

LEAD CARBON BATTERY

LC400 - 12V40Ah/C10 | LC1000 - 12V100Ah/C10
 LC800 - 12V80Ah/C10 | LC1500 - 12V150Ah/C10



THE REVOLUTIONARY ENERGY STORAGE

Unlike lithium batteries standard lead acid batteries have a big discharge capacity (up to C_3^*). Indeed, a much longer charging time (up to 10 hours, $\approx 0,1$) must be accepted to prevent sulfatization which would shorten the lifetime of the battery. The new lead carbon technology provides a solution for this problem: Using carbon additives guarantees much less sulfatization of the negative electrode. Thus, the battery can be charged up to 8 times faster ($\approx 0,8C$) than a standard lead acid battery.

Modern lithium battery systems can also be charged within less than an hour, but the discharge capacity is very low: It must not exceed 50-70% of the battery capacity ($\approx C_{0,5-07}$).

The fast charging is a significant progress in lead carbon technology, since the charging current for the daily cycle mode can be adjusted at 20-50% of the battery capacity ($\approx 0,2-0,5C$). Therefore, it is possible to recharge a discharged battery within 1-3 hours.

Moreover, the lead carbon battery is ideal for partial state of charge (PSOC) applications. Hereby the cycle rate of the battery increases several times in comparison with the standard lead acid battery.

Despite its heavier weight and bigger volume per kilowatt hour the lead carbon battery is more cost effective than the lithium battery.

In terms of security the lead battery is tried and tested for a long time and has no competitors. For transport, storage and usage no special measures are required. Due to its carbon additive,

The lead carbon battery is suitable for a much bigger temperature range than the standard lead acid battery. Unlike lithium batteries it doesn't need a cooling system.

The recycling rate of 97% is one more pro argument for the lead carbon battery, since the recycling of lithium batteries remains an unresolved problem.

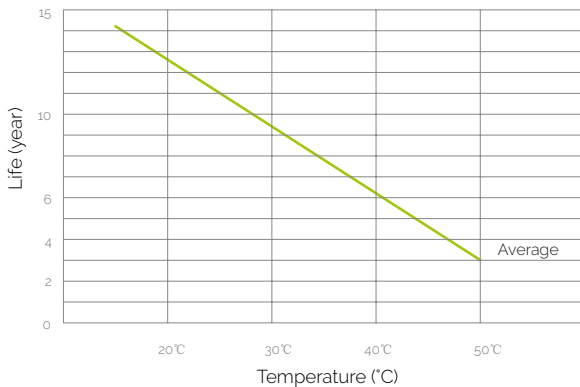
* C - battery capacity in Ah

LEAD CARBON BATTERY

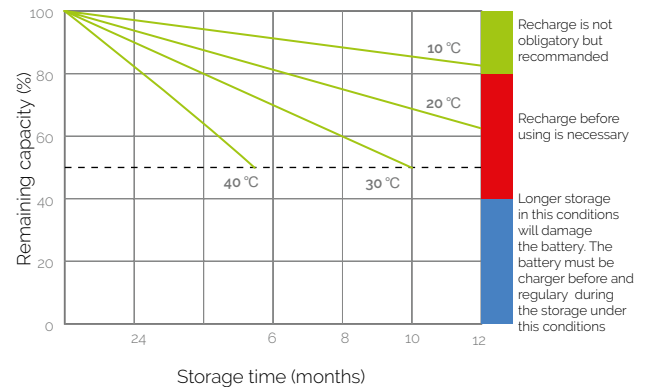
SPECIFICATIONS

Self discharge	3% of capacity per month at 20°C
Operating temperature	Discharge: -15 to 50°C (5 to 122°F)
	Charge: 0 to 40°C (32 to 104°F)
	Storage: -15 to 40°C (5 to 104°F)
Max. charge current daily	0.3C
Max. charge current occasionally	0.5C-0.8C
Max discharge current	3C
Charge voltage	13.5-13.8 standby use, 14.4-14.8 cycle use
Norms	IEC 60896-21:2004, IEC 60896-22:2004

