

# Smartflower +Plus

Get solar energy on-demand  
whether you're on or off the grid.

---

Generating and storing clean solar energy is now easier than ever with **Smartflower +Plus**. Store your clean solar energy reliably with our integrated battery storage system! Whether you're on or off the grid, **Smartflower +Plus** provides an easy installation with greater peace of mind.



  
**NÜ-NRG**  
GROUP  
[nu-nrg.ca](http://nu-nrg.ca)

 SMARTFLOWER

INVERTER DATA	
Inverter	Sol-Ark 8K
Nominal frequency	50 Hz / 60 Hz
AC OUTPUT DATA	
Rated AC voltage	9000 VA
Max. AC current	50 A (240 V)
AC connection	On-grid (240 V split-phase, L1, L2, N, PE), 3-Phase (208 V, L1, L2, N, PE)
Grid frequency range	45–66 Hz (240 V)
FEED-IN PHASES	
Max. efficiency	97.5%
CEC efficiency	96.5%
INVERTER PROTECTIVE DEVICES	
Anti-islanding	Internal, in accordance with UL1741-2010/ 2018, IEEE1547a-2003/2014, FCC 15 class B, UL1741SA, CA Rule 21, HECO Rule 14H
INVERTER NORMATIVE REFERENCES	
Certificate and compliance with standards	NEC 690.4B & NEC 705.4/6
INVERTER GENERAL DATA	
Degree of protection	NEMA 1
Inverter warranty	5–10 years
CHARGER DATA	
Charge controller	Sol-Ark 8K
DC INPUT DATA	
Max. DC voltage	500 V
MPPT voltage range	150–425 V
Max. DC work current	18 A
Number of inputs/MPP trackers	2
CHARGER BATTERY DATA	
Nominal battery voltage range	41–59 V
Continuous battery charging output	190 A
Charging efficiency	96.0%
CHARGER PROTECTIVE DEVICES	
DC reverse polarity protection	No
DC disconnect	Yes
AFCI	Yes
Rapid shutdown compliant	Yes
Ground fault protection	Yes
CHARGER NORMATIVE REFERENCES	
Certificate and compliance with standards	Combined inverter/charger. See Inverter Details above for Normative References.
CHARGER GENERAL DATA	
Degree of protection	Combined inverter/charger. See Inverter Details above for Normative References.
Charger warranty	Details above for Normative References.
BATTERY COMPATIBILITY	
NEC ALM12V35s	Yes
SimpliPhi PHI 3.8 48V	Yes
ENERGY STORAGE SYSTEM DATA	
Max. discharge power	4.5 kW

SIMPLIPHI PHI 3.8 48V	
Nominal battery capacity	75 Ah
Nominal battery voltage	51.2 V
Max. battery charge / discharge current	37.5 A
Battery operating temperatures	-4°F to 140°F   -20°C to 60°C
Safety and compliance	UL 1973, CE, RoHS
SYSTEM DATA	
Battery storage system configuration	3 units arranged in Parallel (3P)
System Capacity	11.4 kWh
Nominal operating system voltage	51.2 V
System max. charge current	88 A
Nominal system float voltage	54 V

## SMARTFLOWER TECHNICAL DATA

Nominal output	2.5 kWp
Yearly output with 2-axis tracking	4,000–6,500 kWh / a *

## SYSTEM

Panel type	Glass / Backsheet
Panel power output warranty (80% power)	25 years
Panel product warranty	10 years
Cell type	Monocrystalline PERC
Inverter	Integrated with unit
System weight	1,900 lb   862 kg
System warranty (parts / labor)	2 years
System self-consumption per year	Approx. 400 kWh
Agency approval	UL 3703, UL 1703, UL 1004, UL 9540, IEC 60068-3-3 Zone 3, CEC, CSA, CE, FCC Class B

## Shipping dimensions (in | mm):

Vertical packaging	65 x 47 x 106   1651 x 1194 x 2692
Horizontal packaging (special order)	111 x 46 x 73   2819 x 1168 x 1854
Total shipping weight	2,450 lbs   1111 kg

## APPLICATION AREA

Temperature range	-4°F to 104°F   -20°C to 40°C
Humidity	5–95% (non condensing)

## ELECTRICAL CONNECTIONS

Up to 100 ft (Sol-Ark 8K)	4 x 12 AWG (L1, L2, N, PE) **
Up to 100 ft (Outback FXR30 10A)	3 x 12 AWG (L1, N, PE)
From 100 ft onwards	Accommodate for voltage drop
Grid connection (circuit breaker)	***
US applications	20 A
EU applications	16 A

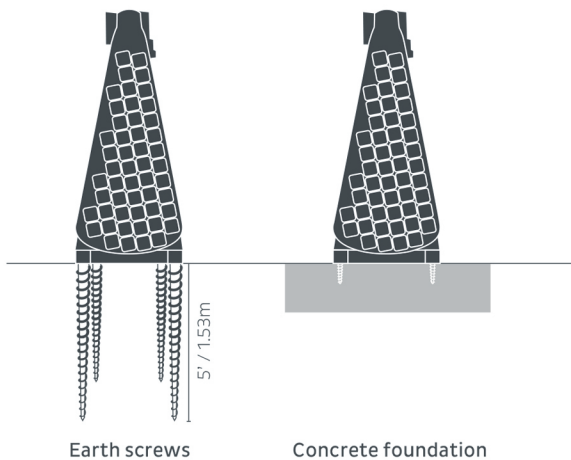
Wind guard	32 ft / 9.75 m cable included
------------	-------------------------------

