

# C&D TECHNOLOGIES

Power Solutions

## LIBERTY® SERIES 1000 VALVE-REGULATED LEAD-CALCIUM BATTERY

For standby applications  
Unit capacity from 25 to 600 Ampere-hours



### SPECIFICATIONS

Electrolyte at 77F (25C)	1.300 specific gravity nominal sulfuric acid
System float voltages	2.25–2.27 volts per cell
Life expectancy	10 years, full float service at 77F (25C)
Container and cover	High-impact, flame-retardant PVC Flammability ratings: UL 94-V0; ASTM D-635, self-extinguishing Oxygen index > 32
Safety vent system	Low-pressure release valve with flash arrester

**Note:** AC ripple current from the charger shall not exceed 5 percent of the 8-hour (ampere-hour) rating of the battery.

## FEATURES AND BENEFITS

### Patented C&D post seal design with secondary epoxy seal to increase integrity

- Leak-free operation
- Superior reliability

### Two-fold vent system

- Low-pressure safety valve with flash arrester
- Minimizes bulging
- Prevents flashback explosion from external ignition source

### Thick radial grid design for both positive and negative plates

- Improves current carrying capacity and performance
- Long float life

### Immobilized electrolyte technology

- Absorbent glass mat design (AGM)
- Safe handling and storage

### Advanced, computer-controlled thermal cover-to-jar weld

- Greater reliability and consistency

### Automated, state-of-the-art, cast-on strap process

- Ensures consistent, high-quality, low electrical-resistance welds

### PVC container and cover

- Provides excellent water vapor retention, preventing dry out
- Prevents oxygen infiltration
- High-impact resistance

### Through-the-partition intercell connection

- Shortens current paths
- Increases performance

### Copper-to-copper connections

- Minimize resistance drop, especially at high rates
- Reduce need for retorquing connections

### Measurable quality and outstanding performance

- 100 percent of cells tested for conductance voltage and capacity
- Tested in accordance with Bellcore TR-NWT-000766 specifications
- 100 percent of cells tested to 95 percent capacity at the 8-hour rate to 1.75 Vpc.

