

## Power, Performance, Features... Reliability.



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

**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.

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

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

**Simple Automation:** Includes Remote Weld ON/OFF, Amperage control, Weld output ON (OK-to-Move).

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

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

**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.

**AC Waveforms Output:** True Square Wave, AC-Soft, Triangle.

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

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

### Quick Specifications

#### Processes

Output AC/DC  
STICK (SMAW)  
TIG (GTAW) Lift, HF & Pulse

#### Industrial Applications

- Precision fabrication
- Heavy fabrication
- Pipe and tube fabrication
- Aerospace
- Aluminum ship repair
- Anodized aluminum fabrication

#### Input Voltage

208-240/480 VAC 3 Phase

#### Input Frequency

50/60 Hz

#### Rated Output @ Duty Cycle

TIG = 500A @ 60%  
STICK = 500A @ 35%

#### Output Range

5-500A DC  
10-500A AC

#### Power Supply Dimensions

25.19" x 12.20" x 20.86"  
(640mm x 310mm x 530mm)

#### Weight

lb ( kg)

#### Certifications

CSA, IP32, IEC-60974

#### Warranty

3 Years

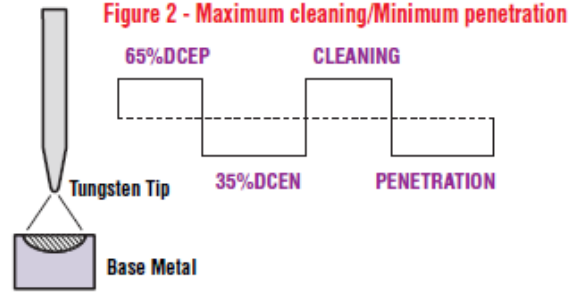
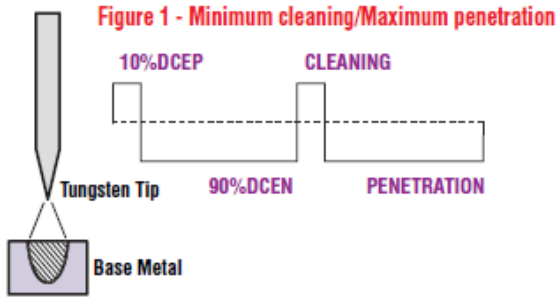


## Features

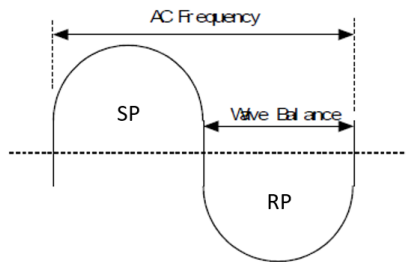
### Effects of Wave Balance Adjustment on AC/GTAW - Complete Welding Control

The 500AP 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® 500AP amperage draw is unaffected by any adjustments. The 500AP 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.



#### AC Soft

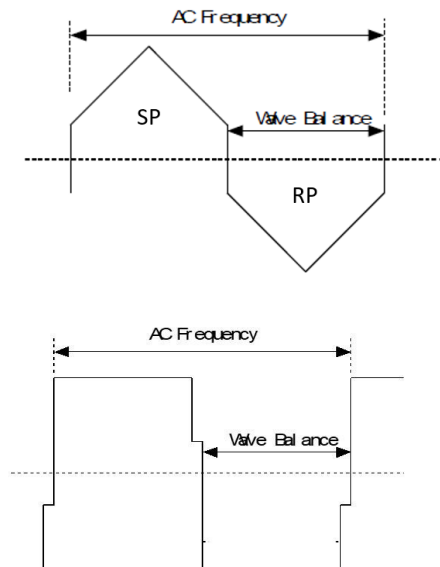


**AC Soft** includes all the benefits of AC square wave with the addition of maximum puddle control and good wetting action of the weld puddle which helps to overcome surface tension.

