

VSP



ENERGIZING THE WORLD



www.VSPNorthAmerica.com

PORTABLE GENERATOR, UNINTERRUPTED POWER SUPPLY, HOME BACK-UP GENERATOR,
RENEWABLE ENERGY POWER STATION, HOME CONTROL CENTER – ALL IN ONE!



RELIABLE AC POWER WHERE YOU NEED IT

VSP 14KW FEATURES AT A GLANCE

- 14KW of stored battery power
- Overload shut down
- 6000W continuous [18KW surge]
- Pure sine wave power
- 110/220V split phase
- 50/60 HTZ
- Built-in, two-way transfer switch
- Real time input/output gauge
- Auto walk drive system [an industry first]
- Automatic fuel generator start, built in solar controller

VSP 14KW BENEFITS

- No gas
- No smoke
- No smell
- 100% silent
- Indoor/outdoor/underground use
- Remote power
- Home back up
- Renewable energy
- No daily fuel cost
- Recharged through Solar/Wind/Grid/
FUEL POWERED GENERATOR

The VSP Generator combines a complete energy management system with a battery management system all in one easy-to-use, turnkey, compact unit. This “one cart solution” is really five generators in one:

1 AN UNINTERRUPTED POWER SOURCE

The VSP Generator is an uninterrupted power source [UPS] to facilities that require a guaranteed source of clean, pure sine wave, uninterrupted power with built-in spike and surge protection. Or power a sump pump when the grid power fails. The VSP Generator switches back to grid power automatically and any energy used gets instantly restored via its on-board charging system. Completely maintenance free!

2 PORTABLE GENERATOR

The VSP Generator is the world’s first portable electric generator. It propels itself under its own power. When compared to a gas or diesel portable generator, for 8-10 hours of power, it would cost about \$20-\$30 for fuel. The same amount of time with the VSP Generator wouldn’t cost anything when connected to portable solar or wind turbine charge kits. Plugged into grid power, it would take six hours and cost \$1 to recharge. No smoke, no smell, no pollution, no maintenance, no fuel. Clean pure sine wave electricity with built-in surge and spike protection.

3 RESIDENTIAL BACK-UP GENERATOR

The VSP Generator connects directly to the home’s electrical panel and has a built-in automatic two-way transfer switch.

4 RENEWABLE ENERGY POWER STATION

The VSP Generator connects to solar PV panels and small wind turbines. A perfect solution for locations without a grid source such as developing countries, portable hospitals, remote offices, or military camps on foreign soil. Whether you are in the middle of the desert or on a boat in the middle of the ocean you will have the best form of electricity at your fingertips.

5 HOME CONTROL CENTER

This feature puts the homeowner in control of their electricity and not the power company. If a homeowner has an existing rooftop solar array on their home they are just selling their power to the grid. If the grid shuts down, so does their solar. If the homeowner has a VSP14000 they can simply flip a switch and redirect the solar power away from the grid and into the VSP14000. Now they are off the grid, their meter is no longer spinning, and they are not paying for power. Now, the solar array is feeding the power to the VSP14000, which is now powering the home.



POWER DRIVE
THROTTLE HANDLE

AC INPUT / DC INPUT
CONTROL PANEL

ANDERSON MULTI-UNIT
CONNECTION PLUG IN



VSP14000 PORTABLE GENERATOR, UNINTERRUPTED POWER SUPPLY, HOME BACK-UP GENERATOR, RENEWABLE ENERGY POWER STATION, HOME CONTROL CENTER – ALL IN ONE!

ENERGIZING THE WORLD THROUGH OFF-GRID POWER SOLUTIONS

SIMPLIFIED & EFFICIENT POWER ELECTRONICS

All required electronics are built right in, including the latest in solar charge controllers and pure sine wave technology for wind conversion. The VSP's inverting systems only consume two percent of the stored battery power to operate the unit, whereas, the less expensive square-wave inverter systems consume 40 percent of the stored battery power just to convert the power.

SIMPLE TO USE

Its plug-and-play design is simple to understand and operate.

MUCH CHEAPER TO OPERATE THAN DIESEL

To get 10 hours of power with a portable gas or diesel generator, it costs about \$20 in fuel. To get 10 hours of power with the VSP14000, it costs about 80¢ in power, if recharged by grid electricity. The VSP's inexpensive operation is a key reason why it is an excellent alternative to a gas or diesel genset.