## SPECIFICATIONS

	LS 12-25	LS 6-50	LS 12-55	LS 12-80	LS 12-100	LS 6-125	LS 6-200	LS 4-300	LS 2-600
Nominal voltage	12 volts	6 volts	12 volts	12 volts	12 volts	6 volts	6 volts	4 volts	2 volts
Number of cells	6 / unit	3 / unit	6 / unit	6 / unit	6 / unit	3 / unit	3 / unit	2 / unit	1 / unit
Rated 8-hr capacity (ampere-hours to 1.75 Vpc)	25 Ah to 10.5 volts	50 Ah to 5.25 volts	52 Ah to 10.5 volts	80 Ah to 10.5 volts	100 Ah to 10.5 volts	123 Ah to 1.75 volts	200 Ah to 5.25 volts	300 Ah to 3.5 volts	600 Ah to 1.75 volts
Rated 15-min capacity (kilowatts to 1.67 Vpc) per cell	0.092	0.185	0.172	0.275	0.344	0.430	0.688	1.032	2.063
Internal resistance per cell	0.010 Ohms	0.003 Ohms	0.00157 Ohms	0.00094 Ohms	0.000786 Ohms	0.00062 Ohms	0.000393 Ohms	0.000262 Ohms	0.000131 Ohms
Short circuit current	1155 A	2310 A	1274 A	2128 A	2545 A	3180 A	5089 A	7634 A	15267 A
Unit height	7.11 in (181 mm)	7.11 in (181 mm)	9.20 in (234 mm)	9.20 in* (234 mm)	9.20 in* (234 mm)	9.95 in (253 mm)	9.20 in* (234 mm)	9.20 in* (234 mm)	9.20 in* (234 mm)
Unit length (includes handles)	7.64 in (194 mm)	7.64 in (194 mm)	10.20 in (259 mm)	13.94 in (354 mm)	16.58 in (421 mm)	16.60 in (422 mm)	16.58 in (421 mm)	16.58 in (421 mm)	16.58 in (421 mm)
Unit width	5.20 in (132 mm)	5.20 in (132 mm)	6.80 in (173 mm)	6.80 in (173 mm)	6.84 in (174 mm)	3.40 in (86 mm)	6.84 in (174 mm)	6.84 in (174 mm)	6.84 in (174 mm)
Weight	23 lbs (10 kg)		56 lbs (25 kg)	79 lbs (36 kg)	95 lbs (43 kg)	59 lbs (27 kg)	95 lbs (43 kg)		
Plate thickness positive negative	0.124 in (3.15 mm) 0.065 in (1.65 mm)		0.140 in (3.56 mm) 0.085 in (2.16 mm)			0.150 in (3.81 mm) 0.080 in (2.03 mm)	0.140 in (3.56 mm) 0.085 in (2.16 mm)		
Terminal characteristics	0.55 in diameter, threaded-brass insert, 0.50 in deep. Fasten with 10-32 stainless steel hex bolt/washer.			1.00 in diameter, threaded copper-brass insert, 0.75 in deep. Fasten with 1/4-20 stainless steel hex bolt/washer.		0.65 mm in diameter, threaded-brass insert, 0.50 in deep. Fasten with 1/4-20 stainless steel hex bolt/washer.		1.00 in diameter, threaded copper-brass insert, 0.75 in deep. Fasten with 1/4-20 stainless steel hex bolt/washer.	

