod with slide lock for comfortable and safe working.
09. Hoist to support the welding gun during use.
10. Water cooling for safe operation by preventing components (transformer, cables, gun, arms, electrodes) from overheating.
11. Easy mobility throughout repair facility.
12. Easily accessible side pockets for storing the arms.
13. Convenient toolbox.

Technical specifications

Rated power at 50%	13 kVA	Connection power (three-phase power supply)	20 kVA
Max. secondary short-circuit current	15 kA	Welding on mild steel	3+3 mm
Three-phase input voltage +/- 10%	400 V	Force at the electrodes (maximum) with 8.5 bar pressure	480 daN
Rated frequency	50/60 Hz	Force at the electrodes with 9 bar pressure	560 daN
Delayed fuses	16/32 A	Electrode cone diameter	12 mm
Secondary voltage without load	6,5 V	Cooling tank capacity	8 L
Gun weight	9 kg	Length of gun cable	3000 mm

Optional



10001012
Spotter



10004402
X gun adapter



12500 INVERTER SPOT WELDING MACHINE WITH “X” GUN water-cooled with spotter

- Possibility of manual welding (also Single Point)
- 50 preset welding programs + a further 50 available.
- Hoist for gun support.
- Multifunctional display with membrane keyboard.
(Arms not included)



ROTATING ROD
With slide



HOIST
For gun support



USB
Welding report



MULTIFUNCTIONAL DISPLAY
With membrane keyboard

FEATURES

01. Extremely precise welds thanks to inverter technology on all types of steel, including HSS and UHSS.
02. Pre-set programs for results that meet OEM requirements.
03. The operator can adjust current, pressure and duration for even more precise results.
04. Dedicated software that allows welding data to be exported, for easy reading and storage.
05. Transformer integrated in the welding machine.
06. Lightweight and easy to handle gun (4.6 to 5.2 kg) that can be used comfortably in all positions.
07. Quick and easy arm replacement without shutting down the machine.
08. Support rod with slide lock for comfortable and safe working.
09. Hoist to support the welding gun during use.
10. Water cooling for safe operation by preventing components (transformer, cables, gun, arms, electrodes) from overheating.
11. Easy mobility throughout repair facility.
12. Easily accessible side pockets for storing the arms.
13. Convenient toolbox complete with all spotter accessories.

Technical specifications

Rated power at 50%	25 kVA	Force at the electrodes	560 daN
Max. secondary short-circuit current	13 kA	Length of gun cable	2500 mm
Three-phase input voltage +/- 10%	400 V	Section of welding cables	150 mm²
Rated frequency	50/60 Hz	Electrode cone diameter	12 mm
Delayed fuses	16 A	Length of single-sided gun cable	2500 mm
Secondary voltage without load	6,5 V	Length of ground cable	2500 mm
Connection power 400/200V (three-phase power supply)	20 kVA	Spotter cable section	150 mm²
Cooling tank capacity	8 L	Arm coupling diameter	24 mm
Welding on mild steel	3+3 mm		



14500 INVERTER SPOT WELDING MACHINE WITH "X" GUN water-cooled

- Transformer integrated in the gun.
- Automatic welding with pre-set programs.
- Capable of manual welding (also single sided)
- Multifunctional display with membrane keyboard.
- Hoist for gun support.
(arms not included)



ROTATING ROD
With gun support slide



HOIST
For gun support



USB
Welding report



MULTIFUNCTIONAL DISPLAY
With membrane keyboard

FEATURES

01. Extremely precise welds thanks to inverter technology on all types of steel, including HSS and UHSS.
02. Pre-set programs for results that meet OEM requirements.
03. The operator can adjust current, pressure and duration for even more precise results.
04. Dedicated software that allows welding data to be exported, for easy reading and storage.
05. Transformer integrated in the welding gun.
06. Lightweight and easy to handle gun (12 to 12.6 kg) that can be used comfortably in all positions.
07. Quick and easy arm replacement without shutting down the machine.
08. Support rod with slide lock for comfortable and safe working.
09. Hoist to support the welding gun during use.
10. Water cooling for safe operation by preventing components (transformer, cables, gun, arms, electrodes) from overheating.
11. Easy mobility throughout repair facility.
12. Easily accessible side pockets for storing the arms.
13. Convenient toolbox.