AUTOMATIC GRID BACKUP

The VSP includes a built-in, two-way transfer switch, which allows the VSP14000 to act as backup power to the grid. The VSP14000 is simply plugged into an electrical outlet—120vac or 240vac. Whenever the grid power fails, the VSP14000 turns on automatically and continues the power supply to whatever you have plugged into the VSP unit, or if it is connected to a home generator panel. When the grid power resumes, the VSP14000 provides a buffer of one minute to ensure the incoming grid power is safe and without harmful spikes. Once this one minute passes, the VSP14000 automatically resumes to stand-by mode and power is now supplied to whatever is plugged into the VSP unit by grid power. Any energy that was used from the generator gets instantly restored through its on-board AC charging system.

DUAL VOLTAGE

The VSP inverting system is split phase and outputs 120/240vac at the same time. Competitor generators and inverters provide just one voltage alternative.

MAINTENANCE-FREE BATTERIES

The VSP comes included with maintenance-free, sealed, lead-acid batteries in a flameproof case that do not emit gases. Safe for indoor and underground use. No weekly top up of batteries required.

PRODUCES SAFE POWER

The VSP14000 supplies pure sine wave electricity, which is the cleanest form of electricity available, even cleaner than the cleanest of grid power. The VSP Generator produces consistent, reliable and safe power, which eliminates damaging electrical events such as brown-outs and spiking. Safe for all medical devices and sensitive electronics.

REMOTE MONITORING

With an online monitoring and computer system built in, both energy input and output can be monitored and managed remotely by Internet. [OPTIONAL]

ADVANCED METERING

The VSP14000 is the only machine in the world to have a watt meter showing how much power is being consumed from the VSP14000 and a second watt meter on the input side showing how much power is flowing into the vsp14000 from solar and/or wind generation. Having accurate metering on the input allows the operator to fine tune the solar PV setup for maximum solar power.

SAFE FOR INDOOR AND UNDERGROUND USE

Its quiet operation, no fumes, no fuel use and no moving parts allow for safe indoor/UNDERGROUND use.

MAINTENANCE FREE

Very important for remote locations or where budgets are tight.

FLEXIBLE

Operates 120VAC/240VAC anywhere. Can be connected to solar, wind, FUEL GENERATOR and electrical grid.

PROVEN TECHNOLOGY

Thousands of units sold, many in developing countries.

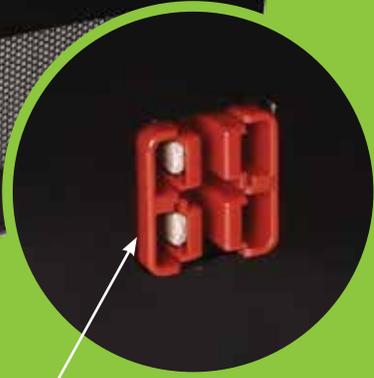
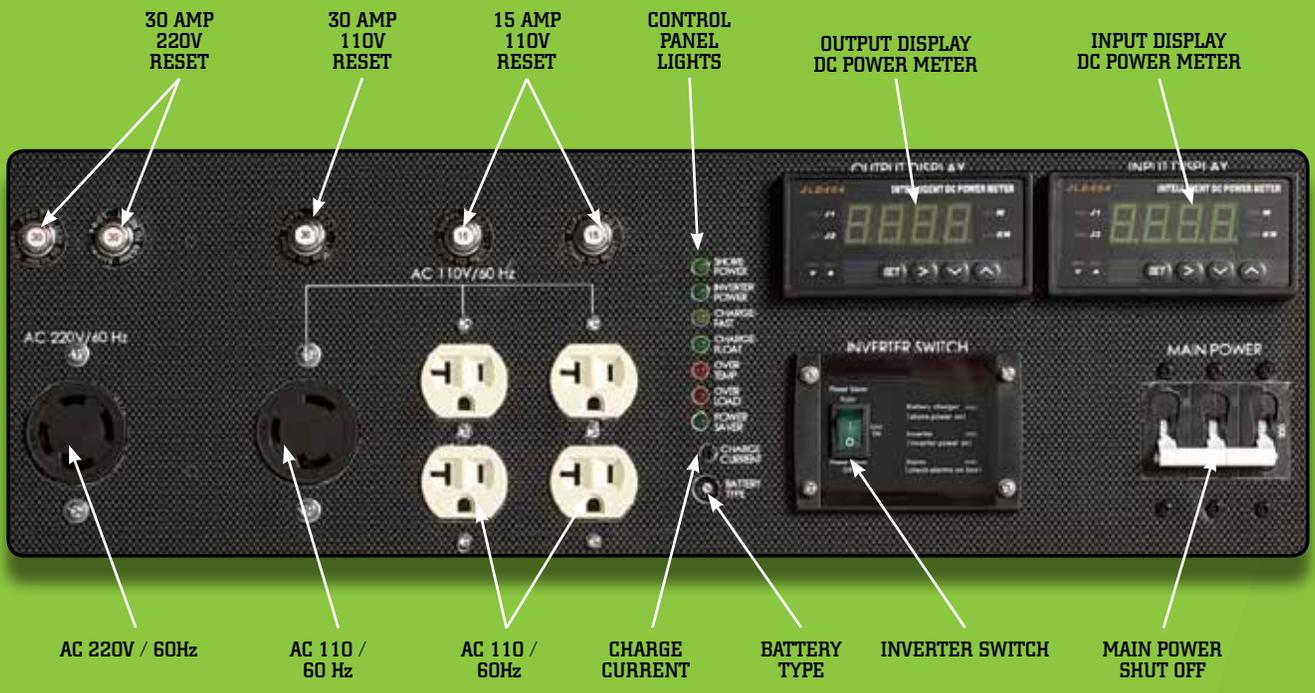
COST EFFECTIVE