\*Add 0.7" to height when using connector covers.

## RATINGS IN AMPERES AT 77F (25C) (per cell)

FV/Time	Models	20 Hr.	10 Hr.	8 Hr.	6 Hr.	5 Hr.	4 Hr.	3 Hr.	2 Hr.	1 Hr.	30 Min.	15 Min.	10 Min.	5 Min.	1 Min.
1.95	LS 12-25	1.0	1.9	2.3	2.9	3.4	4.1	5.2	7.0	11.5	18.1	26.7	29.6	34.8	36.1
	LS 6-50	2.1	3.8	4.5	5.8	6.8	8.1	10.3	14.0	23.0	36.2	53.4	59.2	69.6	72.2
	LS 12-55	2.1	3.8	4.5	5.8	6.8	8.1	10.3	14.0	22.8	35.4	47.2	52.8	57.6	61.5
	LS 12-80	3.3	6.0	7.2	9.6	11.2	12.8	16.5	22.5	36.4	56.6	75.5	84.5	92.1	98.4
	LS 12-100	4.1	7.5	9.0	11.5	13.6	16.3	20.7	28.1	45.5	70.7	94.3	105.6	115.1	123.0
	LS 6-125*	4.9	9.0	10.9	13.8	16.3	19.6	24.8	33.7	54.6	84.8	113.2	126.7	138.2	147.6
	LS 6-200	8.3	15.0	18.1	23.1	27.1	32.6	41.3	56.2	91.0	142.0	188.6	211.2	230.3	246.0
	LS 4-300	12.4	22.6	27.1	34.6	40.7	48.9	62.0	84.3	136.5	212.1	283.0	316.8	345.4	369.1
	LS 2-600	24.8	45.1	69.2	81.4	97.8	124.0	168.5	273.0	424.2	565.9	633.6	690.8	738.1	738.1
1.90	LS 12-25	1.2	2.2	2.6	3.4	3.9	4.8	6.1	8.3	13.2	22.4	35.1	39.8	49.3	57.9
	LS 6-50	2.3	4.3	5.3	6.8	7.9	9.5	12.1	16.6	26.3	44.9	70.2	79.7	98.7	115.8
	LS 12-55	2.3	4.3	5.3	6.8	7.9	9.5	12.1	16.6	27.7	44.3	63.0	73.7	84.8	93.7
	LS 12-80	3.7	6.9	8.4	11.2	12.8	15.2	19.4	26.5	44.3	70.8	100.8	117.9	135.7	149.9
	LS 12-100	4.6	8.6	10.5	13.6	15.8	19.0	24.3	33.2	55.3	88.6	126.0	147.4	169.6	187.4
	LS 6-125*	5.6	10.4	12.6	16.3	18.9	22.9	29.1	39.8	66.4	106.3	151.2	176.9	203.5	224.8
	LS 6-200	9.3	17.3	21.0	27.2	31.5	38.1	48.6	66.3	110.7	178.0	252.0	294.8	339.2	374.7
	LS 4-300	13.9	25.9	31.5	40.8	47.3	57.1	72.8	99.5	166.0	265.7	378.0	442.2	508.8	562.1
	LS 2-600	27.9	51.8	63.0	81.5	94.6	114.3	145.7	199.0	332.0	531.3	756.0	884.4	1017.5	1124.2
1.88	LS 12-25	1.2	2.3	2.8	3.5	4.1	5.0	6.4	8.7	13.8	23.4	36.9	42.4	53.2	64.7
	LS 6-50	2.4	4.5	5.5	7.1	8.3	10.0	12.7	17.5	27.7	46.7	73.9	84.8	106.5	129.4
	LS 12-55	2.4	4.5	5.5	7.1	8.3	10.0	12.7	17.5	29.1	47.1	68.6	81.4	95.9	108.0
	LS 12-80	3.9	7.2	8.8	11.2	13.6	16.0	20.3	28.0	46.6	75.3	109.7	130.2	153.4	172.8
	LS 12-100	4.8	9.0	11.0	14.2	16.5	20.0	25.4	35.0	58.3	94.2	137.2	162.8	191.8	216.0
