



## Tech Specs - sonnen eco Gen 3.1

The sonnen eco is an intelligent energy storage solution that seamlessly integrates with leading smart home automation systems and controllable breakers to power your home with clean energy – managing your energy usage throughout the day, providing smart configurable backup power during grid outages and powering smart homes with solar energy, day and night.

	eco 5 <sup>1</sup>	eco 7.5	eco 10 <sup>1</sup>	eco 12.5	eco 15	eco 17.5	eco 20
<b>Total capacity (@ 90% DOD)<sup>2</sup></b>	5 kWh	7.5 kWh	10 kWh	12.5 kWh	15 kWh	17.5 kWh	20 kWh
<b>Nominal power rating (off-grid output at 25 deg C)</b>	3 kW	4 kW	8 kW	8 kW	8 kW	8 kW	8 kW
<b>Nominal power rating (grid-tied output at 25 deg C)</b>	3 kW	3.6 kW	7 kW	7 kW	7 kW	7 kW	7 kW
<b>Weight (approximate)</b>	394 lbs	447 lbs	543 lbs	596 lbs	724 lbs	777 lbs	830 lbs
<b>Dimensions W”/H”/D” (approximate)</b>	26/57/19				26/84/19		
<b>Off-grid specification</b>	eco 5 <sup>1</sup>	eco 7.5	eco 10 <sup>1</sup>	eco 12.5	eco 15	eco 17.5	eco 20
<b>Continuous AC output current</b>	12.5 A	16.67 A			33.3 A		
<b>Max power</b>	100 ms - 8.5 KVA 5 s - 6 KVA 30 m - 4.5 KVA				100 ms - 17 KVA 5 s - 12 KVA 30 m - 9 KVA		
<b>Max AC current (charge/discharge)</b>	1 ms - 50A 100 ms - 35.35 A 5 s - 25 A 30 m - 18.75 A				1 ms - 100A 100 ms - 70.7 A 5 s - 50 A 30 m - 37.5 A		

## System Applications

Applications	Self-consumption Backup power Time-of-use

## General Specification

<b>Grid integration</b>	AC coupled
<b>Transfer switch</b>	Automatic, integrated
<b>Usable capacity</b>	2.25 kWh per battery module, up to 8 modules
<b>Listed and recognized components</b>	System certified – UL9540; Battery modules – UL1973; Inverter – UL1741; Transfer switch – UL1008; AC Breaker – UL489
<b>Warranty<sup>2</sup></b>	10 year or 10,000 cycle system warranty – includes inverter, battery modules, cabinet and components
<b>Roundtrip efficiency<sup>3</sup> (AC / AC)</b>	Maximum round-trip efficiency of 81.6%
<b>Temperature range</b>	41 °F - 113 °F
<b>Ventilation/Noise</b>	Forced Air / <70DBA
<b>Comm. ports</b>	Ethernet
<b>Communication protocols / Control</b>	SunSpec Alliance / API available to select partners
<b>Enclosure rating</b>	NEMA 12
<b>EMC / EMI protection</b>	FCC Part 15B
<b>Device Protection</b>	Short-circuit, Overload, Over-heating
<b>Over-current Protection</b>	50 A
<b>Total harmonic distortion</b>	<5% L1-L2 & <2% L-N

## Battery Specification

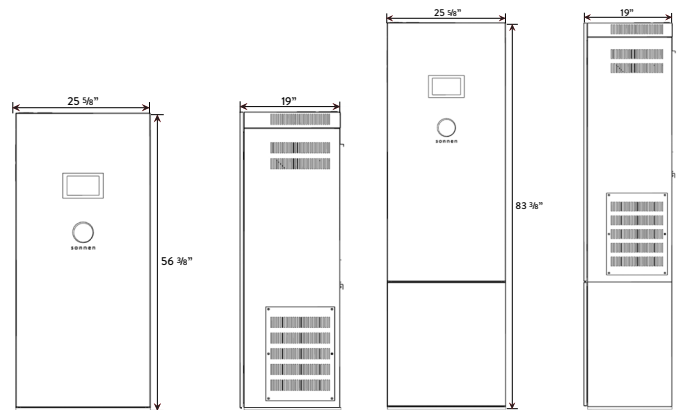
<b>DC battery input voltage</b>	44.5–53.5 VDC
<b>Max charge current</b>	50 A per module
<b>Cell discharge</b>	2.5 kWh with 90% DoD
<b>Overcharge Protection</b>	MOSFET & Fuse protection



## AC specification

<b>AC grid voltage</b>	120/240 VAC (Split phase)
<b>Nominal AC input current (grid-tied operation)</b>	
eco 5	12 amps
eco 7.5	15 amps
eco 10-20	29 amps
<b>Nominal frequency</b>	60 Hz
<b>Adjustable frequency range</b>	+/- 0.7 Hz from nominal
<b>Metering capability</b>	Power meter for load and PV production (not revenue grade)
<b>Tare losses (W)</b>	60 watts
<b>Transient protection</b>	IEEE C62.41 Class B

## Measurements



eco 5-12.5

eco 15-20

-For Puerto Rico, the sonnen eco comes standard with the front screen.

We reserve the right to make technical changes. The values, outputs, other technical data, images, and diagrams in this prospectus and in data sheets, advertisements, and other promotional documents are approximate guidelines in all cases where they have not been identified as binding.

1 The ecolinx Ndure battery modules are 2.5kWh in total capacity and represent 2kWh of usable capacity per module.

2 Please observe our applicable warranty conditions.

3 Based on full system AC/AC RTE "round-trip efficiency" at ambient temperature of 25°C (77°F), beginning of life in off-grid mode and at 50% symmetric charge/discharge rate. Testing conducted by sonnen Inc. R&D. Backup data available on request.

**sonnen Inc.** 1578 Litton Dr, Stone Mountain, GA 30083  
(310) 853-2404