Price of VSP14000 with VSP Battery Pack included—competitive with traditional grid-tied inverter-based solar systems without batteries.

SEAMLESS INTEGRATION

Easily configures with existing gas/diesel genset technology to offset use as well as any new or existing ground mount or rooftop solar arrays.

www.VSPNorthAmerica.com
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ANDERSON CONNECTORS

- Allows you to connect to VSP Wind Turbine kit.
- Allows you to connect to larger solar array using VSP Controller
- Allows you to connect to VSP Power Pack for additional storage.



Inverter Output

Continuous Output Power	6.0KW
Surge Rating [20 Secs]	18.0KW
Output Waveform	Pure Sine wave/Same as input [Bypass Mode]
Nominal Efficiency	> 88%[Peak]
Line Mode Efficiency	> 95%
Power Factor	0.9-1.0
Nominal Output Voltage rms	100-110-120Vac / 220-230-240Vac
Output Voltage Regulation	±10% RMS
Output Frequency	50Hz ± 0.3Hz/60Hz ± 0.3Hz
Short Circuit Protection	Yes [1sec after fault]
Typical transfer Time	10ms [Max]
THD	< 10%

DC Input

Nominal Input Voltage	48.0Vdc
Minimum Start Voltage	40.0Vdc / 42Vdc
Low Battery Alarm	42Vdc / 44.0Vdc
Low Battery Trip	40.0Vdc / 42Vdc
High Voltage Alarm	64Vdc
Low Battery voltage recover	62Vdc
Idle Consumption-Search Mode	< 25 W when Power Saver On [Refer to Table]

Charger

Output Voltage	Float charge 54.4vdc Fast Charge 57.6vdc
Charger Breaker Rating	40A
Max Charge Power Rate	50 ± 5 Amp
Battery Initial Voltage for Start	40-62.8Vdc
Over Charge Protection S.D.	62.8Vdc

BTS

Battery Temperature Sensor [Optional]	Yes [Refer to the table] Variances in Charging Voltage & S.D Voltage Base on the Battery Temperature
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Bypass & Protection

Input Voltage Waveform	Sine wave [Grid or Generator]
Nominal Voltage	100-110-120Vac / 220-230-240Vac
Max Input AC Voltage	150VAC For 120Vac LV Mode 300VAC For 230Vac HV Mode
Nominal Input Frequency	50Hz or 60Hz
Low Freq Trip	47±0.3Hz for 50Hz, 57±0.3Hz for 60Hz
High Freq Trip	55±0.3Hz for 50Hz, 65±0.3Hz for 60Hz
Overload protection [SMPS load]	Circuit Breaker
Output short circuit protection	Circuit Breaker
Bypass breaker rating	40A
Transfer switch rating	40Amp for UL
Bypass without battery connected	Yes [Optional]
Max bypass current	40Amp

