

# SYN PULSE MIG SERIES



## SYN SERIES

SYNERGIC PULSE  
MIG WELDING MACHINES

2004L SYN  
2500 SYN  
3500 SYN

2500 SWF  
3500 SWF  
5000 SWF





# SYNERGIC PULSE MIG WELDING

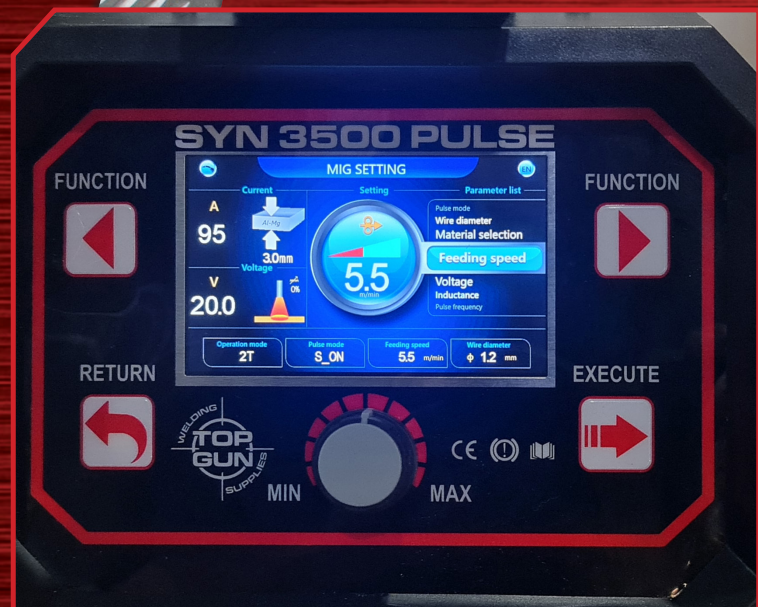
The future is here today with the arrival of the newest addition to Top Gun's comprehensive range: Synergic Pulse MIG Welding Equipment. Set to transform the growing automotive, Aluminium/Stainless Steel fabrication and repair/maintenance sectors, the SYN series is a complete range of high-technology digital microprocessor controlled Synergic Pulse MIG Welding Equipment. This state-of-the-art technology is designed to meet the rigorous demands of a wide range of welding applications, including:

- General aluminium, stainless steel and carbon steel fabrication
- Boat building
- Automotive components and repairs
- Railcar manufacturing
- Custom job shops

## FEATURE PACKED

The Top Gun SYN Series offers a vast array of features, including:

- Multi-Process, GMAW-Conventional (MIG);
- Synergic non-pulse; Synergic Pulse; DualPulse, GTAW, MMAW and CAG
- Huge list of synergic non-pulse/ synergic pulse programs in each model.
- Multiple independent, user-defined, frequently used welding job presets.
- MIG DualPulse, providing effortless TIG-like weld appearance.
- Programmable scratch-start TIG
- Single Touch Control, set the material thickness, then start welding.
- Manual MIG mode, enables 2-knob conventional welding controls.
- User-friendly controls.



# INVERTER TECHNOLOGY

The inverter technology lowers the power consumption while generating the same output power, consequently reducing energy costs.

## SINGLE TOUCH CONTROL

### AT YOUR FINGERTIPS

Selecting a welding machine for a specialised project – or even for general welding requirements – can be a daunting task. You have to take many factors into account, such as running costs, ease of use, versatility and mobility, not to mention machine cost. Always at the forefront of your mind is the awareness that your profitability is based on weld quality, weld repeatability, power consumption, equipment flexibility, workforce flexibility, negligible rework and minimal weld clean up.

Our intelligent Single Touch Control delivers the perfect welding parameters for both synergic non-pulse welding and synergic pulse welding over a wide range of different gas/wire/material thickness combinations. And now setting the optimum welding conditions is as simple as selecting the material thickness.