SERVICE LIFE IN STANDBY



SELF-DISCHARGE



CERTIFICATES



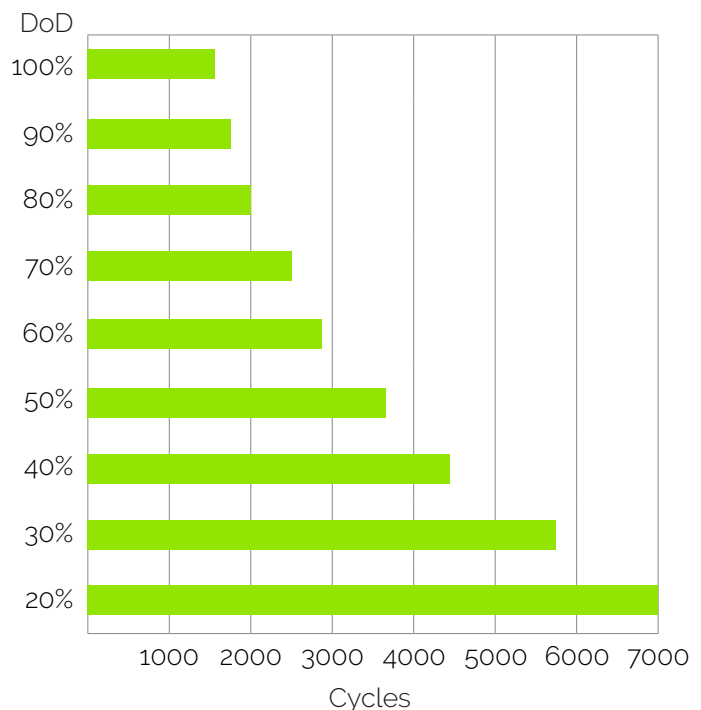
SAFETY



PACKAGING



CYCLES NUMBER



LEAD CARBON BATTERY

DIMENSIONS & POIDS

<p>12V - LC400 (LxDxH) 196x165x174 mm 14 kg</p>	<p>12V - LC800 (LxDxH) 327x172x216 mm 27 kg</p>	<p>12V - LC1000 (LxDxH) 327x172x216 mm 32.8 kg</p>	<p>12V - LC1500 (LxDxH) 485x170x241 mm 47 kg</p>
--	--	---	---



CONSTANT CURRENT DISCHARGE SPECIFICATIONS: A (25°C, 77°F)

	FV/Time	5min	15min	30min	1h	2h	3h	5h	8h	10h	20h
LC400 - 12V40Ah/C10	1.65V	137	73.5	45.3	26.8	15.4	11.1	7.46	5.00	4.16	2.17
	1.70V	131	71.8	44.7	26.6	15.2	10.9	7.36	4.90	4.08	2.16
	1.75V	121	69.7	44.2	26.3	15.0	10.8	7.30	4.82	4.04	2.14
	1.80V	108	64.9	42.2	25.7	14.7	10.7	7.10	4.74	4.00	2.12
LC800 - 12V80Ah/C10	1.65V	239	135	81.2	51.2	29.5	22.4	14.0	9.58	8.15	3.70
	1.70V	230	128	79.9	49.5	28.8	22.1	13.9	9.51	8.09	3.68
	1.75V	211	122	77.2	47.1	27.3	21.6	13.6	9.44	8.03	3.67
	1.80V	189	113	74.8	45.7	26.8	20.8	13.4	9.37	7.97	3.65
LC1000 - 12V100Ah/C10	1.65V	342	184	113	66.9	38.4	27.7	18.6	12.3	10.3	5.43
	1.70V	328	180	111	66.4	38.1	27.3	18.4	12.2	10.2	5.40
	1.75V	302	174	110	65.5	37.5	27.0	18.2	12.1	10.1	5.38
	1.80V	270	162	105	63.8	36.8	26.9	17.7	12.0	10.0	5.35
LC1500 - 12V150Ah/C10	1.65V	523	281	173	102	58.8	42.5	28.5	18.6	15.5	8.15
	1.70V	502	275	170	102	58.4	41.9	28.2	18.5	15.3	8.10
	1.75V	462	266	169	100	57.5	41.4	27.9	18.3	15.2	8.07
	1.80V	414	248	161	97.7	56.4	41.1	27.2	18.2	15.0	8.03