

## Power Inverters

An inverter is a central component of any alternative power system that requires AC power. Inverters transform low voltage 12-volt DC power to standard 120 / 240 volt AC power (also referred to as 110 / 220 volt) used to power most modern appliances and tools.

In an inverter, DC (direct current) is switched back and forth to produce AC (alternating current). This is then transformed, filtered, stepped, etc. to get it to an acceptable waveform. The more processing, the cleaner and quieter the output, but the efficiency of the conversion is reduced. The goal is to produce a waveform that is acceptable to most loads but does not lose too much power in the conversion process.



### Power Inverter Product Matrix

Model	WSE 1000W		WSE 2500W	WSE 5000W
	12V	24V	12V	12V
Continuous Power	1000W		2500W	5000W
Peak Load Power	<2000W		5000W surge	10,000W surge
No Load Current Draw	<0.9A		<1A	<2.4A
Input DC Voltage	11-15V	22-30V	10-15V	10-15V
Output Voltage	110-120VAC / 220-230VAC		110VAC	110VAC
Output Frequency	60 +/-4Hz / 50 +/-4Hz		60Hz	60Hz
Output Waveform			Modified Sine Wave	Modified Sine Wave
Max Temperature	<65°C			
Max Power Efficiency	>85%		>90%	>90%
High Voltage Cutoff	15.5 +/- 1V	30.5 +/-1V		
Low Voltage Cutoff	10.0 +/-0.5V	20.5 +/-0.5V	10.0 +/-0.5V	10.0 +/-0.5V
Over-Temp Protection	Yes	Yes	Yes	Yes
Short Circuit Protection	Yes	Yes	Yes	Yes
Overload Protection	Yes	Yes	Yes (3000W)	Yes (6000W)
Dimensions	287 x 124 x 70			
Weight	1.9kg			