

HC SERIES

HC2-2000

HUB CARBON

RELIABLE BATTERY SOLUTIONS

The HUB CARBON HC2 – Lead Carbon batteries, provide reliable energy storage, for all renewable energy projects.

The HC2 series offer exceptional cycle life and outstanding capacity retention, in life long “partial state of charge” applications (PSOC).



PARAMETERS

Nominal Voltage	2V
Capacity	2000 Ah (10 hr to 1.80V/cell @25°C) 2215 Ah (20 hr to 1.75V/cell @25°C)
Typical Weight	155Kg
Internal Resistance	Approx 0.10mΩ
Short-Circuit Current	20660A
Self Discharge	The residual capacity is above 90% after 90 days storage (25°C)
Temperature Ranges	Operation (recommended): 15°C~25°C Operation (maximum): -40°C~50°C
Max. charging current	500A
Max. constant charging current	400A
Charge Voltage	Floating: 2.25V (25°C) Equalizing/Cycle: 2.30V (25°C)
Terminal	M8 embedded copper
Terminal Hardware Torque	20Nm, +/- 1Nm

FEATURES

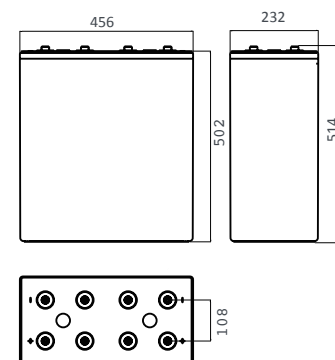
- > Design life 20 years
- > Combine the advantage of lead acid battery and supercapacitor
- > Ideal for PSOC cycle application
- > High power, rapid charge/discharge
- > Reduce sulfation of negative plate, excellent recharge acceptance performance
- > Waterproof, shockproof module installation design
- > Comply with IEC60896, IEC61427 standard

APPLICATIONS

- > Renewable energy storage
- > Smart power grids and microgrids system
- > Distributed energy storage system
- > Hybrid energy storage system such as solar and wind
- > Home energy storage system
- > Solar power generation grid/off-grid energy storage system
- > Emergency lighting system
- > Generator and battery hybrid energy system
- > Other standby, cycling system



Dimensions



DISTRIBUTED BY



HUB POWER LTD

114-4238 Lozells Avenue,
Burnaby, BC, V5A 0C4

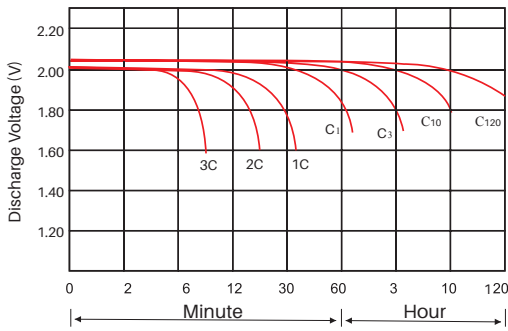
Phone: (604) 420-7737

Fax: (604) 420-7738

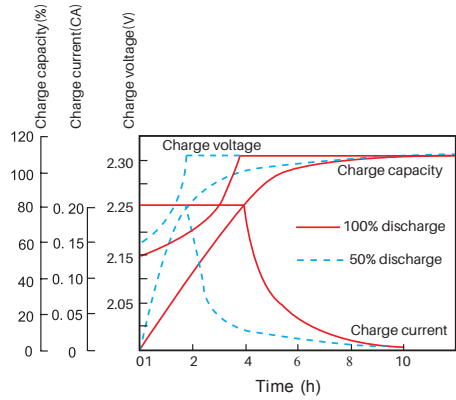
Mail: sales@hubpower.ca

Web: www.hubpower.ca

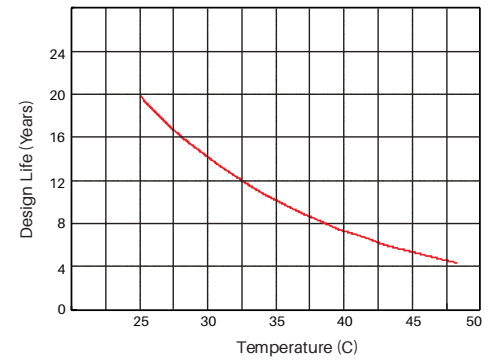
DISCHARGE CURVE AT DIFFERENT RATE (25° C)



