

## THE RANGER

# Your plug and play off grid solar system.

Planning to go off grid? Well, you've come to the right place. With The Ranger Package, you can power all your necessities from your TV and laptop to your fridge and hair dryer. This seamless, all-in-one system is quick and easy to install, providing reliable power at your fingertips.

### Package components

**Qty 1** - Power Tower

Qty 1 - PT Battery 14

Qty 8 - 340W Canadian Solar Panels



PERFECT FOR **POWERING YOUR NON HVAC** OFF GRID ELECTRICAL LOADS.



IDEAL FOR HOME APPLIANCES, ELECTRONICS, PUMPS AND OTHER 120V APPLIANCES.



**GROW YOUR SYSTEM OVER TIME** AS NEEDED WITH ADDITIONAL BATTERIES AND SOLAR PANELS.



## **Key features**



### **Stackable**

Up to 24 PT 5 Batteries can be paralleled to grow your system to your exact needs at time of purchase or at a later date.



### **Auto Gen Start**

Auto generator starts ensure you never run out of power when off grid.



### **Smart System**

Off-grid and backup power.



### **Gen Breaker**

Up to 12kW Generator Input.



#### **Pure Sine Wave**

Pure sine wave means clean power for sensitive electronics.



### **Automatic Transfer Switch**

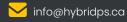
Automatic transfer switch changes over to battery power almost instantaneously.



**ATTENTION:** Please note it is the customer's obligation to check local electrical requirements and certification requirements of all HPS purchased equipment to ensure they meet the local electrical code. Additional components such as AFCI protection, Conduit Caps, and fusing/breakers may be required.













# **Power Tower Specifications.**

Continuous Power Output	6,000W	Peak Power Output	18,000W	
Output Voltage	120V AC	Sine Wave	Pure Sine	
AC Input	120 VAC up to 60A	Battery Charging From Grid/Generator	Selectable up to 50A	
Solar Array Power	3,500W	Maximum Solar Input	30A	
Maximum Solar Voltage	135 VDC	Weight	75 kg [165 lbs]	
Dimensions	88 cm x 56 cm x 24.5 cm [34.6in x 22in x 9.6in]			



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hybridps.ca





## PT14 Battery Specifications.

Chemistry	LiFePO4	Min Voltage	44V	
Nominal Voltage	51.2VDC	Max Voltage	56VDC	
Energy Capacity	14kWh	Operational Temperature	-30°C to 45°C [-22°F to 113°F]	
Battery Heating Operational Temperature	-30°C to 10°C [-22°F to 50°F]	Maximum Continuous Discharge Amperage	280A	
Maximum Continuous Charge Current	280 A (140 A recommended)	Weight	90.7 kg [200 lbs]	
Dimensions	39cm x 13.3cm x 61cm [15.5in x 13.3in x 24in]	Circuit Breaker Amperage	300A	
Enclosure Material	Aluminum	Communication	CANBUS	
Maximum Batteries in Parallel	24	Certifications (battery)	UL1973 (Pending) UN38.3 CSA (SPE-1000) Inspected UL9540A	

### **Cycles**

6700 cycles

(charging CC/CV @0.5C & discharging CC @0.5C, 100% DOD, 25°C +/-2°C 80% of rated capacity), 8500 cycles

(charging CC/CV @0.5C & discharging CC @0.5C, 100% DOD, 25°C +/-2°C 70% of rated capacity),

(charging CC/CV @0.3C & discharging CC @0.3C, 70 DOD, 25°C +/-2°C 70% of rated capacity)

### With

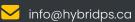
- \*4 Caster Wheels
- \*\* Temporary rope handles provided for installation



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## 340W Canadian Solar Panel Specifications.

### Electrical Data | STC\*

Nominal Max. Power (Pmax)	340W	
Opt. Operating Voltage (Vmp)	37.9V	
Opt. Operating Current (Imp)	8.97A	
Open Circuit Voltage (Voc)	46.2V	
Module Efficiency	17.49%	
Operating Temperature	40°C to 85°C [-40°F to 185°F]	
Max. System Voltage	1500V (IEC) or 1500V (UL)	
Module Fire Performance	TYPE I (UL 1703) or CLASS C (IEC 61730)	
Max. Series Fuse Rating	15A	
Application Classification	Class A	
Power Tolerance	0 ~ + 5W	

<sup>\*</sup> Under Standard Test Conditions (STC) of irradiance of 1000 W/m2, spectrum AM 1.5 and cell temperature of 25°C.

