

Durable Battery *Choose* CSBattery



Fast Charge Deep Cycle Lead-Carbon Battery **HDC6-230**

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.

4V 230Ah Lead Carbon Technology Deep Cycle



COMPLIED STANDARDS
IEC 60869-21-22 IEC 60704 YD/T799
GB 2300 GB/T 19638 UL 1989

General Features

- Combine the characteristics of lead acid battery and super capacitor
- Long life service design, excellent PSOC and cyclic performance
- High power, rapid charging and discharging
- Unibor 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

Technical Specifications

Nominal Voltage		8V(3 cells per unit)
Design Floating Life @25°C		20 Years
Nominal Capacity @25°C(20 hour rate)(11.66A, 6.25V)		230Ah
Capacity @25°C	10 hour rate (21.26A, 6.40V)	213.5Ah
	8 hour rate (19.60A, 6.25V)	198.0Ah
	1 hour rate (11.66A, 6.25V)	138.6Ah
Internal Resistance		Full Charged Battery@25°C
		≤2.8mΩ
Ambient Temperature	Discharge	-30°C~60°C
	Charge	-30°C~60°C
		Storage
		-30°C~60°C
Max. Discharge Current@25°C		2300A(6s)
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 0.75A Voltage 6.0-6.90V
	Cycle Use	Initial Charging Current Less than 0.75A Voltage 7.20-7.35V

Dimensions & Weight

Length(mm)	286±1
Width(mm)	180±1
Height(mm)	266±1
Total Height(mm)	272±1
Weight(kg)	24.2±0.5