	LS 6-125*	5.8	10.9	13.2	17.0	19.8	24.0	30.5	42.0	69.9	113.0	164.6	195.4	230.1	259.2
	LS 6-200	9.7	18.1	22.0	28.3	33.0	40.0	50.8	69.9	116.5	188.0	274.3	325.6	383.5	431.9
	LS 4-300	14.5	27.1	33.0	42.5	49.6	60.0	76.3	104.9	174.8	282.5	411.5	488.4	575.3	647.9
	LS 2-600	29.0	54.3	66.0	85.0	99.1	120.0	152.5	209.8	349.5	564.9	823.0	976.8	1150.6	1295.8
1.85	LS 12-25	1.3	2.4	2.9	3.7	4.4	5.3	6.7	9.3	14.8	24.8	39.7	46.3	59.1	74.9
	LS 6-50	2.5	4.8	5.8	7.5	8.7	10.6	13.5	18.6	29.7	49.6	79.4	92.6	118.2	149.8
	LS 12-55	2.5	4.8	5.8	7.5	8.7	10.6	13.5	18.6	31.0	50.8	76.1	92.0	111.8	129.4
	LS 12-80	4.1	7.6	9.3	12.0	13.6	16.8	21.6	29.8	49.6	81.2	121.7	147.3	178.9	207.0
	LS 12-100	5.1	9.5	11.6	14.9	17.5	21.2	27.0	37.3	62.0	101.6	152.2	184.1	223.7	258.7
	LS 6-125*	6.1	11.5	13.9	17.9	21.0	25.5	32.4	44.7	74.4	121.9	182.6	220.9	268.4	310.5
	LS 6-200	10.1	19.1	23.2	29.8	35.0	42.5	53.9	74.5	124.1	204.0	304.3	368.1	447.3	517.4
	LS 4-300	15.2	28.6	34.8	44.7	52.5	63.7	80.9	111.8	186.1	304.7	456.5	552.2	671.0	776.1
	LS 2-600	30.4	57.3	69.6	89.5	104.9	127.4	161.8	223.6	372.2	609.4	913.0	1104.4	1342.0	1552.3
1.84	LS 12-25	1.3	2.4	2.9	3.8	4.4	5.4	6.8	9.4	15.0	25.2	40.5	47.5	61.2	78.8
	LS 6-50	2.6	4.8	5.0	7.5	8.9	10.8	13.7	18.9	29.9	50.5	80.9	95.0	122.5	157.5
	LS 12-55	2.6	4.8	5.9	7.5	8.9	10.8	13.7	18.9	31.4	51.7	78.0	95.0	116.7	136.4
	LS 12-80	4.1	7.7	9.4	12.0	14.4	17.6	21.9	30.2	50.3	82.7	124.8	151.9	186.7	218.3
	LS 12-100	5.1	9.6	11.7	15.1	17.7	21.5	27.4	37.8	62.9	103.4	156.0	189.9	233.4	272.9
	LS 6-125*	6.1	11.6	14.1	18.1	21.2	25.8	32.9	45.3	75.5	124.0	187.2	227.9	280.1	327.4
	LS 6-200	10.2	19.3	23.4	30.1	35.4	43.0	54.8	75.6	125.8	206.0	312.0	379.9	466.8	545.7
	LS 4-300	15.4	28.9	35.1	45.2	53.1	64.5	82.2	113.3	188.7	310.1	468.0	569.8	700.2	818.6
	LS 2-600	30.7	57.9	70.3	90.4	106.2	129.0	164.3	226.7	377.3	620.2	936.0	1139.6	1400.3	1637.2
1.80	LS 12-25	1.3	2.5	3.0	3.9	4.6	5.6	7.3	10.0	15.5	27.1	43.6	52.3	69.8	94.1
	LS 6-50	2.7	5.0	6.1	7.9	9.3	11.3	14.5	19.9	30.9	54.2	87.3	104.5	139.5	188.2
	LS 12-55	2.7	5.0	6.1	7.9	9.3	11.3	14.5	19.9	33.2	55.3	85.7	106.7	136.1	164.7
