

Durable Battery *Choose* CSBattery



Fast Charge Deep Cycle Lead-Carbon Battery **HDC12-180**

HDC series lead-carbon batteries use functional activated carbon and graphene as carbon materials, which are added to the negative plate of the battery to make lead carbon batteries have the advantages of both lead-acid batteries and super capacitors. It not only improves the ability of rapid charge and discharge, but also greatly prolongs the battery life. It is more suitable for the application of PSOC.

12V 180Ah Lead Carbon Technology Deep Cycle



COMPLIED STANDARDS

IEC 60896-21-22 JIS C8704 YD/T799
 GB2796 zmk4 GB/T 19638 UL 1989

General Features

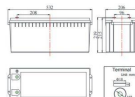
- Combine the characteristics of lead acid battery and super capacitor
- Long life cycle service design, excellent PSOC and cyclic performance
- High power, rapid charging and discharging
- Unleak grid and lead pasting design
- Extreme temperature tolerance
- Able to operate at -30°C ~ 60°C
- Deep Discharge recovery capability

Applications

- Home Energy storage system
- Smart Power grid system
- Solar & Wind Power system
- Wheel chair, Golf Car
- Telecom systems
- BTS Stations
- Micro-grid system

Dimensions & Weight

Length(mm)	532±1
Width(mm)	206±1
Height(mm)	216±1
Total Height(mm)	219±1
Weight(kg)	58.6±3%



Technical Specifications

Nominal Voltage		12V (6 cells per unit)
Design Floating Life @25°C		20 Years
Nominal Capacity @25°C (20 hour rate) @9.00A, 10.50V		180.0Ah
Capacity @25°C	10 hour rate (16.71A, 10.5V)	167.1Ah
	8 hour rate (21.0A, 10.5V)	150.0Ah
	1 hour rate (108.3A, 8.0V)	100.0Ah
Internal Resistance	Full Charged Battery @25°C	≤3.6mΩ
	Ambient Temperature	
Max. Discharge Current @25°C	Discharge	-30°C ~ 60°C
	Charge	-30°C ~ 60°C
	Storage	-30°C ~ 60°C
Capacity affected by Temperature (10 to Capacity)	40°C	100%
	20°C	100%
	0°C	90%
	-15°C	70%
Self-Discharge @25°C per Month		3%
Charge (Constant Voltage) @25°C	Standby Use	Initial Charging Current Less than 45.0A Voltage 13.8-15.0V
	Cycle Use	Initial Charging Current Less than 45.0A Voltage 14.4-14.7V

Battery Discharge Table

Discharge Constant Current per Cell(Ampere) at 25 °C

V/Time	5min	10min	15min	20min	30min	40min	50min	60min	70min	80min	90min	100min	120min	150min	200min
1.80V	185.3	173.1	165.1	154.2	146.1	139.1	132.4	126.4	121.1	116.4	112.1	108.1	104.1	100.1	96.1
1.85V	186.4	174.2	166.2	155.3	147.2	140.2	134.1	128.1	122.8	118.1	113.8	109.8	105.8	101.8	97.8
1.90V	175.3	163.1	155.1	144.2	136.1	129.1	123.1	117.1	111.8	107.1	102.8	98.8	94.8	90.8	86.8
1.95V	166.2	154.0	146.0	135.1	127.0	120.0	114.0	108.0	102.7	98.0	93.7	89.7	85.7	81.7	77.7
1.99V	167.2	155.0	147.0	136.1	128.0	121.0	115.0	109.0	103.7	99.0	94.7	90.7	86.7	82.7	78.7
1.99V	145.0	132.8	124.8	113.9	105.8	98.8	92.8	86.8	81.5	76.8	72.5	68.5	64.5	60.5	56.5

Discharge Constant Power per Cell(Ampere) at 25 °C

V/Time	5min	10min	15min	20min	30min	40min	50min	60min	70min	80min	90min	100min	120min	150min	200min
1.80V	191.1	188.3	180.0	169.1	161.1	154.1	148.1	142.1	136.8	131.1	126.1	121.1	116.1	111.1	106.1
1.85V	201.0	198.2	190.0	179.1	171.1	164.1	158.1	152.1	146.8	141.1	136.1	131.1	126.1	121.1	116.1
1.90V	192.0	189.2	181.0	170.1	162.1	155.1	149.1	143.1	137.8	132.1	127.1	122.1	117.1	112.1	107.1
1.95V	189.0	186.2	178.0	167.1	159.1	152.1	146.1	140.1	134.8	129.1	124.1	119.1	114.1	109.1	104.1
1.99V	185.0	182.2	174.0	163.1	155.1	148.1	142.1	136.1	130.8	125.1	120.1	115.1	110.1	105.1	100.1

Note: The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery design/specifications are subject to modification without notice. Contact CSBATTERY for the latest information.

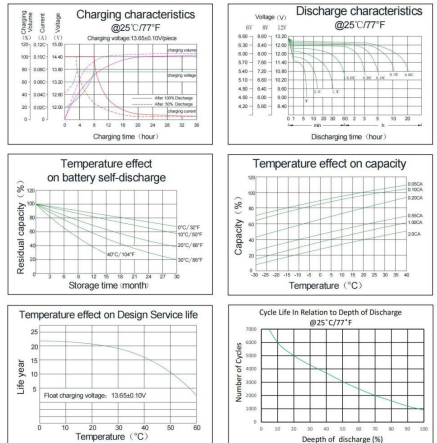
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Performance Characteristics



Battery Discharge Capacity

Model	Long time discharge capacity for Offer Grid solar/wind application						
	Capacity	C20(Ah)	C48(Ah)	C72(Ah)	C100(Ah)	C120(Ah)	C240(Ah)
HDC12-180		180.00	184.80	189.60	194.40	199.20	204.84

F.V=1.75VPC

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