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	322.8	298.8	278.8	262.4	249.2	234.4	221.6	210.4	199.2	189.6	181.2	173.6	166.4	159.2	152.0
1.85V	314.4	291.4	272.4	256.0	243.2	228.4	215.6	204.4	194.8	185.2	176.8	169.6	162.4	155.2	148.0
1.90V	306.0	284.0	266.0	250.0	237.2	222.4	209.6	198.4	188.8	179.2	170.8	163.6	156.4	149.2	142.0
1.95V	297.6	276.6	259.6	244.6	231.8	217.0	204.2	193.0	183.4	173.8	165.4	158.2	151.0	143.8	136.6
2.00V	289.2	269.2	252.2	237.2	224.4	210.6	197.8	186.6	177.0	167.4	158.8	151.6	144.4	137.2	130.0
2.05V	280.8	261.8	244.8	230.8	218.0	204.2	191.4	180.2	170.6	161.0	152.4	145.2	138.0	130.8	123.6
2.10V	272.4	254.4	237.4	223.4	210.6	196.8	184.0	172.8	163.2	153.6	145.0	137.8	130.6	123.4	116.2
2.15V	264.0	246.0	229.0	215.0	202.2	188.4	175.6	164.4	154.8	145.2	136.6	129.4	122.2	115.0	107.8
2.20V	255.6	237.6	220.6	206.6	193.8	180.0	167.2	156.0	146.4	136.8	128.2	121.0	113.8	106.6	99.4
2.25V	247.2	229.2	212.2	208.2	195.4	181.6	168.8	157.6	148.0	138.4	129.8	122.6	115.4	108.2	101.0
2.30V	238.8	220.8	203.8	200.8	188.0	174.2	161.4	150.2	140.6	131.0	122.4	115.2	108.0	100.8	93.6
2.35V	230.4	212.4	195.4	192.4	179.6	165.8	153.0	141.8	132.2	122.6	114.0	106.8	99.6	92.4	85.2
2.40V	222.0	204.0	187.0	184.0	171.2	157.4	144.6	133.4	123.8	114.2	105.6	98.4	91.2	84.0	76.8
2.45V	213.6	195.6	178.6	175.6	162.8	149.0	136.2	125.0	115.4	105.8	97.2	90.0	82.8	75.6	68.4
2.50V	205.2	187.2	170.2	167.2	154.4	140.6	127.8	116.6	107.0	97.4	88.8	81.6	74.4	67.2	60.0
2.55V	196.8	178.8	161.8	158.8	146.0	132.2	119.4	108.2	98.6	89.0	80.4	73.2	66.0	58.8	51.6
2.60V	188.4	170.4	153.4	150.4	137.6	123.8	111.0	100.8	91.2	81.6	73.0	65.8	58.6	51.4	44.2
2.65V	180.0	162.0	145.0	142.0	129.2	115.4	102.6	91.4	81.8	72.2	63.6	56.4	49.2	42.0	34.8
2.70V	171.6	153.6	136.6	133.6	120.8	107.0	94.2	83.0	73.4	63.8	55.2	48.0	40.8	33.6	26.4
2.75V	163.2	145.2	128.2	125.2	112.4	98.6	85.8	74.6	65.0	55.4	46.8	39.6	32.4	25.2	18.0
2.80V	154.8	136.8	119.8	116.8	104.0	90.2	77.4	66.2	56.6	47.0	38.4	31.2	24.0	16.8	9.6
2.85V	146.4	128.4	111.4	108.4	95.6	81.8	69.0	57.8	48.2	38.6	30.0	22.8	15.6	8.4	1.2
2.90V	138.0	120.0	103.0	100.0	87.2	73.4	60.6	49.4	39.8	30.2	21.6	14.4	7.2	0.0	-2.4
2.95V	129.6	111.6	94.6	91.6	78.8	65.0	52.2	41.0	31.4	21.8	13.2	6.0	-0.8	-3.2	-5.6
3.00V	121.2	103.2	86.2	83.2	70.4	56.6	43.8	32.6	23.0	13.4	4.6	-1.4	-4.2	-6.6	-9.0
3.05V	112.8	94.8	77.8	74.8	62.0	48.2	35.4	24.2	14.6	5.0	-1.0	-4.6	-7.0	-9.4	-11.8
3.10V	104.4	86.4	69.4	66.4	53.6	39.8	27.0	15.8	6.0	0.0	-3.0	-5.4	-7.8	-10.2	-12.6
3.15V	96.0	78.0	61.0	58.0	45.2	31.4	18.6	7.0	0.0	-2.0	-4.0	-6.4	-8.8	-11.2	-13.6
3.20V	87.6	69.6	52.6	49.6	36.8	22.8	10.0	0.0	-1.0	-2.0	-3.0	-5.4	-7.8	-10.2	-12.6
3.25V	79.2	61.2	44.2	41.2	28.4	14.2	0.0	-1.0	-1.0	-2.0	-3.0	-5.4	-7.8	-10.2	-12.6
3.30V	70.8	52.8	35.8	32.8	20.0	6.0	-1.0	-1.0	-1.0	-2.0	-3.0	-5.4	-7.8	-10.2	-12.6