## REMOTE MONITORING

Network / LAN cable	CAT 5 or better
Connector	RJ45
Off-grid / remote location	Cell network enabled kit (optional)

## INSTALLATION

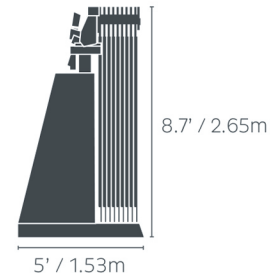
Mounting	4 fastening points to foundation
Assembly	Earth screws, concrete foundation, or a pre-cast concrete pad ****



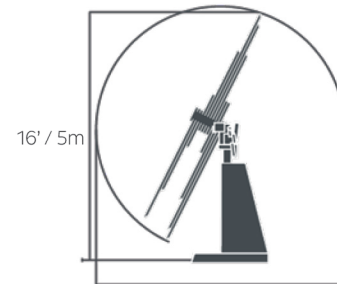
- \* Dependent on geographical location and weather
- \* If using a 208 VAC connection, please contact Smartflower before installation
- \*\*\* Local standards must be followed
- \*\*\*\* Recommendations may vary based on local jurisdiction and soil conditions

## DIMENSIONS

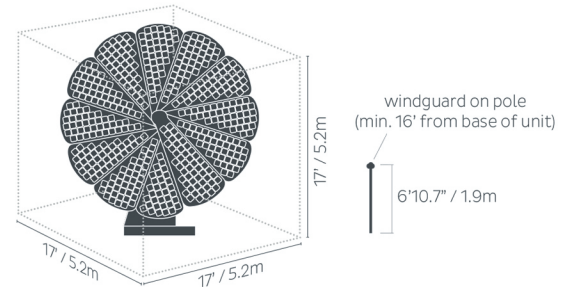
### TRANSPORT POSITION



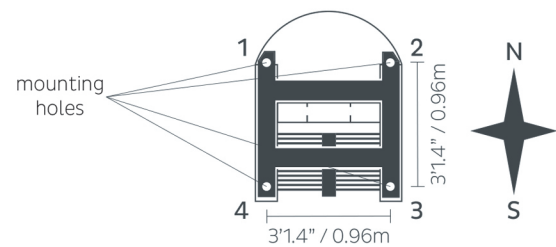
### TRACKING, MAX. HEIGHT



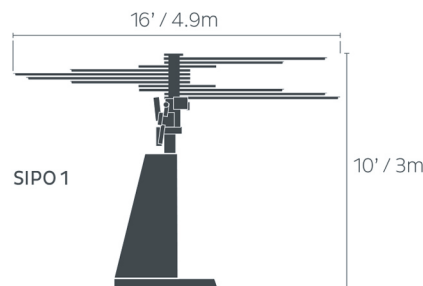
### ACTIVE AREA



### BOTTOM VIEW



### SAFETY POSITIONS



At a wind speed of 29 mph or 13 m/s

### SIPO 2



At a wind speed of 40 mph or 18 m/s



# Renewable energy when you need it.



## Clean energy for all.

With a fully integrated battery storage system, **Smartflower +Plus** lets you store clean solar energy for when you need it most. It is the perfect product for off-the-grid usage, with the clean solar energy produced during the day being stored in batteries for future use. That means that even during peak demand times, or when the power is out, your **Smartflower +Plus** will continue to provide you with clean and reliable energy whether you're on or off the grid.



### Simple.

Control your Smartflower and monitor your energy production from the comfort of your phone with our remote monitoring app.



### Efficient.

Our certified Smartflower technicians can set it up in just a few hours, providing you with immediate energy independence.



### Independent.

Self-cleaning and convection cooling keep **Smartflower** running at maximum efficiency.



### Elegant.

Unique and powerful features packaged in an award-winning design.



## 50 Times Greater. 100 Times Faster.

The NEC batteries in the **Smartflower +Plus** promises strong performance and life across temperatures as low as -40°C/-40°F to as high as 60°C/140°F. This means you get up to 50 times a greater cycle life, twice the usable energy, and charging times 100 times faster than typical lead-acid batteries. What could be better than that?



## Follow the Sun.

**Smartflower +Plus** automatically unfolds every morning. The dual-axis system allows **Smartflower +Plus's** solar panels to always maintain the optimal 90° angle to the sun. This produces up to 40% more power than a conventional solar system and capable of producing up to 6,500 kWh/year, depending on your location.

Recipient of the Red Dot Design Award, the SEA Sustainable Entrepreneurship Award, the Verbund-E-Novations Award, the Green Good Design Award, and the Austria Born Global Champions Award

Revision	Date	Author	Comments
E	8/25/2021	SH	