

# SANARG 300AP

## AC/DC TIG Welding



### Tough, Compact & Light Weight.

**Excellent Performance:** Embedded microprocessor with digital controls, delivering full Constant Current output with perfectly smooth, stable arc characteristics for TIG and Stick electrodes, E6010 Cellulose and low hydrogen electrodes.

**Primary Smart Switch:** Prevents damage to the internal components if installed to improper voltage. Multi voltage 208-230/460 1 or 3 phase providing maximum flexibility.

**Thermal Overload Protection:** Indicator alerts the operator if duty cycle is exceeded or airflow is blocked.

**Remote 14pin Receptacle Fitted:** Makes compatibility of SanRex, competitive remote devices simple.

**Excellent Portability:** Lightweight, less than 60 lbs.

**IP23S:** Suitable for outdoor use.

**Digital Meters:** Voltage and Amperage: Preview and Hold capability.

**Heat sensing fan:** Operates as needed to cool components & reduce airborne contaminants pulled through the power source.

**Dinse Twist Lock Output Terminals:** Allow for easy polarity changing and cable connection.

**Warranty:** 3 Years.

**Easy to use:** Simple, user friendly set-up and operation.

**Smart Warning Diagnostics:** Alerts operator to power supply abnormalities.

**Standards Compliant Integrated VRD:** Voltage Reduction Device reduces the OCV when the power supply is not in use. This all but eliminates the risk of electrocution to the operator from the secondary welding circuit.

**Job Save & Load:** Allows operator to store up to 5 exact optimized welding parameters then digitally recall them with perfect repeatability.

**Lift Start TIG:** Provides TIG arc starting without use of high frequency.

**HF Start TIG:** Provides non-contact arc starting that eliminates tungsten or material contamination.

**True Square Wave Output:** Highly developed balance and cleaning features deliver an unbeatable welding performance with extended tungsten life on aluminum and magnesium alloys without the need for continuous high frequency.

**AC Frequency:** Give the operator control over weld bead shape.

**AC Balance:** Allows you to fine tune the AC welding cycle.

#### Quick Specifications

##### Processes

STICK (SMAW)  
TIG (GTAW) Lift, HF & Pulse

Fabrication, Aerospace, Food/  
Beverage, Contractors, Installation/  
Repair, Dairy Industry.

##### Input Voltage

208-230/460 VAC 1/3 Phase

##### Input Frequency

50/60 Hz

##### Rated Output @ Duty Cycle

300A/32V @ 25%  
250A/30V @ 40%

##### Output Range

5-300A DC  
10-300A AC  
(60Hz cleaning 50% TIG mode)

##### Weight

53 lb (24 kg)

#### Package Includes

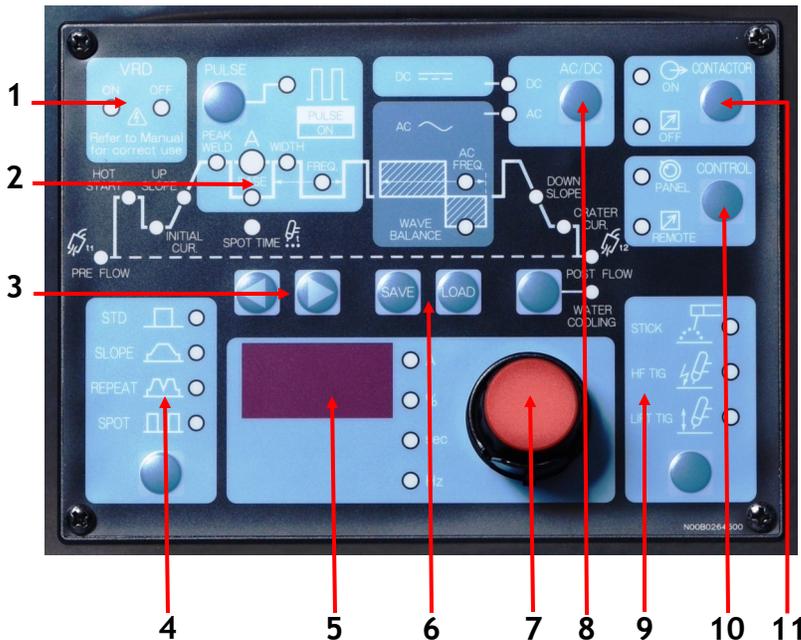
SANARG 300AP  
Power Cord  
2 ea Dinse 50mm plugs

#### Order Information

Part No: IA-3000TP-U2E  
Description: SANARG 300AP



## Control Panel

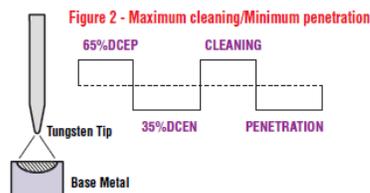
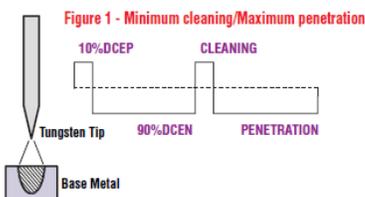


1. VRD - (Voltage Reduction Device) lights indicate on or off.
2. Pulse Function - Pressing this button enables the TIG current pulse functions.
3. Scroll buttons - used to select the parameter to be set. The LED's show which function is being adjusted on the weld sequence graph.
4. TIG Mode Functions - Pressing this button scrolls through the output TIG function modes (Standard, Slope, Slope w/repeat, Spot).
5. Digital LED display - welding amperage and parameter values are displayed in this window. Internal warnings such as over temperature, low or high input voltage applied are signaled to the operator by a warning sound and error message on the screen.
6. Save/Load Buttons - By using the Save & Load buttons the operator can easily save up to 5 welding parameter programs.
7. Control knob - allows the operator to adjust the output amperage within the entire range of the power source, also used to set each parameter value.
8. AC/DC Button - Selects between AC or DC welding output.
9. Process functions - pressing this button scrolls through the output process modes (Stick, Lift & HF Start TIG).
10. Remote current function - pressing this button enables remote current.
11. Remote contactor function - pressing this button enables remote contactor on or off.

