

Aspen 48M-25.9 Battery



PRODUCT SPECIFICATION SHEET

Aquion Energy's Aspen 48M-25.9 battery is a modular building block for clean energy storage systems. The Aspen 48M is composed of twelve Aspen 48S-2.2 batteries connected in parallel and comes pre-wired as a plug-and-play battery bank.

Based on Aquion's safe, clean, and sustainable Aqueous Hybrid Ion (AHI™) technology, the Aspen 48S-2.2 is engineered to meet Cradle to Cradle certification standards. 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 Aspen 48M-25.9 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 (kWh)		Charge Current (A)				
		24	48	72	96	120
Discharge Current (A)	24	28.0	26.2	23.3	20.5	17.6
	48	26.2	23.7	21.9	19.2	16.5
	72	24.7	22.3	19.9	17.7	15.4
	96	23.3	21.2	19.0	17.0	14.8
	120	22.1	20.1	18.1	16.3	14.2

Embodied Capacity (Ah)		Charge Current (A)				
		24	48	72	96	120
Discharge Current (A)	24	567.9	523.1	468.6	420.1	368.1
	48	543.8	498.1	445.7	399.9	350.6
	72	530.4	483.4	432.5	388.1	339.6
	96	511.1	469.1	419.6	376.4	329.1
	120	490.6	454.3	406.1	364.1	318.5



OPERATION & PERFORMANCE

Nominal Energy (10-hour charge/20-hour discharge)	25.9 kWh
Nominal Voltage	48 V
Cycle Life	3,000 cycles (to 70% retained capacity)
Ambient Operating Temperature	-5°C to 40°C
Voltage Range	40.0 to 59.5 V
Peak Power	11.7 kW
Continuous Current	240 A
Onboard Sensing	Voltage, current, temperature
Usable Depth of Discharge	100%

WARRANTY

Limited Warranty	8 years: 5 years full + 3 years prorated
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PHYSICAL CHARACTERISTICS

Height	1,159 mm (45.6")
Width	1,321 mm (52.0")
Depth	1,016 mm (40.0")
Weight	1,504 kg (3,315 lbs)

CERTIFICATIONS

Sustainability	Cradle to Cradle Certified™ Bronze product (component Aspen 48S batteries only)
UL Recognition	In process
CE	CE marked
Shipping Testing	ISTA testing in process
IP Rating	IP2X

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>.

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PERFORMANCE AT CONSTANT CURRENT DISCHARGE

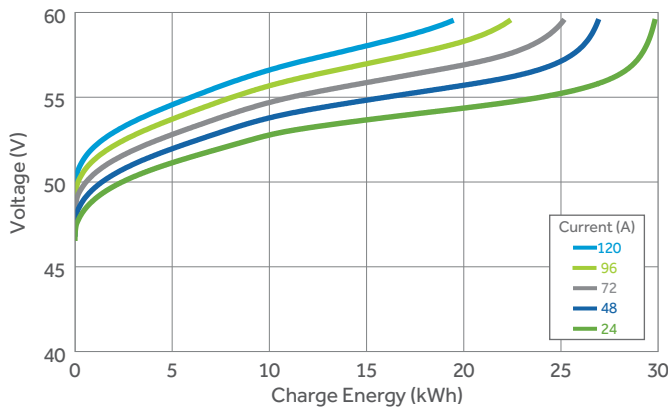
Nominal Energy & Capacity by Charge and Discharge Duration

kWh & Ah		10-hour Charge	
		kWh	Ah
Discharge Duration (hr)	4	18.8	446.4
	8	21.0	472.8
	10	21.7	480.0
	12	22.3	487.2
	20	25.9	507.6

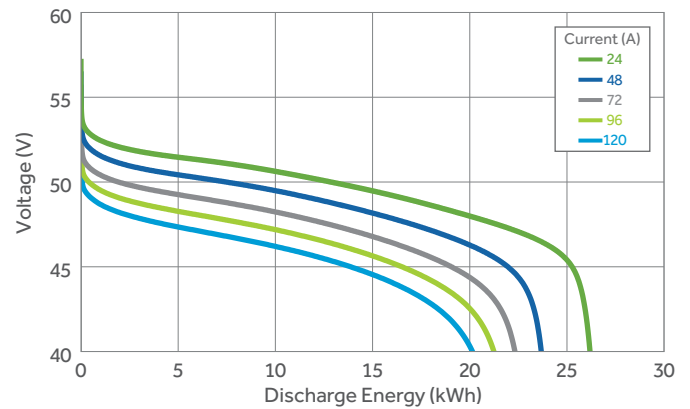
Round Trip Energy Efficiency

RTE (%)		Charge Current (A)				
		24	48	72	96	120
Discharge Current (A)	24	90	90	89	88	87
	48	88	88	87	86	85
	72	87	87	86	85	84
	96	85	85	84	83	82
	120	83	83	82	81	80

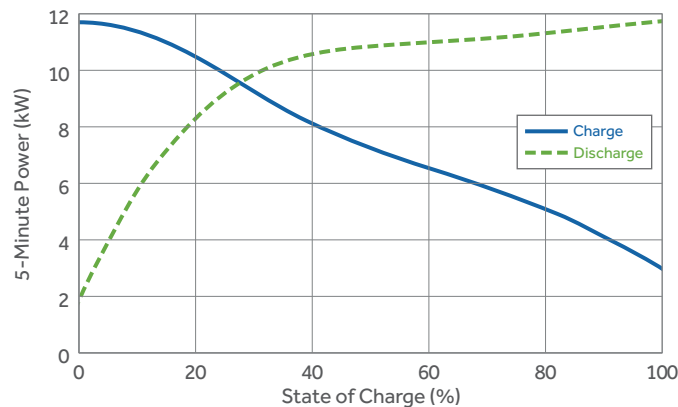
Voltage vs. Charge Energy



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



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.

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