

A new AGM battery: the AGM Super Cycle battery

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A truly innovative battery

The AGM Super Cycle batteries are the result of recent battery electrochemistry developments. The paste of the positive plates is less sensitive to softening, even in case of repeated 100% discharge of the battery, and new additives to the electrolyte reduce sulfation in case of deep discharge.

Exceptional 100% depth of discharge (DoD) performance

Tests have shown that the Super Cycle battery does withstand at least three hundred 100% DoD cycles. The tests consist of a daily discharge to 10,8V with $I = 0,2C_{20}$, followed by approximately two hours rest in discharged condition, and then a recharge with $I = 0,2C_{20}$. The two hours rest period in discharged condition will damage most batteries within 100 cycles, but not the Super Cycle battery.

We recommend the Super Cycle battery for applications where an occasional discharge to 100% DoD, or frequent discharge to 60-80% DoD is expected.

Smaller and lighter

An additional advantage of the new chemistry is a slightly smaller size and less weight compared to our standard deep cycle AGM batteries.

Low internal resistance

The internal resistance is also slightly lower compared to our standard deep cycle AGM batteries.

Recommended charge voltage:

	Float Service	Cycle service Normal	Cycle service Fast recharge
Absorption		14,2 - 14,6 V	14,6 - 14,9 V
Float	13,5 - 13,8 V	13,5 - 13,8 V	13,5 - 13,8 V
Storage	13,2 - 13,5 V	13,2 - 13,5 V	13,2 - 13,5 V

Specifications

Article number	V	Ah C5 (10,8V)	Ah C10 (10,8V)	Ah C20 (10,8V)	l x w x h mm	Weight kg	CCA @0°F	RES CAP @80°F	Terminals
BAT412015081	12	13	14	15	151 x 100 x 103	4,1			M5 insert
BAT412025081	12	22	24	25	181 x 77 x 175	6,5			M5 insert
BAT412038081	12	34	36	38	267 x 77 x 175	9,5			M5 insert
BAT412060082	12	52	56	60	224 x 135 x 178	14	300	90	M6 insert
BAT412110081	12	82	90	100	260 x 168 x 215	26	500	170	M6 insert
BAT412112081	12	105	114	125	330 x 171 x 214	33	550	220	M8 insert
BAT412117081	12	145	153	170	336 x 172 x 280	45	600	290	M8 insert
BAT412123081	12	200	210	230	532 x 207 x 226	57	700	400	M8 insert

Cycle life

≥ 300 cycles @ 100% DoD (discharge to 10,8V with $I = 0,2C_{20}$, followed by approximately two hours rest in discharged condition, and then a recharge with $I = 0,2C_{20}$)

≥ 700 cycles @ 60% DoD (discharge during three hours with $I = 0,2C_{20}$, immediately followed by recharge at $I = 0,2C_{20}$)

≥ 1000 cycles @ 40% DoD (discharge during two hours with $I = 0,2C_{20}$, immediately followed by recharge at $I = 0,2C_{20}$)

Effect of temperature on charging voltage

The charge voltage should be reduced with increased temperature. Temperature compensation is required when the temperature of the battery is expected to be less than 10°C / 50°F or more than 30°C / 85°F during long periods of time.

The recommended temperature compensation for Victron VRLA batteries is -4 mV / Cell (-24 mV / °C for a 12V battery).

The centre point for temperature compensation is 25°C / 70°F.



Super Cycle Battery 12V 230Ah