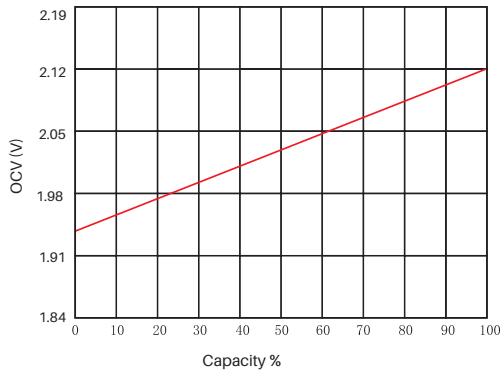
CHARGE CURVE AT (25° C)



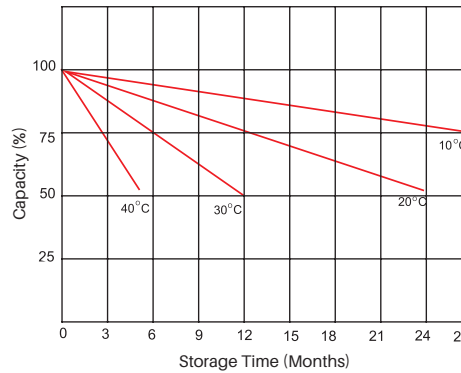
DESIGN LIFE VS TEMPERATURE



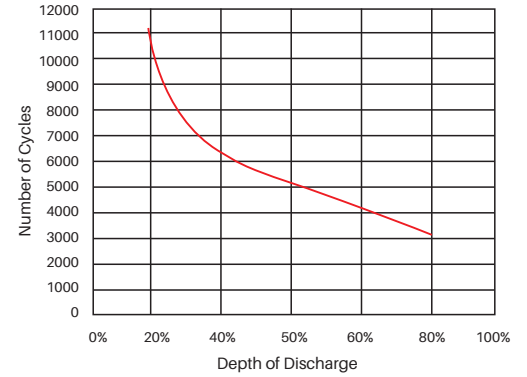
CAPACITY VS OCV CURVE



RESIDUAL CAPACITY VS STORAGE TIME



BATTERY CYCLE LIFE VS DOD



Constant Current Discharge Characteristics Units: Amperes (25° C)

End voltage per cell	1Hr	3hr	5hr	8hr	10hr	24hr	48hr	72hr	120hr
1.75V	1107.0	535.7	365.0	250.7	209.1	94.2	48.2	33.0	20.9
1.8V	1051.5	523.8	356.7	246.0	206.3	92.2	47.5	32.5	20.6
1.83V	992.0	507.9	351.2	244.5	205.3	92.2	47.3	32.4	20.5
1.85V	928.5	480.4	334.3	236.1	197.9	89.6	45.6	31.2	20.0
1.88V	843.2	453.0	318.6	227.4	190.5	86.9	43.9	30.0	19.0

Discharge Data with Constant Power Units: Watts per cell (25° C)

End voltage per cell	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr
1.75V	4932	3201.3	2200.4	1402.1	1106.2	893.7	754.7	655.4	542.2	456.8
1.8V	4640	3005.1	2025.7	1350.4	1072.4	879.8	734.8	641.5	530.2	448.8
1.83V	4370	2821.4	1894.6	1300.8	1048.6	855.9	714.9	623.6	516.3	440.9
1.85V	4080	2622.8	1735.8	1251.1	1012.8	832.1	695.1	605.7	500.1	425.0
1.88V	3792	2384.5	1588.8	1187.6	957.2	798.3	675.2	591.8	486.6	425.0