	LS 12-80	4.3	8.0	9.7	12.8	15.2	18.4	23.2	31.9	53.1	88.5	137.1	170.7	217.8	263.6
	LS 12-100	5.3	10.0	12.1	15.7	18.6	22.6	29.1	39.8	66.3	110.6	171.4	213.4	272.3	329.5
	LS 6-125*	6.4	12.0	14.6	18.9	22.3	27.1	34.9	47.8	79.6	132.7	205.6	256.1	326.7	395.3
	LS 6-200	10.7	20.1	24.3	31.4	37.1	45.2	58.1	79.7	132.7	222.0	342.7	426.8	544.5	658.9
	LS 4-300	16.0	30.1	36.4	47.2	55.7	67.8	87.2	119.5	199.0	331.8	514.1	640.2	816.8	988.4
	LS 2-600	32.0	60.2	72.9	94.3	111.4	135.5	174.3	239.0	398.0	663.6	1028.2	1280.4	1633.5	1976.7
1.78	LS 12-25	1.3	2.5	3.1	4.0	4.7	5.7	7.3	10.1	15.7	27.6	44.6	54.2	73.2	101.7
	LS 6-50	2.7	5.1	6.1	8.0	9.4	11.4	14.7	20.2	31.4	55.2	89.1	108.5	146.4	203.4
	LS 12-55	2.7	5.1	6.2	8.0	9.4	11.4	14.7	20.2	33.7	56.2	87.4	109.3	142.0	179.2
	LS 12-80	4.3	8.1	9.8	12.8	15.2	18.4	23.5	32.3	53.9	89.9	139.9	174.9	227.1	286.7
	LS 12-100	5.4	10.2	12.3	15.9	18.8	22.9	29.4	40.4	67.4	112.4	174.8	218.7	283.9	358.4
	LS 6-125*	6.4	12.2	14.7	19.1	22.6	27.5	35.2	48.4	80.9	134.9	209.8	262.4	340.7	430.1
	LS 6-200	10.7	20.3	24.6	31.9	37.6	45.8	58.7	80.7	134.8	230.0	349.6	437.4	567.8	716.8
	LS 4-300	16.1	30.5	36.9	47.8	56.5	68.7	88.1	121.1	202.2	337.3	524.4	656.0	851.7	1075.3
	LS 2-600	32.2	61.0	73.7	95.7	112.9	137.3	176.2	242.2	404.4	674.5	1048.9	1312.1	1703.5	2150.5
1.75	LS 12-25	1.4	2.6	3.1	4.1	4.8	5.8	7.5	10.3	16.1	28.4	46.0	57.2	78.4	113.1
	LS 6-50	2.7	5.2	6.3	8.1	9.6	11.7	14.9	20.6	32.1	56.7	91.9	114.4	156.7	226.3
	LS 12-55	2.8	5.3	6.5	8.1	9.6	11.7	14.9	20.6	34.5	57.6	90.0	113.3	150.7	200.9
	LS 12-80	4.3	8.3	10.0	12.8	15.2	18.4	23.9	32.9	55.2	92.1	144.0	181.3	241.1	321.5
	LS 12-100	5.4	10.4	12.5	16.3	19.2	23.3	29.8	41.2	69.0	115.2	180.0	226.6	301.4	401.9
	LS 6-125	6.8	12.5	15.6	19.5	24.0	29.0	37.0	51.0	86.0	138.2	138.2	138.2	138.2	138.2
	LS 6-200	10.8	20.8	25.0	32.6	38.4	46.7	59.7	82.3	138.0	230.0	360.0	453.2	602.8	803.7
	LS 4-300	16.3	31.2	37.5	48.8	57.6	70.0	89.5	123.5	207.0	345.5	540.0	679.8	904.2	1205.6
	LS 2-600	32.5	62.3	75.0	97.7	115.2	140.0	179.0	247.0	414.0	690.9	1080.0	1359.6	1808.4	2411.2

