



C&D LIBERTY HC SERIES VRLA BATTERY

For Cyclic Applications



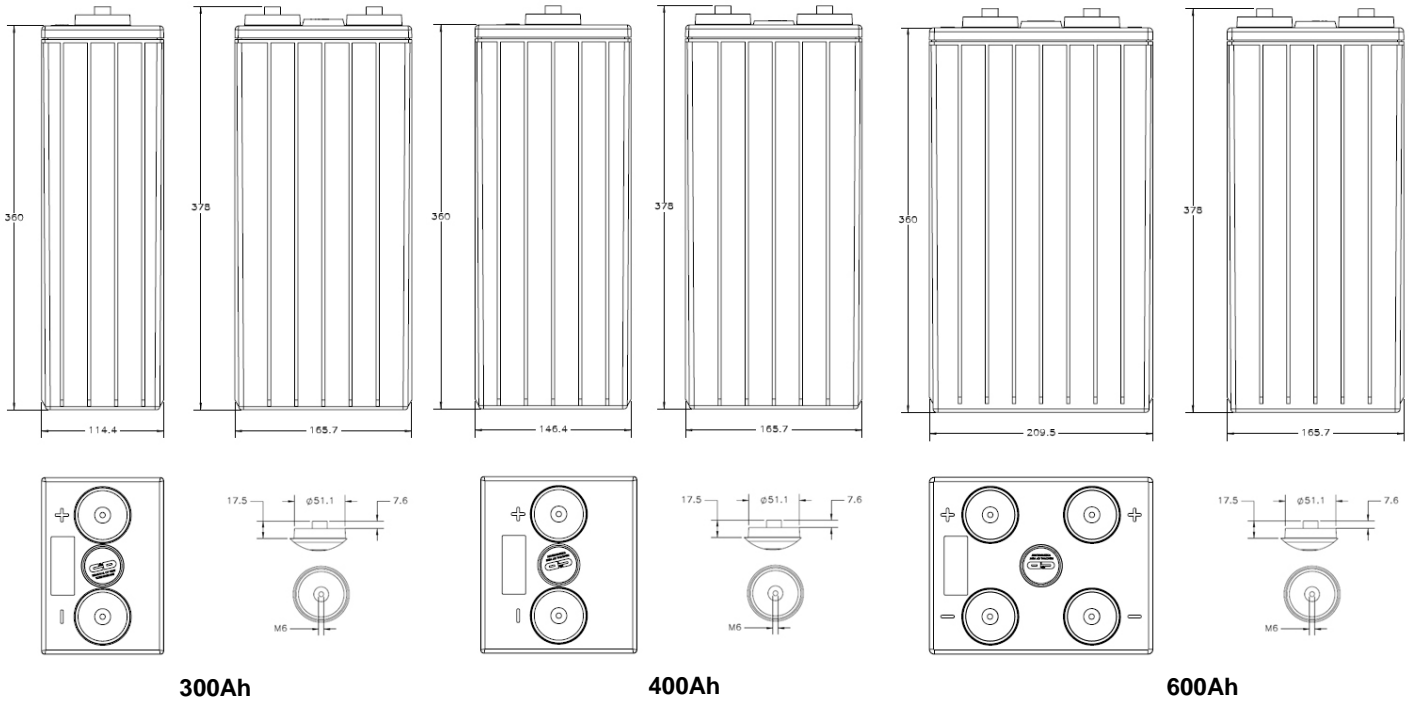
FEATURES AND BENEFITS

- High energy density, space saving design for greatest amount of power in small footprint.
- New terminal design for ease of maintenance readings.
- Advanced micro-porous Absorbed Glass Mat separators for ultra-low float current, reduce grid corrosion for long, usable service life.
- Proprietary positive grid alloy to minimize positive grid corrosion and growth, to increase cycling capability, maximize battery life.
- Proprietary positive and negative active material formulations to enhance cycle life of the battery in operating temperature above 25°C.
- Thermally welded case-to-cover bond to eliminate leakage.
- Robust polypropylene container and cover, enhances product quality and improves strength of materials for safe operation with flammability rating UL94-V0, LOI>28%
- High efficient, proprietary plate processing for high utilization of active material, results in high energy density and low float current.
- Advanced formation process results in a narrow float voltage window making on-site float matching unnecessary.
- Highly controlled manufacturing processes for exceptional and consistent plate quality.
- Proprietary cell design and manufacturing process provides documented long-lasting service life.