Technical specifications

Rated power at 50%	25 kVA	Connection power 400/200V (three-phase power supply)	20 kVA
Max. secondary short-circuit current	13 kA	Welding on mild steel	3+3 mm
Three-phase input voltage +/- 10%	400 V	Length of gun cables	3000 mm
Rated frequency	50/60 Hz	Force at the electrodes with 9 bar pressure	560 daN
Delayed fuses	32 A	Electrode cone diameter	12 mm
Secondary voltage without load	16 V	Cooling tank capacity	8 L
Minimum network pressure	8,5 bar		

Optional



10001012

Spotter



10001109

550mm C-Arm



10001110

350mm C-Arm



10001107

65mm Straight C-Arm



10001111

665mm C-Arm



10001108

250 mm C-Arm



10000970

65mm Slant C-Arm



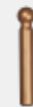
10000743

Electrode caps
sphere point Ø 18



10001144

Electrode holder



10000971

Electrode caps
sphere point Ø 25



100001145

Electrode
extension 34mm



10000634

Electrode
central tip



10000635

Electrode tip
out of center



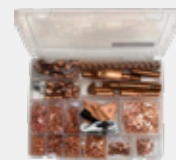
10000744

Spoked tip
electrode



10001146

Electrode
extension 61mm



10000545

Consumable
box



10001159

Toolbox

10000581 Pair of cooled arms 100mm, with electrodes
CBRH-100



10000588 Pair of cooled arms 160mm, with electrodes
CBRH-160



10000582 Pair of cooled arms 220mm, with electrodes
CBRH-220



10000583 Pair of cooled arms 350mm, with electrodes
CBRH-350



10000584 Pair of cooled arms, with electrodes
CBRH-10



10000585 Pair of cooled arms, with electrodes
CBRH-11



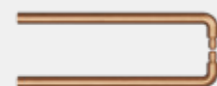
10000586 Pair of cooled arms, with electrodes
CBRH-13



10000587 Pair of cooled arms, with electrodes
CBRH-14



10000589 Pair of cooled arms 450mm with electrode, straight version
CBRH-450 D



10000590 Pair of cooled arms 450mm with electrodes, slanting version
CBRH-450 S



10000634 Electrode central tip item E285



1000635 Electrode tip out of center item E286





SPOOL HOLDER
100 to 200 mm



CYLINDER HOLDER
To hold 2 cylinders



USER INTERFACE
Quick access to welding programs and parameters



STORAGE COMPARTMENT
Holds spare parts and accessories

200A Q5.2 SYNERGIC INVERTER WELDING MACHINE
With 3 torches

- Automatic welding synergic machine with pre-set programs.
- Activate tprogram with a click of the torch.
- Capable of custom programs.
- Multi-process inverter technology.
- For Mig/Mag welding, pulsed and double-pulsed.
- Intuitive adjustment of welding parameters.
- High accuracy and repeatability of results.
- Multi-material welding Al-Fe-CuSi
- Wire diameter 0.6 mm to 1.2 mm

ACCESSORIES INCLUDED



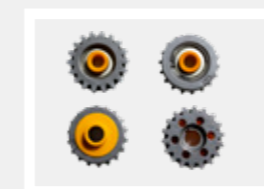
FEATURES

01. Automatic selection of welding program and wire by pressing the switch on the torch
02. Metal support frame.
03. No spatter with all materials and the different types of gases in MIG/MAG, pulsed MIG and double-pulsed MIG welding.
04. Synergic digital control of all welding parameters (material, wire diameter and gas used) managed by innovative software. A microprocessor ensures arc stability and accuracy despite torch movements and metal irregularities.
05. Modification of parameters and creation of custom programs.
06. Perfect wire cut at the end of the welding operation.
07. Arc ignition control to prevent the wire from sticking.
08. Precise and soft arc triggering for better welding of aluminium.
09. High electric performance resulting in energy consumption reduction.
10. Professional 4-roller wire feeder for the use of all types of wire, with gas solenoid valve and wire speed (welding current) and welding voltage adjustment.
11. The feeding rollers can be replaced without using tools.