\*Preliminary

Note: Liberty Series 1000 batteries are manufactured to provide 95 percent of published rates at time of shipment at 8-hour rate to 1.75 Vpc.

## RATINGS IN KILOWATTS AT 77F (25C) (per cell)

FV/Time	Models	8 hr.	5 hr.	3 hr.	1 Hr.	30 Min.	20 Min.	15 Min.	10 Min.	5 Min.	1 Min.
1.95	LS-12-25	0.005	0.007	0.010	0.023	0.036	0.043	0.053	0.058	0.068	0.070
	LS-6-50	0.009	0.014	0.020	0.046	0.072	0.086	0.106	0.117	0.136	0.141
	LS-12-55	0.009	0.014	0.021	0.045	0.070	0.083	0.093	0.104	0.113	0.120
	LS-12-80	0.015	0.023	0.033	0.073	0.112	0.134	0.149	0.166	0.181	0.192
	LS-12-100	0.018	0.027	0.042	0.091	0.141	0.167	0.186	0.208	0.226	0.240
	LS-6-125*	0.022	0.033	0.050	0.109	0.169	0.200	0.224	0.250	0.271	0.288
	LS-6-200	0.036	0.055	0.083	0.182	0.282	0.334	0.373	0.416	0.451	0.480
	LS-4-300	0.055	0.082	0.125	0.273	0.422	0.501	0.559	0.624	0.677	0.720
	LS-2-600	0.109	0.164	0.249	0.545	0.843	1.002	1.118	1.248	1.354	1.439
1.90	LS-12-25	0.005	0.008	0.012	0.026	0.044	0.054	0.068	0.077	0.095	0.110
	LS-6-50	0.010	0.015	0.024	0.052	0.088	0.108	0.136	0.154	0.189	0.220
	LS-12-55	0.010	0.016	0.024	0.055	0.087	0.107	0.122	0.142	0.163	0.178
	LS-12-80	0.017	0.026	0.039	0.087	0.139	0.171	0.196	0.228	0.260	0.285
	LS-12-100	0.021	0.032	0.048	0.109	0.174	0.214	0.245	0.285	0.325	0.356
	LS-6-125*	0.025	0.038	0.058	0.131	0.208	0.257	0.294	0.342	0.390	0.427
	LS-6-200	0.042	0.063	0.097	0.219	0.349	0.428	0.490	0.570	0.650	0.712
	LS-4-300	0.063	0.095	0.145	0.328	0.521	0.642	0.734	0.855	0.975	1.068
	LS-2-600	0.126	0.189	0.290	0.656	1.042	1.284	1.469	1.710	1.951	2.136
1.85	LS-12-25	0.006	0.008	0.013	0.029	0.048	0.061	0.076	0.088	0.111	0.139
	LS-6-50	0.011	0.016	0.026	0.058	0.096	0.122	0.152	0.176	0.222	0.277
	LS-12-55	0.011	0.017	0.027	0.061	0.098	0.124	0.146	0.175	0.210	0.239
	LS-12-80	0.018	0.027	0.043	0.097	0.157	0.199	0.233	0.280	0.336	0.383
	LS-12-100	0.023	0.035	0.053	0.121	0.197	0.248	0.291	0.350	0.420	0.479
	LS-6-125*	0.028	0.042	0.064	0.145	0.236	0.298	0.349	0.420	0.504	0.575
	LS-6-200	0.046	0.069	0.107	0.243	0.395	0.496	0.582	0.700	0.841	0.957
	LS-4-300	0.069	0.104	0.160	0.364	0.590	0.745	0.873	1.050	1.261	1.436
	LS-2-600	0.138	0.208	0.320	0.728	1.180	1.489	1.746	2.099	2.523	2.872
1.80	LS-12-25	0.006	0.009	0.013	0.030	0.052	0.064	0.083	0.098	0.129	0.169
	LS-6-50	0.012	0.017	0.026	0.060	0.104	0.128	0.165	0.196	0.257	0.339
	LS-12-55	0.012	0.018	0.029	0.064	0.106	0.137	0.162	0.200	0.251	0.297
	LS-12-80	0.019	0.030	0.046	0.103	0.170	0.219	0.259	0.320	0.402	0.474
	LS-12-100	0.024	0.037	0.057	0.129	0.212	0.273	0.324	0.400	0.502	0.593
	LS-6-125*	0.029	0.044	0.068	0.155	0.254	0.328	0.389	0.480	0.602	0.712
	LS-6-200	0.048	0.073	0.114	0.258	0.426	0.547	0.648	0.799	1.005	1.186
	LS-4-300	0.072	0.110	0.171	0.386	0.636	0.820	0.972	1.199	1.507	1.779
	LS-2-600	0.143	0.219	0.342	0.773	1.273	1.640	1.944	2.398	3.014	3.558