### HOW DOES IT WORK?

In synergic non-pulse MIG mode the One Touch Control links the wire feed speed to the arc voltage eliminating the guesswork to achieve the optimum welding parameters.

When synergic pulse mode is selected, the Auto Control adjusts all the pulse parameters – such as pulse height, pulse width, pulse frequency, background power and wire feed speed – via the micro-processor, giving you the perfect pulse welding performance.

## WHAT IS SYNERGIC PULSE MIG WELDING?

Synergic Pulse MIG Welding links the pulse welding parameters to the wire feed speed to achieve optimum welding conditions across the full range of wire feed speed for a given wire size.

- The welding pulse profile is a combination of pulse height, pulse width, pulse frequency and background power – all these parameters are linked via the micro-processor to give the correct arc energy.
- This arc energy is then matched to a wire feed speed that gives an acceptable arc length and the best welding conditions for the chosen gas mixture, wire diameter and material type combination.

- The synergic Single Touch Control knob adjusts the arc energy over the available current range of the power source, while maintaining approximately the same arc length. An additional choke knob is also provided to allow the user to tune in the arc length for the particular welding job.
- Pulsed weld current facilitates exact control over the transfer of molten metal droplets across the welding arc.
- As the weld current is pulsed, each droplet is forced off the end of the wire and projected across the arc into the weld pool. Varying the pulse height and frequency allows the size and time of the transferring droplet to be accurately controlled.
- The pulsed droplet transfer produces a spray-like arc over the entire current range, with a smooth, stable weld current producing no spatter and an even weld bead shape.

### PERFECT STARTS

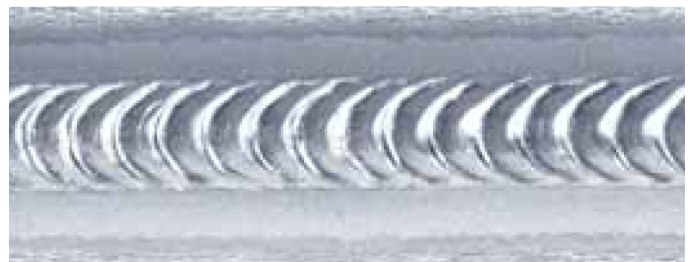
An amplified power level is applied to the welding arc at the beginning of the weld bead to ensure that start defects are a thing of the past.

### NO MORE SPATTER

Micro-processor control of wire speed, weld current and voltage, in conjunction with synergic (non-pulse)/synergic pulse programs, ensures precise control and adjustment for the duration of the welding process. This eliminates spatter, and downtime for cleaning the workpiece. With its ability to adjust in milliseconds, the synergic SYN series provides clean, spatter-free operation from start to finish, every single time.

### INTELLIGENT PULSING

Droplets of molten filler metal are transferred across the arc by expertly tailored current pulse parameters – to achieve spatter-free welding for the selected gas/wire/material combination. The pulse forces the droplet off the end of the wire, transfers it across the arc and into the weld pool. The program is optimised to vary the pulse height and frequency, thus ensuring that the size and time of the transferring droplet is accurately controlled. This produces a spray-like arc over the entire welding power range.





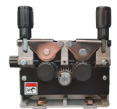

















# SPECIFICATIONS






	2004L SYN	2500 SYN	3500 SYN
Input Voltage (V)	240 A/C		415 A/C
Frequency (Hz)	50/60 Hz		
Output Current Range (A)	40 - 200A MIG	40 - 250A MIG	40 - 350A MIG
Rated Duty Cycle (%)		30% @ 250A	30% @ 350A
	60% @ 200A		60% @ 248A
	100% @ 155A	100% @ 137A	100% @ 192A
Wire Sizes	0.8 - 1.2mm	0.8 - 1.2mm	0.8 - 1.2mm
Machine Weight	15.6 Kg	31.5 Kg	44.2 Kg
Machine Dimensions(mm)	460 x 215 x 375	600 x 500 x 270	820 x 510 x 800
Package weight	21 Kg	52 Kg	64 Kg
Package Dimensions	520 x 290 x 460	745 x 650 x 420	745 x 440 x 920
Warranty	3 Years		



