

Tech Specs - sonnen eco - Gen 3.1

The sonnen eco is a smart energy storage solution for homes that uses intelligent software to manage energy usage throughout the day – providing homeowners with greater energy management during peak time-of-use periods, backup power during grid outages and a powerful way to store solar power for use day or night.

	eco 5 ¹	eco 7.5	eco 10 ¹	eco 12.5	eco 15	eco 17.5	eco 20
Total capacity (@ 90% DOD)²	5 kWh	7.5 kWh	10 kWh	12.5 kWh	15 kWh	17.5 kWh	20 kWh
Nominal power rating (off-grid output at 25 deg C)	3 kW	4 kW	8 kW	8 kW	8 kW	8 kW	8 kW
Nominal power rating (grid-tied output at 25 deg C)	3 kW	3.6 kW	7 kW	7 kW	7 kW	7 kW	7 kW
Weight (approximate)	394 lbs	447 lbs	543 lbs	596 lbs	724 lbs	777 lbs	830 lbs
Dimensions W"/H"/D" (approximate)	26/57/19				26/84/19		

Off-grid specification	eco 5 ¹	eco 7.5	eco 10 ¹	eco 12.5	eco 15	eco 17.5	eco 20
Continuous AC output current	12.5 A	16.67 A			33.3 A		
Max power	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		
Max AC current (charge/discharge)	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		

General specification

Grid integration	AC coupled
Applications	Self-consumption Backup power Time-of-use
Transfer switch	Automatic, integrated
Usable capacity	2.25 kWh per battery module, up to 8 modules
Listed and recognized components	System certified – UL9540; Battery modules – UL1973; Inverter – UL1741; Transfer switch – UL1008; AC Breaker – UL489
Warranty	10 year or 10,000 cycle system warranty – includes inverter, battery modules, cabinet and components ³
Inverter efficiency	92.5% CEC weighted, 95.0% peak
Roundtrip efficiency % (Grid<>Battery)	>= 86%
Temperature range	41 °F - 113 °F
Ventilation	Forced Air
Comm. ports	Ethernet
Communication protocols / Control	SunSpec Alliance / API available to select partners
EMC / EMI protection	FCC Part 15B

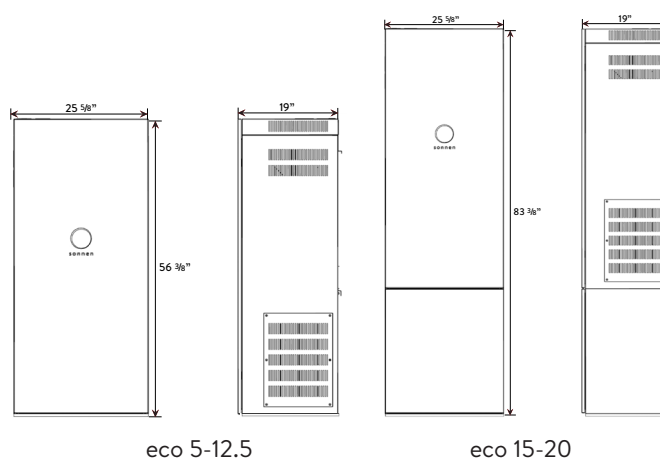
Battery specification

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

AC specification

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

Measurements



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

sonnen Inc.

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1 The eco Gen 3.1 is available in two base models, the eco 5 and the eco 10, with the ability to add battery modules to increase capacity.

2 eco Gen 3.1 battery modules are 2.5kWh in total capacity and at a 90% DoD represent 2.25kWh of usable capacity per module.

3 Please observe our applicable warranty conditions.