### Effects of Wave Balance Adjustment on AC/GTAW - Complete Welding Control

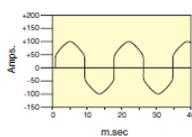
The 200AP AC output uses advanced embedded micro processor technology. This control of the wave form changes the amount of time spent on DCEP (cleaning) and DCEN (penetration) parts of each cycle, increasing arc stability. The DCEP cycle insures that the aluminum oxide is thoroughly removed, allowing the DCEN cycle a thorough penetration of the base metal. Both cycles enhance weld quality and significantly improve performance.

When a conventional system changes its wave balance, there can be as much as a 50% increase in amperage draw. Sanrex® 200AP amperage draw is unaffected by any adjustments. The 200AP increases efficiency and eliminates tungsten spitting and enables the use of a smaller diameter tungsten electrodes to operate at a higher current levels. Figures 1 & 2 show the difference in TIG torch electrode and heat and cleaning variations.

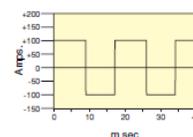


### SanRex - The Leader in Technology and Service!

Conventional Square AC wave @ 100 amps output



Sanrex 200AP Square Wave Inverter Power Supply @ 100 amps output.



# SANARG 300AP

# AC/DC TIG Welding

## Features



## Specifications

300AP	
<b>Input Voltage</b> 208-230/460V, 3 Phase	<b>Primary Cable Length</b> 10 ft.
<b>Rated Output @ Duty Cycle</b> 300A/32V @ 25% TIG (208-230/460V, 1/3 Ph) 250A/30V @ 40% STICK (208-230/460V, 1/3 Ph)	<b>Output Range</b> 5–300A AC/DC Mode (60Hz cleaning 50% TIG mode)
<b>Input Frequency</b> 50/60 Hz	<b>OCV</b> 65
<b>Lift Mode Short Current</b> 25A	<b>Weight</b> 53 lb (24 kg)
<b>Approvals</b> CSA (Pending); IP23S, IEC 60974-1 (CE)	<b>Dimensions (HxWxD)</b> 16.5 x 8.3 x 17.7 in (420 x 210 x 450 mm)

Input Voltage (VAC)										
	Duty Cycle	Output Ams	OCV	Output Voltage	No. Phase	208 Input Amps	230 Input Amps	460 Input Amps	kVA	kw
Output	25%	300	65	32	3	47	43	21	17	12.8
Output	40%	250	65	30	3	37	33	17	13.3	10
No Load	-	-	-	-	3	1.4	1.1	0.7	0.5	0.13
Output	25%	300	65	32	1	96	87	-	20	12
Output	40%	250	65	30	1	71	64	-	14.8	8.9
No Load	-	-	-	-	1	2.5	1.8	-	0.5	0.13

## Ordering Information

Product	Part Number	Description
SANARG 300AP	IA-3000TP-U2E	Power Supply includes 2 ea Dinse Plugs & 10ft. Primary Cable.

### Accessories

 Air cooled TIG Kit	300AP-ACTK	Includes regulator/flowmeter with 12.5' gas hose, 12.5' 200 Amp Air cooled TIG torch, accessory kit, 13' work cable, 13' Electrode cable, 25' foot control & running gear/Cylinder Rack.
 Water Cooled TIG Kit	300AP-WTK	Includes regulator/flowmeter with 12.5' gas hose, 12.5' 250 Amp Water cooled TIG torch, accessory kit, 13' work cable, 13' Electrode cable, Water Cooler w/hose & 2 gal. Coolant, 15' foot control & running gear/Cylinder Rack.
 Water Cooled TIG Kit	300AP-HDWTK	Includes regulator/flowmeter with 12.5' gas hose, 12.5' 350 Amp Water cooled TIG torch, accessory kit, 13' work cable, 13' Electrode cable, Water Cooler w/hose & 2 Gal. Coolant, 25' Foot control & running gear/Cylinder Rack.
 Recirculator	TK1013	Plastic water tank eliminates coolant contamination due to electrolysis or chemical reactions, Factory set at 50 psi adjustable to 80 ps, 12,000 BTU, Dimensions: 18"L x 14"W x 9"H.
Coolant	TK1014	Coolant 2x1 Gal. Box.
 Foot Control	FC1000 - 15ft. FC1001 - 25ft.	Contacter On/Off and Current control, Cable and 14 pin male plug.
 Torch Control	RC1000 - 15ft. RC1001 - 28ft.	Remote amperage controls provide welding power source contactor on-off, activate gas and/or water solenoids and provide full range current output control. Handle styles include Velcro® straps where one size fits all handle diameters or built into the handle as original equipment.
 Running Gear	MS1009	Heavy Duty Single/Dual Bottle Universal Welding Cart is designed to carry one bottle of gas up to 10 inches in diameter and up to 300 cu. Ft.; or two separate bottles of gas up to 7-1/2 inches in diameter or 150 cu. Ft each. The bottom shelf has an 18 inch clearance.