3.35V	62.4	44.4	27.4	24.4	11.6	-1.0	-1.0	-1.0	-1.0	-2.0	-3.0	-5.4	-7.8	-10.2	-12.6
3.40V	54.0	36.0	19.0	16.0	3.2	-2.0	-2.0	-2.0	-2.0	-3.0	-4.0	-6.4	-8.8	-11.2	-13.6
3.45V	45.6	27.6	10.6	7.6	-4.2	-3.0	-3.0	-3.0	-3.0	-4.0	-5.0	-7.4	-9.8	-12.2	-14.6
3.50V	37.2	19.2	2.2	-0.8	-10.8	-4.0	-4.0	-4.0	-4.0	-5.0	-6.0	-8.4	-10.8	-13.2	-15.6
3.55V	28.8	10.8	-6.2	-9.2	-17.4	-5.0	-5.0	-5.0	-5.0	-6.0	-7.0	-9.4	-11.8	-14.2	-16.6
3.60V	20.4	2.4	-14.6	-13.6	-24.0	-6.0	-6.0	-6.0	-6.0	-7.0	-8.0	-10.4	-12.8	-15.2	-17.6
3.65V	12.0	-6.0	-23.0	-22.0	-30.6	-7.0	-7.0	-7.0	-7.0	-8.0	-9.0	-11.4	-13.8	-16.2	-18.6
3.70V	3.6	-14.4	-31.4	-30.4	-37.2	-8.0	-8.0	-8.0	-8.0	-9.0	-10.0	-12.4	-14.8	-17.2	-19.6
3.75V	-4.8	-22.8	-39.8	-38.8	-45.6	-9.0	-9.0	-9.0	-9.0	-10.0	-11.0	-13.4	-15.8	-18.2	-20.6
3.80V	-13.2	-31.2	-48.2	-47.2	-54.0	-10.0	-10.0	-10.0	-10.0	-11.0	-12.0	-14.4	-16.8	-19.2	-21.6
3.85V	-21.6	-39.6	-56.6	-55.6	-62.4	-11.0	-11.0	-11.0	-11.0	-12.0	-13.0	-15.4	-17.8	-20.2	-22.6
3.90V	-30.0	-48.0	-65.0	-64.0	-70.8	-12.0	-12.0	-12.0	-12.0	-13.0	-14.0	-16.4	-18.8	-21.2	-23.6
3.95V	-38.4	-56.4	-73.4	-72.4	-79.2	-13.0	-13.0	-13.0	-13.0	-14.0	-15.0	-17.4	-19.8	-22.2	-24.6
4.00V	-46.8	-64.8	-81.8	-80.8	-87.6	-14.0	-14.0	-14.0	-14.0	-15.0	-16.0	-18.4	-20.8	-23.2	-25.6
4.05V	-55.2	-73.2	-90.2	-89.2	-96.0	-15.0	-15.0	-15.0	-15.0	-16.0	-17.0	-19.4	-21.8	-24.2	-26.6
4.10V	-63.6	-81.6	-98.6	-97.6	-104.4	-16.0	-16.0	-16.0	-16.0	-17.0	-18.0	-20.4	-22.8	-25.2	-27.6
4.15V	-72.0	-90.0	-107.0	-106.0	-112.8	-17.0	-17.0	-17.0	-17.0	-18.0	-19.0	-21.4	-23.8	-26.2	-28.6
4.20V	-80.4	-98.4	-115.4	-114.4	-121.2	-18.0	-18.0	-18.0	-18.0	-19.0	-20.0	-22.4	-24.8	-27.2	-29.6
4.25V	-88.8	-106.8	-123.8	-122.8	-129.6	-19.0	-19.0	-19.0	-19.0	-20.0	-21.0	-23.4	-25.8	-28.2	-30.6
4.30V	-97.2	-115.2	-132.2	-131.2	-138.0	-20.0	-20.0	-20.0	-20.0	-21.0	-22.0	-24.4	-26.8	-29.2	-31.6
4.35V	-105.6	-123.6	-140.6	-139.6	-146.4	-21.0	-21.0	-21.0	-21.0	-22.0	-23.0	-25.4	-27.8	-30.2	-32.6
4.40V	-114.0	-132.0	-149.0	-148.0	-154.8	-22.0	-22.0	-22.0	-22.0	-23.0	-24.0	-26.4	-28.8	-31.2	-33.6
4.45V	-122.4	-140.4	-157.4	-156.4	-163.2	-23.0	-23.0	-23.0	-23.0	-24.0	-25.0	-27.4	-29.8	-32.2	-34.6
4.50V	-130.8	-148.8	-165.8	-164.8	-171.6	-24.0	-24.0	-24.0	-24.0	-25.0	-26.0	-28.4	-30.8	-33.2	-35.6
4.55V	-139.2	-157.2	-174.2	-173.2	-179.0	-25.0	-25.0	-25.0	-25.0	-26.0	-27.0	-29.4	-31.8	-34.2	-36.6
4.60V	-147.6	-165.6	-182.6	-181.6	-187.4	-26.0	-26.0	-26.0	-26.0	-27.0	-28.0	-30.4	-32.8	-35.2	-37.6
4.65V	-156.0	-174.0	-191.0	-190.0	-195.2	-27.0	-27.0	-27.0	-27.0	-28.0	-29.0	-31.4	-33.8	-36.2	-38.6
4.70V	-164.4	-182.4	-199.4	-198.4	-204.0	-28.0	-28.0	-28.0	-28.0	-29.0	-30.0	-32.4	-34.8	-37.2	-39.6
4.75V	-172.8	-190.8	-207.8	-206.8	-212.4	-29.0	-29.0	-29.0	-29.0	-30.0	-31.0	-33.4	-35.8	-38.2	-40.6