Technical specifications

Single-phase power supply 50/60Hz	230 ± 15% V	Power output of feeder motor	50 W
Mains supply: Zmax (*)	0,21 Ω	Rated wire feeding speed	1 - 20 m/min
Power consumption (I2 @ 60%)	4,6 kVA	Protection class	IP 21
Delayed fuse (I2 @ 100%)	16 A	Insulation class	H
Power factor / cos	0,68 / 0,99 φ	Dimensions	770-950-220 mm
Efficiency	0,8 η	Weight	65 kg
Secondary voltage without load	59 V	Mains connection cable length:	3 m
Adjustment range	10 ÷ 200 A	Section	2,5 mm²
Duty Cycle @ 100% (40°C)	100 A	Ground cable length:	3 m
Duty Cycle @ 60% (40°C)	115 A	Section	16 mm²
Duty Cycle @ X% (40°C)	200 (15%) A	Shielding gas	Argon
Wire diameter	0,6 - 1,2 mm		Co2/ Argon Mix
Spool Diameter	100 mm / 1 kg	Reference standards	IEC 60974-1
Weight	200 mm / 5 kg		IEC 60974-5
Number of rollers	4		IEC 60974-10-S

Optional



10001140

Wire feed roller for Al Ø 1.2 mm



SPOOL HOLDER
100 to 200 mm



CYLINDER HOLDER
To hold 2 cylinders

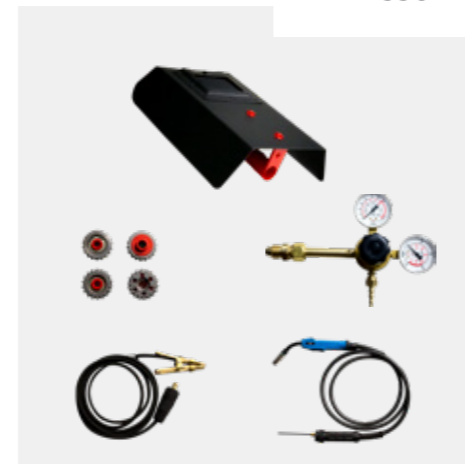


USER INTERFACE
Quick access to welding programs and parameters

**320A SYNERGIC INVERTER WELDING MACHINE
CONVEX 325 PULSE**

- Automatic welding synergic machine with pre-set programs.
- Capable of custom programs.
- Multi-process inverter technology.
- For Mig/Mag welding, pulsed and double-pulsed.
- Intuitive adjustment of welding parameters.
- High accuracy and repeatability of results.
- Multi-material welding Al-Fe-CuSi
- Wire diameter 0.6 mm to 1.2 mm
(Spools not included)

INCLUDED ACCESSORIES



FEATURES

01. Metal support frame with shockproof fibre front panel and visor-protected controls.
02. No spatter with all materials and the different types of gases in MIG/MAG, pulsed MIG and double-pulsed MIG welding.
03. Synergic digital control of all welding parameters [material, wire diameter and shielding gas used managed by innovative software. A microprocessor ensures arc stability and accuracy despite torch movements and metal irregularities.
04. Modification of parameters and creation of custom programs.
05. Perfect wire cut at the end of the welding operation.
06. Arc ignition control to prevent the wire from sticking.
07. Precise and soft arc triggering for better welding of aluminium.
08. High electric performance resulting in energy consumption reduction.
09. Professional 4-roller wire feeder for the use of all types of wire, with gas solenoid valve and wire speed [welding current] and welding voltage adjustment.
10. The feeding rollers can be replaced without using tools.

