

SUNWIZE POWER STATION

System Sizing Tables

For a Hybrid Power Station (PSG), the load is served by both the PV array and the engine generator. The PSG Hybrid Sizing Table specifies a system designed to meet approximately 50% of the daily AC load with PV energy, and the remaining 50% from the generator. Systems with a larger PV array will require less generator run time, and therefore less fuel and maintenance cost.

The Stand-Alone Power Station (PS) Sizing Table specifies a system designed to meet the daily load of your equipment in the worst case month using only the PV energy. The systems are designed for an availability of better than 99.99%. Systems with a larger PV array and battery bank will provide a greater safety factor against weather-related downtime.

HOW TO SELECT YOUR SYSTEM-

1. Use the world insolation map on the back cover to select the insolation zone corresponding to the equipment site location.

2. Determine your daily equipment load in Amp-hours/day (for DC loads) or kWh/day (for AC loads) at the specified load voltage.
 3. Select a hybrid (PSG) or stand-alone PV (PS) system type.
 4. In the PSG or PS Sizing Table, under the DC or AC Load column, select the DC or AC Load that is greater than or equal to your load.
 5. In the PSG or PS Sizing Table, under your site's Insolation Zone column, find the PV array size that corresponds to your load; this value represents your PV array size and Order # (e.g., PS1920).
 6. Use the System Equipment Options chart to select your Power Panel Order# based on your load voltage and power demand.
 7. Specify any System Options required such as load conditioning equipment, and enter these letters in the Part Number Configuration.
- Contact SunWize to customize the system components based on your location and other design criteria.

Model PSG Hybrid Power Station with AC Load (in kWh/day)

Daily AC Load (kWh/day)	PV Array Size (peak Watts)				
	INSOLATION ZONE				
	1.0 - 1.9	2.0 - 2.9	3.0 - 3.9	4.0 - 4.9	5.0 - >5.9
4 - 6	1360	1360	960	960	Call SunWize
6 - 8	1920	1700	1360	1360	960
8 - 10	2300	1920	1700	1700	1360
10 - 12	2760	2300	1920	1920	1700
12 - 14	Call SunWize	2300	2300	2300	1920
14 - 16	Call SunWize	2760	2300	2300	2300
16 - 18	Call SunWize	Call SunWize	2760	2760	2300
18 - 20	Call SunWize	Call SunWize	Call SunWize	2760	2760
20 - 22	Call SunWize	Call SunWize	Call SunWize	Call SunWize	2760

Model PS Power Station with DC Load (in Amp-hours/day) or AC Load (in kWh/day)

Daily DC Load (Amp-hrs/day)	Daily AC Load (kWh/day)	PV Array Size (peak Watts)				
		INSOLATION ZONE				
		1.0 - 1.9	2.0 - 2.9	3.0 - 3.9	4.0 - 4.9	5.0 - >5.9
20 - 29	0.5 - 0.6	960	960	Call SunWize	Call SunWize	Call SunWize
30 - 39	0.7 - 0.9	1360	960	Call SunWize	Call SunWize	Call SunWize
40 - 49	1.0 - 1.1	1700	960	960	Call SunWize	Call SunWize
50 - 59	1.2 - 1.3	1920	1360	960	Call SunWize	Call SunWize
60 - 69	1.4 - 1.6	2300	1360	960	Call SunWize	Call SunWize
70 - 79	1.7 - 1.8	2760	1700	1360	960	Call SunWize
80 - 99	1.9 - 2.3	Call SunWize	1920	1360	960	Call SunWize
100 - 119	2.4 - 2.8	Call SunWize	2300	1700	1360	960
120 - 139	2.9 - 3.3	Call SunWize	2760	1920	1700	1360
140 - 179	3.4 - 4.2	Call SunWize	Call SunWize	2300	1920	1360
180 - 239	4.3 - 5.7	Call SunWize	Call SunWize	2760	2300	1920
240 - 280	5.8 - 6.7	Call SunWize	Call SunWize	Call SunWize	2760	2300

System Equipment Options for Part Number Configuration

(Use the options list to specify Power Station equipment or contact SunWize for custom configurations)