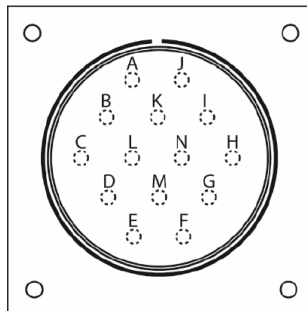
**Triangle Wave** provides the punch of the peak amperage, while reducing overall heat input. Fast puddle formation increases travel speed, limiting heat input and reducing weld distortion, especially on thin materials.

**AC Square Wave** fast transitions for a responsive, focused arc, for better directional control.

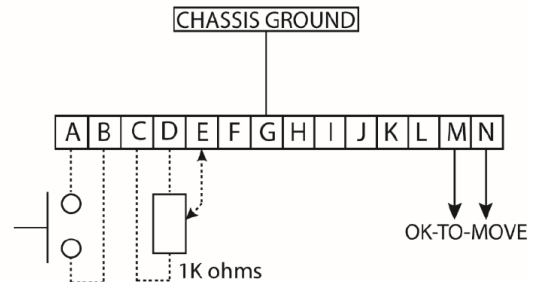
#### Triangle Wave



**Simple Automation** Interface for Fixed, hard and Robotic automation applications includes Remote Weld ON/OFF, Remote Amperage Control, OK-to-Move Weld Arc ON signals.