SPECIFICATIONS

Volt Per Unit (Volts)	2V		
Recommended Operation Temperature	25°C		
Recommended Float Charge Voltage	2.25 to 2.27 VPC @ 25°C		
Recommended Equalize Charge Voltage	2.35 VPC		
Recommended Compensation Temperature/voltage	Below 25°C, +3.6mV/°C; Above 25°C, -3.6mV/°C		
Model	HC 2V 300Ah	HC 2V 400Ah	HC 2V 600Ah
Number of Terminals	2	2	4
Nominal 8 Hrs Ah Rate to 1.75v/c @ 25°C	300	400	600
Cell Weight (Kg)	18	23	33.5
Terminal Hardware Initial Torque	12 N-m	12 N-m	12 N-m
Terminal hardware Annual Torque	10 N-m	10 N-m	10 N-m
Cell Width (mm)	165.7	165.7	165.7
Cell Length (mm)	114.4	146.4	209.5
Cell Height (mm)	360	360	360
Cell Height Over Terminals (mm)	378	378	378
Container and Cover Materials	Flame Retardant PP, UL94-V0, LOI > 28%		

DIMENSIONS

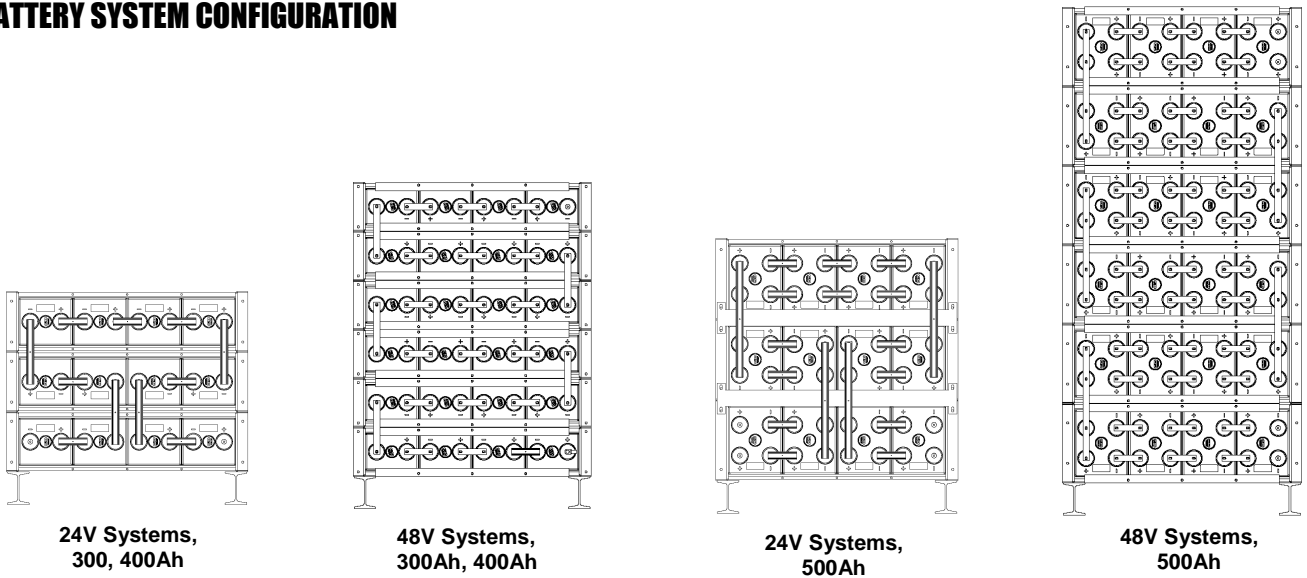


300Ah

400Ah

600Ah

BATTERY SYSTEM CONFIGURATION



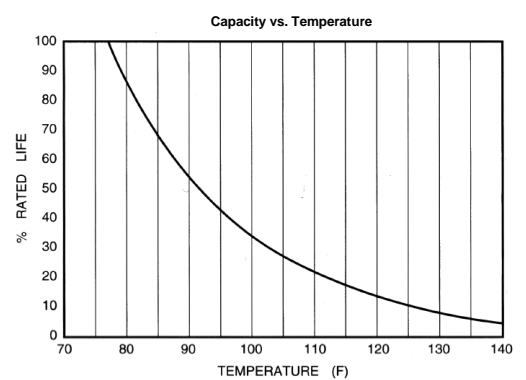
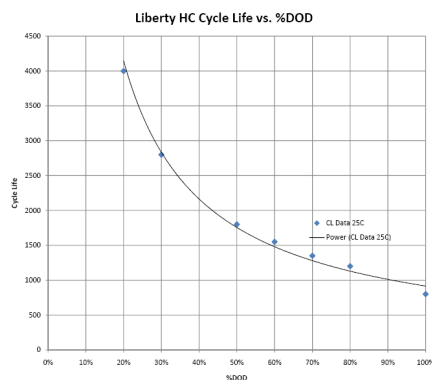
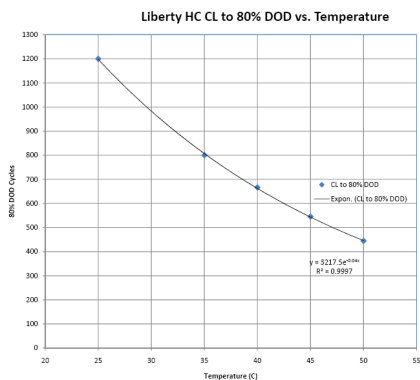
24V Systems,
300, 400Ah