### **Electrical Data | NOCT\***

Nominal Max. Power (Pmax)	245W
Opt. Operating Voltage (Vmp)	34.6V
Opt. Operating Current (Imp)	7.10A
Open Circuit Voltage (Voc)	42.4V
Short Circuit Current (Isc)	7.67A

<sup>\*</sup> Under Nominal Operating Cell Temperature (NOCT), irradiance of 800 W/ m2, spectrum AM 1.5, ambient temperature 20°C, wind speed 1 m/s.

### **Mechanical Data**

Cell Type	Mono-crystalline, 6 inch		
Cell Arrangement	72 (6 x 12)		
Dimensions	196 cm x 99.2 cm x 4 cm [77.2in x 39.1in x 1.57in]		
Weight	22.4 kg (49.4 lbs)		
Front Cover	3.2 mm tempered glass		
Frame Material	Anodized aluminium alloy		
J-Box	IP67, 3 diodes		
Cable	PV1500DC-F1 4 mm2 (IEC) & 12 AWG 2000 V (UL), 1160 mm (45.7 in)		
Connector	T4 series or PV2 series		

#### **Temperature Characteristics**

Temperature Coefficient (Pmax)	-0.41 % / °C/F		
Temperature Coefficient (Voc)	-0.31 % / °C/F		
Temperature Coefficient (Isc)	0.053 % / °C/F		
Nominal Operating Cell Temperature	45±2 °C/F		

### **Performance At Low Irradiance**

Outstanding performance at low irradiance, average relative efficiency of 96.5 % from an irradiance of 1000 W/ m2 to 200 W/m2 (AM 1.5, 25°C).

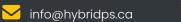
The specification and key features described in this datasheet may deviate slightly and are not guaranteed. Due to on-going innovation, research and product enhancement, Canadian Solar Inc. reserves the right to make any adjustment

to the information described herein at any time without notice. Please always obtain the most recent version of the datasheet which shall be duly incorporated into the binding contract made by the parties governing all transactions related to the purchase and sale of the products described herein.

Caution: For professional use only. The installation and handling of PV modules requires professional skills and should only be performed by qualified professionals. Please read the safety and installation instructions before using the modules.









# Compare our solar & backup power packages



Off Grid

**Backup Power Grid Tied** 

	Frontier	Defender	Starter	Cottager	Chateau	Ranger
Power	6,000W	6,000W	12,000W	12,000W	15,000W	6,000W
Surge Power	18,000W	18,000W	25,000W	25,000W	30,000W	18,000W
Output Voltage	120VAC	120VAC	120 - 208 - 240V AC	120 - 208 - 240V AC	120 - 208 - 240V AC	120VAC
Solar Charging Power	3,500W	3,500W	12,000W	12,000W	15,000W	3,500W
Outdoor Rated	No	No	Yes (Inverter only)	Yes (Inverter only)	Yes (Inverter only)	No
Temperature Rating	-30°C to 45 °C [-22°F to 113 °F]					
Total Energy	5kWh	14kWh	-	14kWh	14kWh	14kWh
Number of Solar Panels	-	-	9	12	24	8
Included Solar Panel Power	-	-	3,060W	4,080W	8,160W	2,720W
Package Components	(1) Power Tower (1) PT5 Battery	(1) Power Tower (1) PT14 Battery	(1) Solark 12K (9) 340W Ca- nadian Solar Panel	(1) Solark 12K (1) PT14 Battery (12) 340W Canadian Solar Panel	(1) Solark 15K (1) PT14 Battery (24) 340W Canadian Solar Panel	(1) Power Tower (1) PT14 Battery (8) 340W Ca- nadian Solar Panel

\*Based on Canadian figures

**Perfect For** 

\*\*Can be scaled to a maximum of 1,440kWh



Back up power for 10 - 50 hours



Avg. Monthly Energy Usage: 367kWh\* \*\*

Base package will offset some energy costs and can be scaled to offset full energy costs.



Avg. Monthly Energy Usage: 490kWh\* \*\*

Base package will power all electrical appliances and devices with the exception of electric heat/air conditioning.



Avg. Monthly Energy Usage: 980kWh\*

Base package will power all electric appliances and devices with limited load management. Includes air conditioning for grid-tied, excludes electric heating for off-grid.



Avg. Monthly Energy Usage: 326kWh\*

Will power most mall appliances and electrical basics.



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