Technical specifications

Three-phase power supply 50/60Hz	400 ± 20% V	Number of rollers	4
Main supply: Zmax (*)	0,037 Ω	Power output of feeder motor	50 W
Power consumption @ 12 Max	17 kVA	Rated wire feeding speed	1,5 ÷ 22 m/min
Delayed fuse (I eff)	25 A	Protection class	IP 23 S
Power factor / cos	0.66/0.99 φ	Insulation class	H
Efficiency	0,86 η	Dimensions	25" x 20.2" x 11.4"
Secondary voltage without load	63 V	Weight	93 lbs.
Adjustment range	10 ÷ 320 A	Mains connection cable Length Section	4 m 4x2.5 mm²
Duty Cycle @ 100% (40°C)	280 A	Ground cable	50
Duty Cycle @ 60% (40°C)	300 A	Reference standards	IEC 60974-1 IEC 60974-5 IEC 60974-10
Duty Cycle @ 40% (40°C)	320 A		
Wire diameter	0,6 - 1,2 mm		
Spool diameter	300 mm		
Weight	33 lbs.		



PNEUMATIC-HYDRAULIC RIVETING MACHINE

- Riveting machine with foot control.
- Optional blind rivet and threaded bushing attachments.
- C arm handle.
- C arms available in several sizes.
- Complete with push-pull actuator.
- Joins multiple materials such as steel or aluminum.
- The hydraulic-pneumatic system used provides more power than the traditional pneumatic system.
- Series of Push-Pull rivet inserts specific to each manufacturer.

Technical specifications

Drive method	Pneumatic-hydraulic	C arm depth	30 mm, 110mm (*), 220mm (*)
Compression force	6 Ton	Noise threshold	<70 dB
Air pressure	8-10 bar	Compression head rotation	360°
Foot pump pressure	700 bar		

Optional



10038754

220 mm C arm



10038753

110 mm C arm



10038755
10038756
10038762
10038763

MERCEDES KIT
 FORD KIT
 JAGUAR - LAND ROVER KIT
 FLOW FORM KIT



ELECTRO-HYDRAULIC RIVETING MACHINE

- SUITABLE FOR REPAIRING CARS BY USING SELF-PIERCING RIVETS, RIVETS, BLIND RIVETS AND THREADED BUSHING.
- Battery-operated hydraulic pump with 9 ton push-pull piston and shoulder strap.
- Optional blind rivet and threaded bushing attachments.
- Pre-set programs [time, pressure and stroke] according to the OEM requirements.
- Automatic retraction once the set force has been achieved.
- C arm handle.
- C arms available in several sizes.
- Clamping time adjustment.
- Complete with push-pull actuator.
- Super silent.
- Complete with traceability software.
- Powered with 18v lithium-ion common tool battery.
- Print a report of operations performed such as pressure used or machine calibration.
- Issues a certificate of proper functionality.

Technical specifications

Drive method	Electro-hydraulic	Battery capacity	3,0 Ah
Portable pump body weight	3,8 kg	Compression head rotation	360°
Electronic adjustment	da 200-700 bar	C arm depth	40 mm, 130 mm, 240 mm
Compression force of adjustment	20 - 90 kN	Noise threshold	dB < 70
Lithium battery	18V DC	Use between battery recharges	380 fasteners

Optional



10038793

240 x 140 mm C gun



10038794

130 x 80 mm C gun



10038796

Shears with three punches 0.6 and 0.8 cm



10038795

Extraction accessory for M5 pins



10038797

Accessory for threaded bushing and pins



10038798

Accessory for blind rivets



10038755 MERCEDES KIT
10038756 FORD KIT
10038762 JAGUAR - LAND ROVER KIT
10038763 FLOW FORM KIT



Spanesi S.p.A.

Via Praarie 56/II - 35010
Cavino di San Giorgio
delle Pertiche (PD)

Tel. +39 049 933 32 11
e-mail: info@spanesi.it