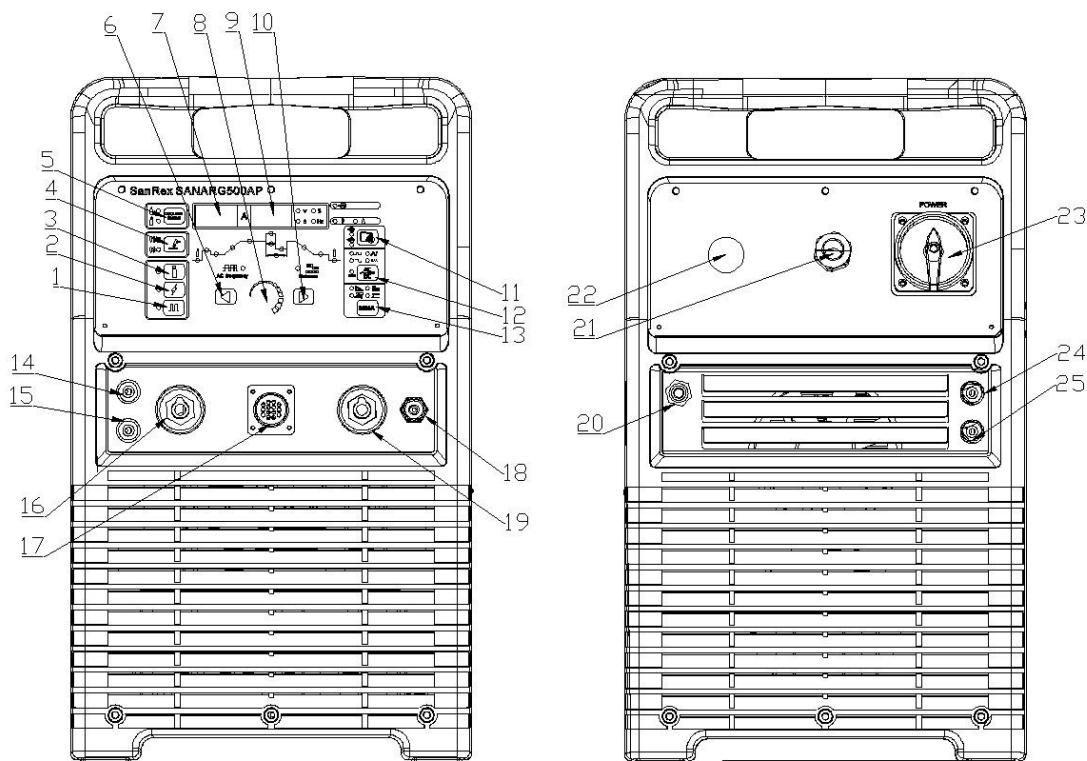


Front view of 14-Pin Socket Receptacle



## Features

1. Pulse Button
2. HF Button
3. Gas Purge Button
4. 2T/4T Button
5. Cooling Mode Selection
6. Forward Button
7. Amperage Display
8. Parameter Adjustment knob
9. Voltage Display
10. Parameter Back Button
11. Save Load Button
12. AC Wave Selection Button
13. STICK Parameter Button
14. Water Cooler Output Receptacle
15. Water Cooler Input Receptacle
16. Negative Output Receptacle
17. 14 Pin Receptacle
18. Shield Gas Torch Receptacle
19. Positive Output Receptacle
20. Shield Gas Input Receptacle
21. Input Power Connection
22. Water Cooler control Receptacle
23. Input On/OFF Switch
24. Water Cooler Output Receptacle
25. Water Cooler Input Receptacle



## Specifications

500AP	
<b>Input Voltage</b> 208-240/480V, 3 Phase	<b>Primary Cable Length</b> 10 ft.
<b>Rated Output @ Duty Cycle</b> 500A @ 60% TIG (208-240/480V, 3 Ph) 500A @ 35% STICK (208-240/480V, 3 Ph)	<b>Output Range</b> 10–500A AC Mode, 5–500 DC Mode
<b>Input Frequency</b> 50/60 Hz	<b>OCV</b> 71
<b>Approvals</b> CSA, IP23, IEC 60974-1	<b>Weight</b> lb ( kg)
<b>Warranty</b> 3 Years	<b>Dimensions (HxWxD)</b> 25.19" x 12.20" x 20.86" 640mm x 310mm x 530mm)

Input Voltage (VAC)									
	Duty Cycle	Output Ams	OCV	Output Voltage	No. Phase	208 Input Amps	230 Input Amps	460 Input Amps	kw
Output TIG	60%	500	71	32	3	56	49	23	19
Output STICK	35%	500	71	30	3	73	63	30	24
No Load	-	-	-	-	3	1.4	1.1	0.7	0.13

## Ordering Information

Product	Part Number	Description
SANATIG 500 ACDC	XXXXXXXXXX	Power Supply Only includes 2 ea Dinse Plugs & 10ft. Primary Cable.

### Accessories

	500ACDC-WTK	Includes 500AP, regulator/flowmeter with 12.5' gas hose, 25' Style 18 300 Amp Water cooled TIG torch, accessory kit, 15' work cable, Water Cooler w/hose & 4 Gal. Coolant, 25' Foot control & running gear/Cylinder Rack.
	500ACDC-HDWTk	Includes 500AP, regulator/flowmeter with 12.5' gas hose, 25' Ergonomic 500 Amp Water cooled TIG torch, accessory kit, 15' work cable, Water Cooler w/hose & 4 Gal. Coolant, 25' Foot control & running gear/Cylinder Rack.
	XXXXXX	Water Cooling System 115vac. Included in Water cooled TIG Kits.
	XXXXXX	500AP System Trolley includes Running Gear and Cylinder Rack. Included in Water cooled TIG Kits.
	TK-1014B	Coolant (4 Gal Box), Included in Water cooled TIG Kits.
	XXXXXX	15ft. Work Lead. Included in Water cooled TIG Kits.
	MS-XXXX	12.5ft Gas Hose. Included in Water cooled TIG Kits.
 <p>500 Amp TIG Torch Shown</p>	TK-1011 TK-XXXX	Style 18 300 AMP TIG Torch, 25ft. Ergonomic 500 AMP Tig Torch, 25ft. (Torches included in TIG Kits.)
	HP-1425	Hand Pendant 14 pin , 25ft., On/OFF & Voltage/Current Control.
	FC1000 - 15ft. FC1001 - 25ft.	Contactor On/Off, Current control, 15ft. Cable and 14 pin plug. Contactor On/Off, Current control, 25ft. Cable and 14 pin plug.  Note: 25ft. Included in Water cooled TIG Kits.
	RC1000 – 25ft. RC1001 – 15ft RC1002 – 15ft.	Velcro TIG Torch remote Current, with ON/OFF. Velcro TIG Torch remote Current, with ON/OFF. Velcro TIG Torch On/OFF.
	ADC101	14 Pin Automation Interface cable, 12ft.