



Sigmaweld series welding machines are sophisticated IGBT based inverters with total digital control having wide current range. Sigmaweld is designed to meet varied requirement of the welding industry covering manual arc welding, TIG welding, high frequency TIG welding, pulse TIG welding. Advanced micro controller technology enables Sigmaweld to have upslope downslope and plusing even without the use of high frequency.

**Significant energy saving vis-à-vis traditional welding equipments for all applications.**

**Features:**

**1. Constant Current Output Provided**

The output of sigmaweld welding inverters are constant even if there is a power fluctuation in the mains of upto  $\pm 15\%$ . The powersource equally works well on generator sets with balanced load.

**2. Water Cooling Unit Interlocking**

Sigmaweld WCS (Water Cooling System) can be easily counted below the Sigmaweld welding inverters making it one completely integrated unit. The Sigmaweld WCS contains stainless steel tank, radiator and forced air cooling interlocking of water cooling unit with the program ensures that the WCS is operational only in the GTAW code. No more torch burn out due to no water flow.

**3. Smart Operations**

If the operator runs the torch switch but does not start welding, the gas solenoid is switched off within 10 sec. Ensuring no wastage of shielding gas. In case the tungsten touches the job, the welding current and voltage are stopped immediately and helps to avoid tungsten inclusion defects.

**4. Protections and Safety**

Sigmaweld welding inverters are designed for safety of both operator and machines. It has inbuilt protections for overvoltage, undervoltage, output short, thermal overload

and IGBT peak current locking. This ensures longer life of equipment.

**5. Foot Pedal With Current Control**

Potentiometer based remotes or foot controlled remote or adjusting welding current during welding. This helps welder change current while welding as per the need without using a helper. Our latest foot switch comes with current control.

**6. Welding Automation Accessories**

Sigmaweld GTAW machines can be interfaced with robots, welding SPM's and other systems with ease. Sigmaweld automation systems such as weaving units, AVC (Automatic Voltage Controllers), special purpose machines, cold wire feeders etc are specially designed to enhance productivity and quality of welding.

**Product Selector Guide**

SIGMA WELD MODEL	MATERIAL THICKNESS	AMPERE RANGE	INDUSTRY APPLICATION
SW170	0.7 to 5mm	5 to 170	Site Work, Dairy Equipments, Pharma Piping, Training and Maintenance
SW250	0.7 to 15mm	5 to 250	PetroChem, Aerospace, Pharma Equipment
SW400	0.7 to 25mm	5 to 400	Precision Metal Fabrication, Tube and Pipe Fabrication, Boiler, Pressure Vessels
SW600	1mm upwards	5 to 600	Precision Metal Fabrication, Tube and Pipe Fabrication, Boiler, Pressure Vessels, Railway Wagons

Specifications	SW170PT	SW250PT	SW400PT	SW600PT
Rated Input Voltage	1 $\phi$ , 230 V, $\pm$ 15%, 50HZ	3 $\phi$ , 415 V, $\pm$ 15%, 50HZ	3 $\phi$ , 415 V, $\pm$ 15%, 50HZ	3 $\phi$ , 415 V, $\pm$ 15%, 50HZ
Power (KVA) @ 100%	4.1 KVA	7 KVA	12KVA	18KVA
Duty Cycle @ 40° C	100% @ 130 Amps	100% @ 200 Amps	100% @ 300 Amps	100% @ 400 Amps
Open Circuit Voltage	70Volts	65 Volts	65 Volts	65 Volts
Output Current Range Amperes	8 -170 Amps	8 – 250 Amps	8 – 400 Amps	8 – 600 Amps
(W x D x H) mm	220 x 440 x 560	360 x 650 x 560	360 x 650 x 560	380 x 655 x 650
Weight	23 Kgs	40 Kgs	45 Kgs	65 Kgs

## Protection, Safety Features

1) Thermal Shutdown	Inbuilt (Over temperature Indication)
2) Under Voltage	Inbuilt (Phase Failure Indication)
3) Over Voltage	Inbuilt (Phase Failure Indication/MOV)
4) IGBT Peak Current	Inbuilt
5) VRD, Energy Saving	Inbuilt
6) Cooling Type	Forced Air Cooled
7) Water Cooling Interlocking	Water Flow Switch (Optional)
8) Output Short	In built (Output Short Indication)

## Parameter

Parameter		MIN	MAX
1) Gas Pre Flow Time	Settable	0.1 Sec	25 Sec
2) Gas Post Flow Time	Settable	0.1 Sec	25 Sec
3) Peak Current Time	Settable	0.1 Sec	10.0 Sec
4) Base Current Time	Settable	0.1 Sec	10.0 Sec
5) Welding Mode		2T	4T
6) Hot Start Current	In Built	30% @ 300 ms	
7) Digital Ammeter & Voltmeter	In Built		
8) Process Memory Recall	In Built		

## Ordering Information:

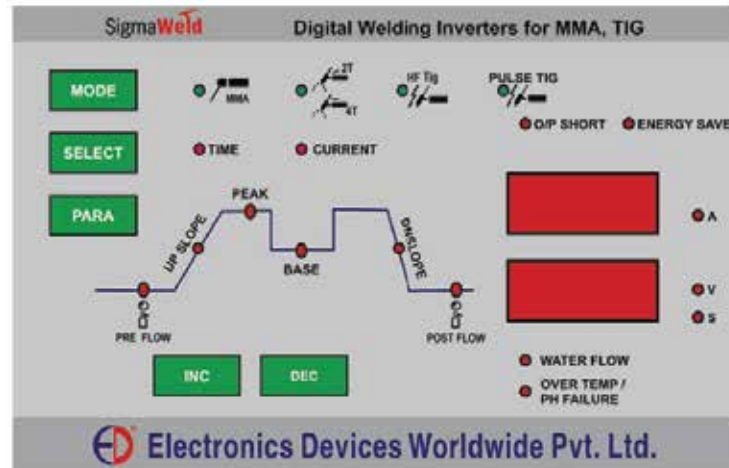
SW	AAA	Model
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SW: SigmaWeld | AAA:170, 250, 400, 600 | Mode: UD, PW, HF, PT

## Models Available:

<p><b>UD:</b> LIFT ARC Up slope Down slope</p> <p>Manual arc welding &amp; DC TIG welding inverter using lift arc starts with settable up slope &amp; down slope timing.</p>	<p><b>PW:</b> LIFT ARC Up slope Down slope Pulsing</p> <p>Manual arc welding and DC TIG welding inverter using lift arc starts with settable up slope and down slope timing along with pulsing control for peak and base current.</p>
<p><b>HF:</b> HF Up slope Down slope</p> <p>Manual arc welding &amp; DC TIG welding inverter with high frequency initiation. Provides HF starts with settable up slope &amp; down slope timing where greater control is required.</p>	<p><b>PT:</b> HF Up slope Down slope Pulsing</p> <p>Manual arc welding and DC TIG welding inverter with high frequency. Provides HF starts with settable up slope and down slope timing along with pulsing control for peak and base current where greater control is required.</p>

## Operating Panel:



\*Continual development can lead to change in specification