Solar Charger [Optional]

Rated Voltage	48Vdc
Solar Input Voltage Range	60-100Vdc
Rated Charge Current	80A
Rated Output Current	80A
Self Consumption	< 10mA
Bulk Charge [Default]	58Vdc
Floating Charge [Default]	54Vdc
Equalization Charge [Default]	56Vdc
Over Charge Disconnection	59.2Vdc
Over Charge Recovery	54.4Vdc
Over Discharge Disconnection	43.2Vdc
Over Discharge Reconnection	49.2Vdc
Temperature Compensation	-13.2mV / for 12Vdc Mode
Ambient Temperature	0 ~ 40 [Full load] 40 ~ 60 [Derating]

Mechanical Specifications

Dimensions [L*W*H]	41" L x 29.5" W x 34.5" H 1143mm L x 850mm W x 876mm H
Weight LBS [KG]	820 LBS [372 KG]
Shipping Dimensions[L*W*H]	48" L x 32" W x 42" H 1219mm L x 812mm W x 1066mm H
Shipping Weight LBS [KG]	965 LBS [43 KG]
Display Status	LEDs / Status LEDs+LCD
Standard Warranty	1 Year



PORTABLE GENERATOR



UNINTERRUPTED POWER SUPPLY



RENEWABLE ENERGY POWER STATION



TWO-WAY POWER TRANSFER SWITCH



CONTROL BOX

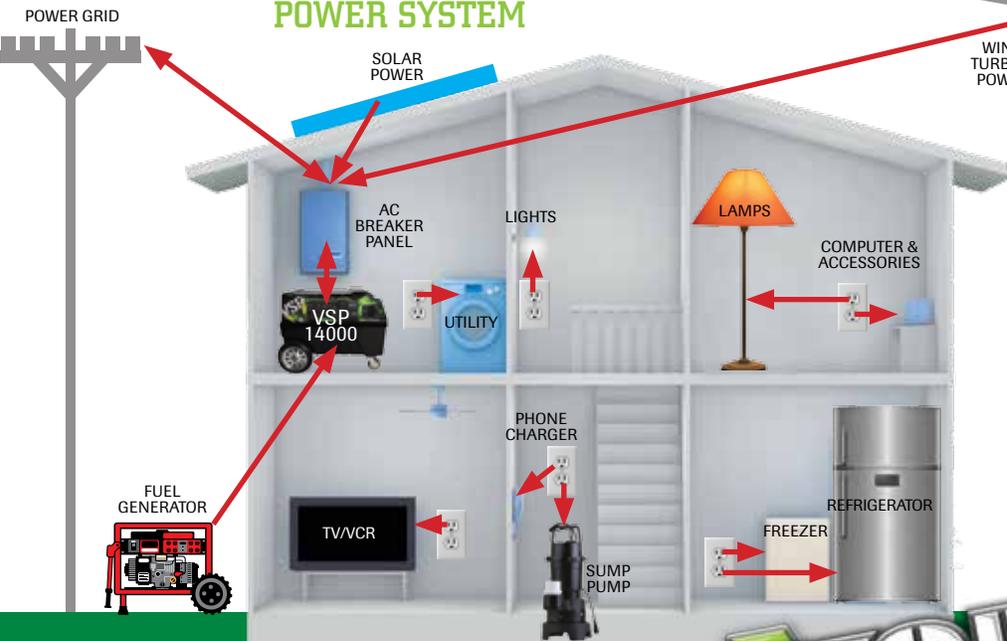


HOME CONTROL CENTER

Homeowner controls the direction of electricity— not the power company.

Homeowner can choose to sell power from their existing solar array, or simply flip a switch and redirect the solar power away from the grid and into the VSP14000. They are then off the grid, and the solar array is feeding the power to the VSP14000 which is powering their home.

HOME BACKUP POWER SYSTEM



MADE IN THE
USA



OFF-GRID
POWER SOLUTIONS
ENERGIZING THE WORLD

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