System Type						
Array Wp	Stand-Alone Order#	Hybrid (w/Gen) Order#	Dimensions (See drawing at bottom of page)			
			A	B	C	D
960	PS0960	PSG0960	183.5"	96"	94.5"	120"
1360	PS1360	PSG1360	183.5"	96"	94.5"	120"
1700	PS1700	PSG1700	183.5"	149"	94.5"	140"
1920	PS1920	PSG1920	203.5"	149"	112"	120"
2300	PS2300	PSG2300	203.5"	149"	112"	140"
2760	PS2760	PSG2760	203.5"	149"	112"	140"

Power Panel Output/System Voltage (Option T)	Order#
DC ONLY, maximum 1.4kW/60A @ 24Vdc	TDC24V
DC ONLY, maximum 2.9kW/60A @ 48Vdc	TDC48V
3.3 kVA / 14A @ 230Vac/50Hz/1Ø, 24Vdc	T3024E
4.0 kVA / 33A @ 120Vac/60Hz/1Ø, 24Vdc	T4024S
4.0 kVA / 33A @ 120Vac/60Hz/1Ø, 48Vdc	T4048S*
4.5 kVA / 19A @ 230Vac/50Hz/1Ø, 48Vdc	T4548E
5.5 kVA / 46A @ 120Vac/60Hz/1Ø, 24Vdc	T5548S
8.0 kVA / 33A @ 120/240Vac/60Hz/1Ø, 48Vdc	T8048D
11.0 kVA / 46A @ 120/240Vac/60Hz/1Ø, 48Vdc	T1148D

Battery – 100 hour rating (Option B)	Order#
Valve-regulated lead acid, sealed 12V cells, 500Ah @ 24 volt or 250Ah @ 48 volt	B12
Valve-regulated lead acid, sealed 12V cells, 1000Ah @ 24 volt or 500Ah @ 48 volt	B10*

Battery – 100 hour rating (Option B continued)	Order#
Valve-regulated lead acid, sealed 12V cells, 1500Ah @ 24 volt or 750Ah @ 48 volt	B04
Valve-regulated lead acid, sealed 12V cells, 1800Ah @ 24 volt or 900Ah @ 48 volt	B14

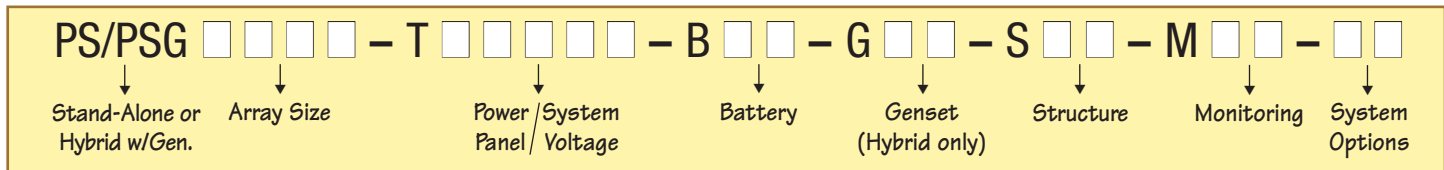
Generator (Option G)	Order#
Propane, medium-duty, water cooled, 1800 rpm	G04
Diesel, medium-duty, water cooled, 1800 rpm	G09
Propane, light-duty, air-cooled, 3600 rpm **	G08*

Structure (Option S)	Order#
Ground Mount, A-Frame w/rear skid, hot-dip galvanized, AC	S01*
Ground Mount, A-Frame, hot dip galvanized, DC only	S02
Trailer mount, heavy-duty, road rated, dual axle	S03

Monitoring (Option M) ***	Order#
Local Monitoring with RS-232 communication port	M01*
Remote Monitoring/Control Panel, 50 ft. (15m) cable	M02

System Options	
a. DC - DC converter	f. Theft deterrent module hardware
b. DC - AC inverter (125-1100W)	g. Load output cable
c. DC rated load circuit breaker	h. Bird deterrent spikes
d. Multi-cycle load timer	i. Charge controller LCD meter
e. Customer equipment integration	j. 4-channel relay driver
	m. MPPT charge controller

* Denotes standard configuration equipment. ** Light Duty usage: less than 250 hrs/year run time. *** Monitoring includes: array current, battery voltage, genset voltage, genset current, genset run hours, load voltage, load current, load frequency, and diagnostic messages.



Power Station Dimensions

