

AC-DC TIG / MMA 350A & 500A – water cooled

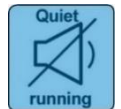
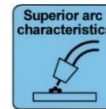
TECARC Ti AC-DC models provide exceptional welding performance on both TIG & MMA. Rugged reliable inverter built using only two IGBT power modules keeps these units welding reliably year after year. Equally happy in any environment, industrial workshops, off shore, oil & gas, aerospace engineering, construction sites.

400V 3 phase or 230V single phase



Key features

- ✓ Precision control of weld power from 5A.
- ✓ Instant arc starting on both TIG & MMA.
- ✓ AC-DC infinite balance control – unique to our machines
- ✓ AC frequency control from 20-200Hz
- ✓ Advanced squarewave output for optimised AC arc.
- ✓ Soft low noise AC TIG thanks to advanced squarewave.
- ✓ MMA on both DC & AC with frequency & balance control.
- ✓ MMA welding of all electrodes including cellulosic.
- ✓ Digi display shows precise values before & during welding.
- ✓ TIG 2T/4T torch trigger normal/latch function.
- ✓ Slope up & down controls.
- ✓ Gas preflow circuit built in & adjustable postflow gas time.
- ✓ Pulser with variable current & extended frequency control.
- ✓ Remote socket for foot pedal or other remote control.
- ✓ MMA welding of all rods including cellulose.
- ✓ Generator friendly & compensation for cables up to 100M.
- ✓ Protection from over/under input volts, over temp.
- ✓ High efficiency, 20W standby power = low running costs.
- ✓ High duty cycles to keep you welding all day long.
- ✓ Rugged case design on a 3mm galv chassis.
- ✓ Cooling chamber keeps dirty airflow away from controls.
- ✓ Fan on demand to minimise noise & wear.
- ✓ Auto shut down if left energised on TIG.
- ✓ Undercarriage c/w H duty wheels, gas bot carrier & lifting points.
- ✓ Low noise water cooling - runs only as needed.
- ✓ Industrial machines built to work hard for 25+ years.



Specifications	350A AC-DC model Ti353 AC-DC (400V 3ph) Ti351 AC-DC (230V 1ph)	500A AC-DC model Ti503 AC-DC (400V 3ph) Ti501 AC-DC (230V 1ph)
Input fuse (D) slow – 400V 3ph	16A	25/32A
Input fuse (D) slow – 230V 1ph	32A*	45/63A*
Amperage range	5A-350A	8A-500A
Duty cycle 60% on TIG	350A	470A
100% rating on TIG	270A	370A
No load volts (OCV)	88V	88V
Minimum generator size for ¾ output	8KVA	12KVA
Net weight approx.	49kg-Ti353, 50kg-Ti351	56kg-Ti503, 58kg-Ti501

Power source overall incl wheels & bottle carrier, approx 460Wx900Lx720mm H (total height above floor).

Power source case size without undercarriage, approx. 300Wx650Lx590mm H

Output amps range on MMA is the same as TIG, duty cycle is reduced up to 6% when using on MMA.

*Recommended fuse is 'D' slow type.

Duty cycle is tested at 40°C, at 20°C the duty cycle increases by approx. 5%.

Efficiency = 83% for single phase & 84% for 3 phase.

Compliance with BS IEC60974-1, WEE/HD0071UZ, EU2019/1784. Protection - IP23S (suitable for use outside with cover).

PTO for further information



TIG welding performance is exceptional, instant arc starting and super smooth welding from 5A/0.5mm material. On DC TIG the arc is perfectly stable & near silent. AC TIG benefits from our advanced square wave design, this gives a substantial reduction in arc noise & provides an optimal stable arc condition on all aluminium & alloys. Furthermore, our unique balance control allows complete output adjustment from DC negative through all AC combinations to DC positive. This allows extreme AC balances to be run to either optimise the heat to the job or optimise the cleaning effect for specialist metals. Variable AC frequency from 20-200Hz provides further potential to optimise the arc to suit your job. A low AC frequency such as 20Hz give a soft wide arc with minimal noise, ideal for heavier materials. At high AC frequency the arc constricts & can focus the heat more precisely, ideal for thinner precision welding jobs.

Variable pulsing functions provide further control over the output, low pulse frequency can be used to create the classic TIG 'stack of cards' appearance, high pulse frequency reduces heat input, ideal for difficult to weld thin metals.

All AC-DC & pulse functions also work on MMA electrode welding. In addition, the high OCV (88V) combined with built in hot start lights up all rods fast including cellulosic types.

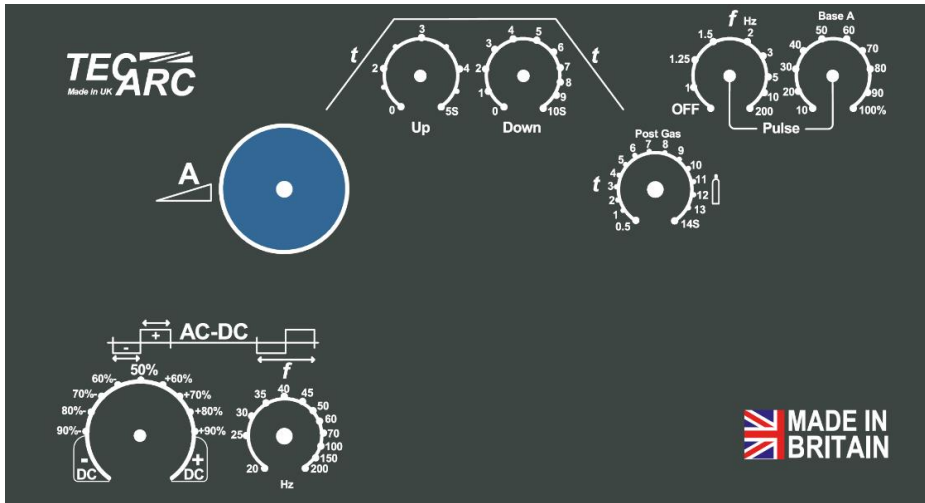
Digital display shows set values & precise real time values. Optional calibration to BS IEC60974-14 with precision grade capability. In standby these models are completely silent & draw almost zero power.

Water cooling starts instantly when TIG welding & has a post run time depending on how long you're welding. Even when running audible noise is very low. A built in water flow switch is fitted to protect the torch in event of a flow problem.

Built using our rugged 2 IGBT power module technology & simple electronics – **minimum parts & maximum reliability!** Our reliability is the very best, no matter if welding all day in production or storing in a barn for years for occasional jobs.

We design & build all our own PCBs, transformers, coils, power assemblies etc. There are NO microprocessors or programable technology used, **GUARANTEED** no software to corrupt!

From a serviceability point our inverter machines are simple, no Electronics degree needed! We include diagnostic LEDs & test points so our machines can be maintained by any competent Technician anywhere in the world.



Left is a close up of the Ti front panel controls - Simple intuitive controls = no programming or menus to scroll through. BUT provides control over all parameters with absolute precision.

Ti AC DC TIG models are a joy to use. Guaranteed!

Options available at time of order

Input voltage 440V/480V/550V etc	Longer cables	Adjustable pre flow gas control on front panel.	No water cooling fitted.	No undercarriage fitted.
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Accessories available anytime

<p>Foot pedal -super smooth control of welding power.</p> 	<p>TIG torches in 4M & 8M Ergonomic design. WP9/WP17/WP26, WP20/WP18</p> 	
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**Our long term warranty & back up – 2 year warranty + 5 years on main transformer & all coils.
100% spares availability & service support for a minimum of 20 years from purchase.
'Invest in the best' quality made British welding equipment**