1.75	LS-12-25	0.006	0.010	0.014	0.031	0.054	0.067	0.086	0.106	0.142	0.198
	LS-6-50	0.012	0.019	0.028	0.062	0.108	0.134	0.172	0.211	0.284	0.396
	LS-12-55	0.013	0.019	0.029	0.067	0.110	0.142	0.168	0.209	0.273	0.352
	LS-12-80	0.020	0.030	0.047	0.107	0.175	0.227	0.269	0.335	0.437	0.563
	LS-12-100	0.025	0.038	0.058	0.133	0.219	0.283	0.336	0.418	0.546	0.703
	LS-6-125*	0.029	0.045	0.070	0.160	0.263	0.326	0.363	0.418	0.546	0.703
	LS-6-200	0.049	0.075	0.117	0.266	0.438	0.567	0.672	0.837	1.092	1.407
	LS-4-300	0.074	0.113	0.175	0.400	0.658	0.850	1.008	1.255	1.638	2.110
	LS-2-600	0.147	0.226	0.350	0.799	1.315	1.701	2.016	2.510	3.275	4.220
1.70	LS-12-25	Not recommended to discharge longer than 15 min. below 1.75 Vpc.						0.089	0.111	0.155	0.230
	LS-6-50							0.178	0.222	0.310	0.460
	LS-12-55							0.172	0.214	0.287	0.400
	LS-12-80							0.275	0.342	0.459	0.641
	LS-12-100							0.344	0.427	0.574	0.801
	LS-6-125*							0.263	0.263	0.263	0.263
	LS-6-200							0.687	0.854	1.149	1.602
	LS-4-300							1.031	1.281	1.723	2.403
	LS-2-600							2.062	2.563	3.446	4.806
1.67	LS-12-25	Not recommended to discharge longer than 15 min. below 1.75 Vpc.						0.092	0.117	0.164	0.244
	LS-6-50							0.185	0.233	0.328	0.488
	LS-12-55							0.172	0.217	0.296	0.429
	LS-12-80							0.275	0.346	0.474	0.686
	LS-12-100							0.344	0.433	0.593	0.857
	LS-6-125*							0.263	0.263	0.263	0.263
	LS-6-200							0.688	0.866	1.186	1.715
	LS-4-300							1.032	1.299	1.778	2.572
	LS-2-600							2.063	2.598	3.557	5.144
1.65	LS-12-25	Not recommended to discharge longer than 15 min. below 1.75 Vpc.						0.094	0.119	0.168	0.255
	LS-6-50							0.187	0.238	0.337	0.510
	LS-12-55							0.172	0.217	0.301	0.447
	LS-12-80							0.276	0.348	0.482	0.715
	LS-12-100							0.345	0.435	0.603	0.894
	LS-6-125*							0.263	0.263	0.263	0.263
	LS-6-200							0.689	0.870	1.205	1.788
	LS-4-300							1.034	1.304	1.808	2.682
	LS-2-600							2.068	2.609	3.616	5.363
1.63	LS-12-25	Not recommended to discharge longer than 15 min. below 1.75 Vpc.						0.095	0.120	0.173	0.264
	LS-6-50							0.189	0.240	0.345	0.528
	LS-12-55							0.173	0.218	0.306	0.465
	LS-12-80							0.276	0.349	0.490	0.743
	LS-12-100							0.345	0.437	0.612	0.929
	LS-6-125*							0.263	0.263	0.263	0.263
	LS-6-200							0.691	0.873	1.224	1.859
	LS-4-300							1.036	1.310	1.836	2.788
	LS-2-600							2.072	2.619	3.673	5.576
1.60	LS-12-25	Not recommended to discharge longer than 15 min. below 1.75 Vpc.						0.096	0.122	0.179	0.279
	LS-6-50							0.191	0.244	0.359	0.559
	LS-12-55							0.173	0.221	0.314	0.490
	LS-12-80							0.277	0.353	0.502	0.784
	LS-12-100							0.346	0.441	0.628	0.980
	LS-6-125*							0.263	0.263	0.263	0.263
	LS-6-200							0.692	0.882	1.256	1.959
	LS-4-300							1.038	1.323	1.884	2.939
	LS-2-600							2.077	2.646	3.768	5.878