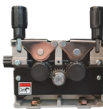















# WHATS IN THE BOX

User Manual	✓	✓	✓
Wire Feeder	 4 Roller System	 4 Roller System	 4 Roller System
Hand Piece	 3MTR MB24 Euro-Fit Mig Torch	 4MTR MB24 Euro-Fit Mig Torch	 4MTR MB36 Euro-Fit Mig Torch
Earth Lead	 4MTR Earth Lead with Clamp	 4MTR Earth Lead with Clamp	 4MTR Earth Lead with Clamp
Electrode Holder	 2MTR Electrode Lead with Electrode Holder	 2MTR Electrode Lead with Electrode Holder	 2MTR Electrode Lead with Electrode Holder
Roller Sets	 0.8mm - 0.9mm "V" Steel Rollers  1.0mm - 1.2mm "U" Aluminium Rollers	 0.8mm - 0.9mm "V" Steel Rollers  1.0mm - 1.2mm "U" Aluminium Rollers	 0.8mm - 0.9mm "V" Steel Rollers  1.0mm - 1.2mm "U" Aluminium Rollers
Fitted Plug	Single Phase 15A	Single Phase 15A	Three Phase 32A, 4 Pin
Consumable Kit	To Suit MB 24 Mig Torch	To Suit MB 24 Mig Torch	To Suit MB 36 Mig Torch
Regulator	Twin Gauge Argon Regulator	Twin Gauge Argon Regulator	Twin Gauge Argon Regulator
Gas Hose	3MTR with Quick Connect Fitting	3MTR with Quick Connect Fitting	3MTR with Quick Connect Fitting

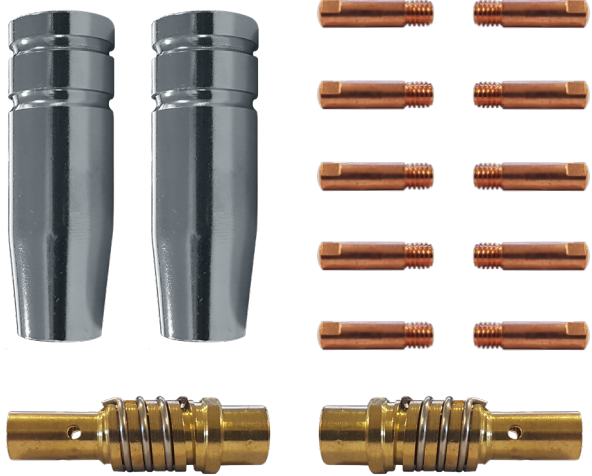
# SPECIFICATIONS

			
	2500 SYN SWF	3500 SYN SWF	5000 SYN SWF/WC
Input Voltage (V)	240 A/C	415 A/C	
Frequency (Hz)	50/60 Hz		
Output Current Range (A)	40 - 250A MIG	40 - 350A MIG	40 - 500A MIG
Rated Duty Cycle (%)	40% @ 250A	40% @ 350A	40% @ 500A
	60% @ 204A		
	100% @ 158A	100% @ 221A	100% @ 316A
Wire Sizes	0.8 - 1.2mm	0.8 - 1.2mm	0.8 - 1.2mm
Machine Weight	44.2 Kg (Power Source)	48 Kg (Power Source)	55 Kg / 60 Kg (WC)
Machine Dimensions(mm)	820 x 510 x 800	820 x 510 x 800	820 x 510 x 800
Package weight	64 Kg	68 Kg	75 Kg / 80 Kg (WC)
Package Dimensions	745x 440 x 920	745x 440 x 920	745x 440 x 920
Warranty	3 Years		

