

S20-P08F Battery Stack

For models S20-P08F and S20-P080



PRODUCT SPECIFICATION SHEET

Aquiion Energy's S20-P08F Battery Stack is a modular building block for clean energy storage systems. Based on Aquiion's safe, clean, and sustainable Aqueous Hybrid Ion (AHI™) technology, the S20-P08F 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 solar energy for residential, off-grid, and microgrid applications. The S20-P08F 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	1,185	1,425	1,500	1,544	1,690
	8	1,200	1,503	1,600	1,661	1,847
	12	1,243	1,588	1,700	1,773	1,984
	20	1,426	1,860	2,000	2,097	2,366

Embodied Capacity (Ah)		Charge Current (A)				
		8.3	4.4	3.8	3.1	2.0
Discharge Current (A)	8.3	26.2	31.5	33.2	34.2	37.4
	4.4	26.4	33.1	35.2	36.5	40.6
	3.1	27.2	34.7	37.2	38.8	43.4
	2.0	28.5	37.2	40.0	41.9	47.3



PHYSICAL CHARACTERISTICS

Height	935 mm (36.8")
Width	330 mm (13.0")
Depth	310 mm (12.2")
Weight	118 kg (260 lbs)
In-Line Fusing (S20-P08F, pictured)	20 A (unfused: S20-P080)

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%

CERTIFICATIONS

Sustainability	Cradle to Cradle Certified™ Bronze product
UL Recognition	UL recognized
CE Recognition	CE marked
Shipping Testing	Tested to ISTA 6B
IP Rating	IP22

WARRANTY

Limited Warranty	4 years
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Performance characteristics based on testing conducted by Aquiion Energy. Performance may vary depending on use, conditions, and application. For the most up-to-date specification, visit <http://info.aquiionenergy.com/download-specs>.

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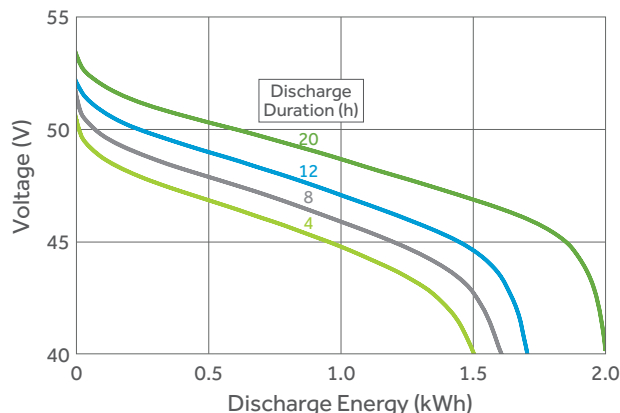
S20-P08F Battery Stack

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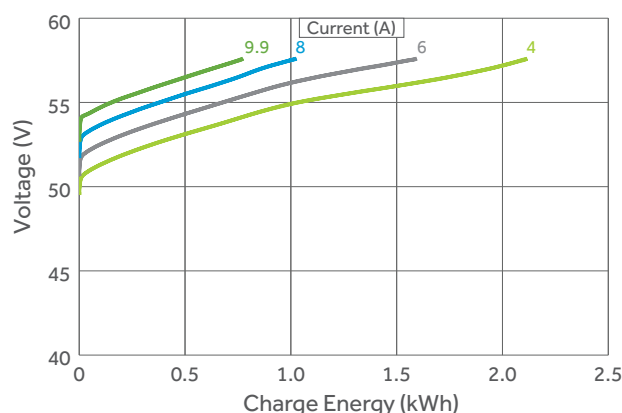


PERFORMANCE DATA AT CONSTANT CURRENT DISCHARGE

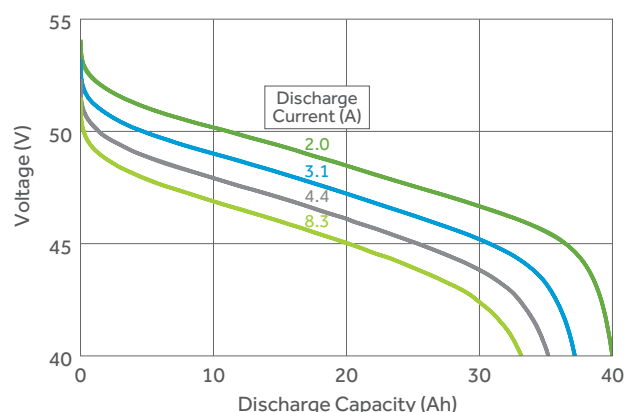
Voltage vs. Discharge Energy
(from 10-hour charge)



Voltage vs. Charge Energy



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



Round Trip Energy Efficiency

	Charge Current (A)				
	2	4	6	8	10
2	90%	89%	89%	89%	88%
4	88%	87%	87%	87%	86%
6	86%	85%	84%	84%	83%
8	83%	82%	82%	82%	82%
10	82%	81%	80%	80%	79%



CRADLE TO CRADLE CERTIFIED™ BRONZE PRODUCT

Cradle to Cradle Certified™ is a multi-attribute certification program that assesses products and materials for safety to human & environmental health, design for future use cycles, and sustainable manufacturing. Cradle to Cradle Certified™ products are evaluated for material health, material reutilization, renewable energy use and carbon management, water stewardship, and social fairness. The Aquion S20-P08F and S20-P080 are the only energy storage products or batteries that have met these requirements. Please see www.c2ccertified.org for more details on specific program requirements.

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