\*Preliminary

Note: Liberty Series 1000 batteries are manufactured to provide 95 percent of published rates at time of shipment at 8-hour rate to 1.75 Vpc.

# LIBERTY SERIES OPTIONS

## FA Series Batteries



C&D designed the FA Series of valve-regulated lead-acid batteries to provide easy front access to the battery terminals for both installation and maintenance, reducing the need for expensive rollout trays and drawers

in cabinets or racks. The compact, lightweight designs provide optimal power in attractive footprints. Thick positive grids supply longer life and excellent long-duration discharge rates from 25 to 150 ampere-hours.\*

For additional information on the FA Series Batteries, see brochure #12-383.

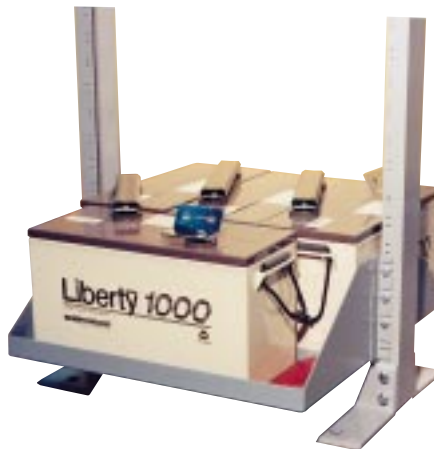
\*The Liberty® Series 1000 Batteries will be available in the Front Access Design.

## Optional Accessories

For demanding applications, C&D provides optional components to enhance battery life. An optional steel jacket is available to preserve jar shape and maintain element compression in high-temperature operations.



Special wiring harnesses are available which speed battery installation, and circuit-enhancing electronics are offered to increase battery life.

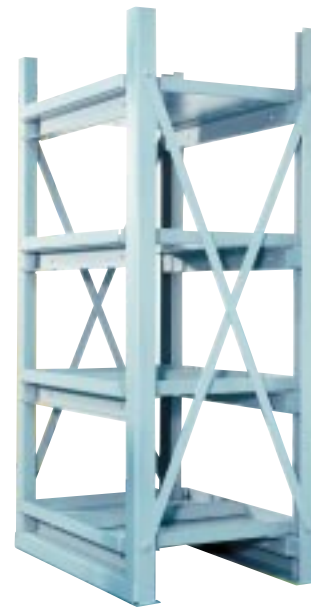


## Relay Rack Battery Trays

C&D manufactures a wide range of battery trays to mount in 19- and 23-inch relay racks.

## RACKS

C&D is a major supplier of high-quality VRLA battery racks to Telecommunications, Switchgear & Control, and UPS markets. Both standard and modular racks are designed and manufactured to suit all cell configurations, including multi-row and multi-tier layouts. C&D racks meet seismic loading requirements, imposed by UBC and Bellcore standards.



**Standard Rack**

RD-2132 OR  
RD-2140

## Modular Rack



C&D's modular racks provide a flexible, efficient method for racking Liberty Series 1000 batteries. These attractive, durable racks provide accessibility to the batteries and are easy to install. Racks are available in 29" and 43" lengths and are stackable. Optional panels are available to completely enclose racks, providing a cabinet-like appearance.

For additional information on racks and cabinets for Liberty Series 1000, see the following brochures:  
Modular Rack brochure # 12-380



**Modular Rack with Panels**



## POWERCOM DIVISION

1400 UNION MEETING ROAD  
P.O. BOX 3053  
BLUE BELL, PA 19422-0858  
(215) 619-2700 • FAX (215) 619-7899  
(800) 543-8630  
www.cdpowercom.com

Specifications are subject to change without notice. Contact your nearest C&D sales office for the latest specifications. All statements, information and data given herein are believed to be accurate and reliable but are presented without guaranty, warranty, or responsibility of any kind, express or implied. Statements or suggestions concerning possible use of our products are made without representation or warranty that any such use is free of patent infringement, and are not recommendations to infringe any patent. The user should not assume that all safety measures are indicated, or that other measures may not be required. Unless made explicitly in writing to the customer, C&D makes no representations or warranties regarding whether any product/technology purchased and/or specifications and/or literature regarding same are the most current or advanced version thereof; and C&D assumes no obligation to inform its customers of any revisions and/or improvements to such product, technology, specifications, and/or literature.

Copyright 1998 C&D TECHNOLOGIES, INC.

**C&D TECHNOLOGIES, INC.**