# WHATS IN THE BOX

	✓	✓	✓
User Manual			
Wire Feeder	 4 Roller System	 4 Roller System	 4 Roller System
Hand Piece	 4MTR MB36 Euro-Fit Mig Torch	 4MTR MB36 Euro-Fit Mig Torch	 4MTR MB36 Euro-Fit Mig Torch or 4MTR 501D W/C Mig Torch
Earth Lead	 10MTR Earth Lead with Clamp	 10MTR Earth Lead with Clamp	 10MTR Earth Lead with Clamp
Roller Sets	 0.8 - 0.9mm, 1.0 - 1.2mm "V" Steel Rollers  0.8 - 0.9mm, 1.0 - 1.2mm "U" Aluminium Rollers  0.9mm - 1.2mm "F" Flux Cored Rollers	 0.8 - 0.9mm, 1.0 - 1.2mm "V" Steel Rollers  0.8 - 0.9mm, 1.0 - 1.2mm "U" Aluminium Rollers  0.9mm - 1.2mm "F" Flux Cored Rollers	 0.8 - 0.9mm, 1.0 - 1.2mm "V" Steel Rollers  0.8 - 0.9mm, 1.0 - 1.2mm "U" Aluminium Rollers  0.9mm - 1.2mm "F" Flux Cored Rollers
Fitted Plug	Single Phase 15A	Three Phase 32A, 4 Pin	Three Phase 32A, 4 Pin
Consumable Kit	To Suit MB 36 Mig Torch	To Suit MB 36 Mig Torch	To Suit MB 36 Mig Torch
Regulator	Twin Gauge Argon Regulator	Twin Gauge Argon Regulator	Twin Gauge Argon Regulator
Gas Hose	3MTR with Quick Connect Fitting	3MTR with Quick Connect Fitting	3MTR with Quick Connect Fitting

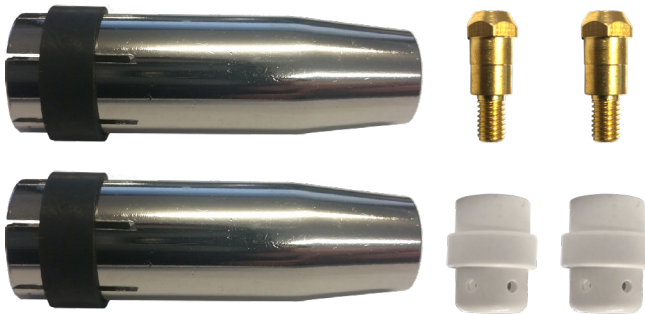
# MIG TORCH CONSUMABLE KITS



## MB15 Consumable Kits

TGKIT15

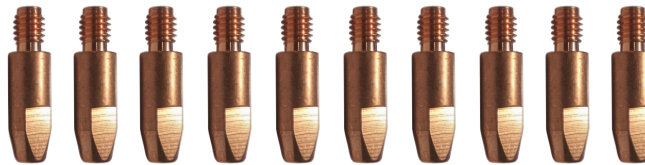
- 5 x TT100102 0.8mm Tips
- 5 x TT100104 0.9mm Tips
- 2 x TT200120 Conical Nozzles
- 2 x TT150000 Tip Adaptors



## MB24 Consumable Kits

TGKIT24

- 5 x TT100202 0.8mm Tips
- 5 x TT100204 0.9mm Tips
- 2 x TT200300 Conical Nozzles
- 2 x TT150002 Tip Adaptors
- 2 x TT300510 Gas Diffusers



## MB36 Consumable Kits

TGKIT36

- 5 x TT100204 0.9mm Tips
- 5 x TT100208 1.2mm Tips
- 2 x TT200610 Conical Nozzles
- 2 x TT150302 Tip Adaptors
- 2 x TT300530 Gas Diffusers

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SCAN ME



FOR THE ENTIRE  
TOP GUN RANGE