48V Systems,
300Ah, 400Ah

24V Systems,
500Ah

48V Systems,
500Ah

BATTERY CHARACTERISTICS



CONSTANT CURRENT DISCHARGE- Amperes @ 77°F (25°C)

	EPV	1min	5min	10min	15min	30min	1hr	2hr	3hr	4hr	5hr	6hr	8hr	10hr	12hr	16hr	20hr	24hr
300Ah	1.75	331.1	314.6	294.3	274.9	224.8	162.1	106.4	80.5	65.1	54.9	47.5	37.5	31.0	26.5	20.5	16.7	14.1
400Ah	1.75	441.4	419.4	392.4	366.5	299.7	216.1	141.8	107.3	86.8	73.1	63.3	50	41.3	35.3	27.3	22.3	18.8
600Ah	1.75	662.1	629.1	588.6	549.7	449.5	324.1	212.7	160.9	130.2	109.7	94.9	74.9	62	52.9	40.9	33.4	28.2
300Ah	1.80	276.9	266.3	253.1	240	203.2	150.3	99.8	76.1	62	52.6	45.7	36.4	30.3	25.9	20.2	16.6	14.0
400Ah	1.80	369.1	355.1	337.5	320	270.9	200.3	133	101.5	82.7	70.1	60.9	48.5	40.3	34.5	26.9	22.1	18.7
600Ah	1.80	553.7	532.6	506.2	480	406.4	300.5	199.5	152.2	124	105.1	91.4	72.7	60.5	51.8	40.4	33.1	28
300Ah	1.85	225.3	217.6	208.2	199	173.8	135.4	93.2	71.7	58.6	49.6	43.2	34.3	28.5	24.4	19.0	15.5	13.2
400Ah	1.85	300.3	290.1	277.5	265.3	231.7	180.5	124.3	95.5	78.1	66.1	57.5	45.7	38.0	32.5	25.3	20.7	17.5
600Ah	1.85	450.5	435.2	416.3	398	347.5	270.7	186.4	143.3	117.1	99.2	86.3	68.5	57	48.8	37.9	31	26.3
300Ah	1.90	172.1	167.4	161.5	155.8	139.8	113.7	81.4	63.5	52.2	44.5	38.8	31.0	25.8	22.1	17.3	14.2	12.0
400Ah	1.90	229.5	223.1	215.3	207.7	186.3	151.5	108.5	84.6	69.6	59.3	51.7	41.3	34.4	29.5	23.0	18.9	16.0
600Ah	1.90	344.2	334.7	323	311.5	279.5	227.3	162.7	126.9	104.4	88.9	77.5	61.9	51.6	44.2	34.5	28.3	24

CONSTANT CURRENT DISCHARGE - Watts Per Unit @ 77°F (25°C)

	EPV	5min	10min	15min	20min	30min	45min	1hr	2hr	3hr	4hr	5hr	6hr	8hr
300Ah	1.65	688	638	581.5	526	446.5								
400Ah	1.65	917.3	850.7	775.3	701.3	595.3								
600Ah	1.65	1376	1276	1163	1052	893								
300Ah	1.67	659	608.5	557.5	510	433	358.5	311						
400Ah	1.67	878.7	811.3	743.3	680	577.3	478	414.7						
600Ah	1.67	1318	1217	1115	1020	866	717	622						
300Ah	1.70	622	579	536	495	425.5	354.5	308						
400Ah	1.70	829.3	772	714.7	660	567.3	472.7	410.7						
600Ah	1.70	1244	1158	1072	990	851	709	616						
300Ah	1.75	556.5	524.5	494	464.5	412.5	350.5	304.5	203.5	155.5	126.5	107	93	74
400Ah	1.75	742	699.3	658.7	619.3	550	467.3	406	271.3	207.3	168.7	142.7	124	98.7
600Ah	1.75	1113	1049	988	929	825	701	609	407	311	253	214	186	148
300Ah	1.80	483	461	439.5	418	378.5	327	286.5	193.5	148.5	121.5	103	90	71.5
400Ah	1.80	644	614.7	586	557.3	504.7	436	382	258	198	162	137.3	120	95.3
600Ah	1.80	966	922	879	836	757	654	573	387	297	243	206	180	143

* All data shall be changed without prior notice, C&D reserves the right to explain and update the information contained hereinto.