

S30-0080 Battery Stack



PRODUCT SPECIFICATION SHEET

Aquion Energy's S-Line Battery Stack is a modular building block for clean energy storage systems. Based on Aquion's safe, clean, and sustainable Aqueous Hybrid Ion (AHI™) technology, the S30-0080 is the only Cradle to Cradle Certified™ energy storage product on the market. Designed for years of hassle-free operation in stationary, long-duration applications, AHI batteries are optimized for storing energy for residential, off-grid, and microgrid applications. The S30-0080 delivers an unmatched combination of performance, safety, and environmental sustainability in a cost-effective battery platform.

PRODUCT PERFORMANCE

Testing Performed at 30°C

Embodied Energy (Wh)		Charge Duration (h)				
		4	8	10	12	20
Discharge Duration (h)	4	1,264	1,520	1,600	1,647	1,803
	8	1,335	1,672	1,780	1,848	2,055
	12	1,389	1,775	1,900	1,982	2,217
	20	1,569	2,046	2,200	2,307	2,603

Embodied Capacity (Ah)		Charge Duration (h)				
		4	8	10	12	20
Discharge Duration (h)	4	28.7	35.0	37.2	38.7	42.5
	8	30.3	37.0	39.4	40.9	44.9
	12	31.3	38.2	40.6	42.3	46.3
	20	32.6	39.8	42.3	44.0	48.3



PHYSICAL CHARACTERISTICS

Height	935 mm (36.8")
Width	330 mm (13.0")
Depth	310 mm (12.2")
Weight	118 kg (260 lbs)

OPERATION & PERFORMANCE

Cycle Life	3,000 cycles (to 70% retained capacity)
Operating Temperature	-5°C to 40°C ambient
Voltage Range	40.0 to 57.6 V
Nominal Voltage	48 V
Continuous Power	680 W
Peak Power	800 W
Continuous Current	17 A
Usable Depth of Discharge	100%
Round Trip Efficiency	>90%

CERTIFICATIONS

Sustainability	Cradle to Cradle Certified™ Bronze product
UL Recognition	UL recognized
CE Recognition	CE marked
Shipping Testing	Modified ISTA 3H
IP Rating	IP22

WARRANTY

Limited Warranty	5-year full plus 3-year prorated
------------------	----------------------------------

Performance characteristics based on testing conducted by Aquion Energy. Performance may vary depending on use, conditions, and application. For the most up-to-date specification, visit <http://aquionenergy.com>.

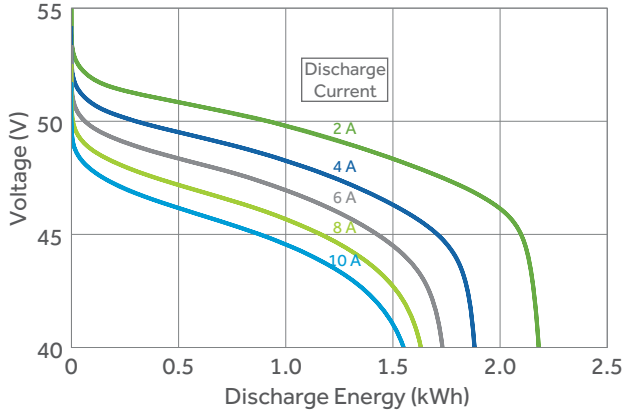
Cradle to Cradle Certified™ is a certification mark licensed by the Cradle to Cradle Products Innovation Institute.

S30-0080 Battery Stack

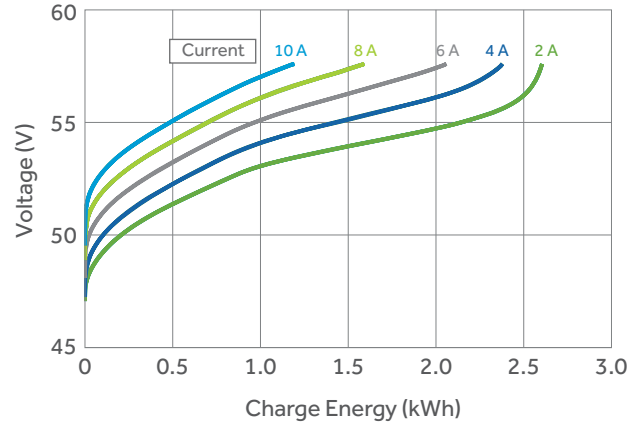


PERFORMANCE AT CONSTANT CURRENT DISCHARGE

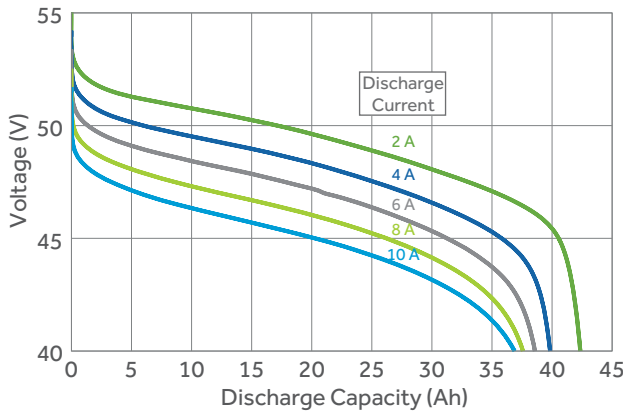
Voltage vs. Discharge Energy (from 10-hour charge)



Voltage vs. Charge Energy



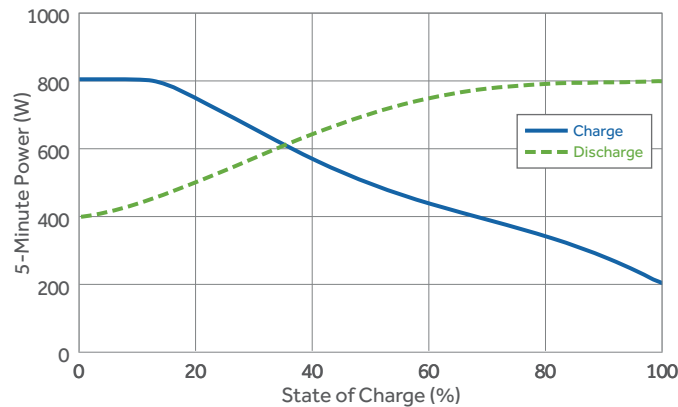
Voltage vs. Discharge Capacity (from 10-hour charge)



Round Trip Energy Efficiency

Discharge Current (A)	Charge Current (A)				
	2	4	6	8	10
2	90%	90%	89%	88%	87%
4	88%	88%	87%	86%	85%
6	87%	87%	86%	85%	84%
8	85%	85%	84%	83%	82%
10	83%	83%	82%	81%	80%

5-Minute Peak Power



CRADLE TO CRADLE CERTIFIED™ BRONZE



Aquion batteries are the first and only batteries in the world to be Cradle to Cradle Certified™, an esteemed quality mark for products made from sustainable materials and manufacturing processes. Cradle to Cradle Certified™ is a certification mark licensed by the Cradle to Cradle Products Innovation Institute. Visit www.c2ccertified.org for more details.

Performance characteristics based on testing conducted by Aquion Energy. Performance may vary depending on use, conditions, and application. For the most up-to-date specification, visit <http://aquionenergy.com>.

Cradle to Cradle Certified™ is a certification mark licensed by the Cradle to Cradle Products Innovation Institute.