



UL Recognized Component



# LIBERTY® SERIES 1000

## VALVE REGULATED LEAD-CALCIUM BATTERY FOR STANDBY APPLICATIONS

Capacities from 55 to 600 Ampere-hours (8 hours to 1.75 VPC)  
172 to 2060 Watts per cell (15 mins to 1.67 VPC)

C&D Technologies' valve regulated lead-acid (VRLA) batteries are engineered to provide performance reliability and consistency over the life of the product. Designed using C&D's patented processes, these



products offer long battery life with minimal maintenance. The versatile Liberty® Series 1000 10-year VRLA product fits virtually anywhere and provides superior performance in the most demanding applications.

### APPLICATIONS

#### Telecom

- Customer Premise
- Broadband
- Wireless
- PBX
- Repeaters
- Fixed Wireline
- Outside Plants
- Underground Battery Vaults

#### Switchgear Utility

- Electric Utility
- Railway Signals
- Emergency Systems
- Manufacturing Facilities
  - Assembly Lines
  - Process Controls
- Petrochemical processing plants
- Pipelines

#### UPS

- Data Centers
- Network Operations Centers
- Industrial Process Control Facilities
- Semiconductor Manufacturing
- Banks & Financial Markets
- Power Generation Plants
- Hospital & Testing Laboratories
- Emergency 911 response centers

### SPECIFICATIONS

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

- Advanced, computer-controlled thermal cover-to-jar weld for greater reliability and consistency
- Automated, state-of-the-art, cast-on strap process ensures consistent, high-quality, low electrical-resistance welds
- Through-the-partition intercell connection shortens current paths and increases performance
- Copper-to-copper connections minimize resistance, especially at high rates, and shorten maintenance time by reducing the need for retorquing connections
- Patented and time-tested C&D post seal design with secondary epoxy seal to increase integrity
  - Leak-free operation
  - Superior reliability
- Two-fold vent system, comprised of a low-pressure safety valve with flash arrester, minimizes bulging and prevents flashback explosion from external ignition source
- Thick radial grid design for both positive and negative plates improves current carrying capacity and performance resulting in long float life
- Fully automated vacuum and filling operation results in uniform acid volume distribution and consistent float voltage
- Immobilized electrolyte technology using an absorbent glass mat design (AGM) offers safe handling and storage
- Non-spillable designation on most models for lower shipping cost
- High-impact resistant PVC container and cover provide excellent water vapor retention, preventing dry out and oxygen infiltration

## 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

## SPECIFICATION

|   | LS 12-55  | LS 12-80            | LS 12-100   | LS 6-200             | LS 4-300            | LS 2-600*            |
|---|---|---------------------|---|----------------------|---------------------|----------------------|
| <b>Nominal voltage</b>                                    | 12 volts  | 12 volts            | 12 volts  | 6 volts              | 4 volts             | 2 volts              |
| <b>Number of cells</b>                                    | 6 / unit  | 6 / unit            | 6 / unit  | 3 / unit             | 2 / unit            | 1 / unit             |
| <b>Rated 8-hr to capacity (ampere-hours to 1.75 VPC)</b>  | 52 Ah to 10.5 volts   | 80 Ah to 10.5 volts | 100 Ah to 10.5 volts  | 200 Ah to 5.25 volts | 300 Ah to 3.5 volts | 600 Ah to 1.75 volts |
| <b>Rated 15-min capacity (watts per cell to 1.67 VPC)</b> | 172   | 286                 | 344   | 688                  | 1032                | 2063                 |
| <b>Internal resistance per cell</b>                       | 0.001570 Ohms   | 0.000940 Ohms       | 0.000786 Ohms   | 0.000393 Ohms        | 0.000262 Ohms       | 0.000131 Ohms        |
| <b>Short circuit current</b>                              | 1274 A  | 2128 A              | 2545 A  | 5089 A               | 7634 A              | 15267 A              |
| <b>Unit height</b>  | 8.95 in (227 mm)  | 8.95 in (227 mm)    | 8.95 in (227 mm)  | 8.95 in (227 mm)     | 8.95 in (227 mm)    | 8.95 in (227 mm)     |
| <b>Unit length (includes handles)</b>                     | 10.14 in (257 mm)   | 13.94 in (354 mm)   | 16.58 in (421 mm)   | 16.58 in (421 mm)    | 16.58 in (421 mm)   | 16.58 in (421 mm)    |
| <b>Unit width</b>   | 6.80 in (173 mm)  | 6.84 in (174 mm)    | 6.84 in (174 mm)  | 6.84 in (174 mm)     | 6.84 in (174 mm)    | 6.84 in (174 mm)     |
| <b>Weight</b>   | 56 lbs (25 kg)  | 79 lbs (36 kg)      | 95 lbs (43 kg)  | 95 lbs (43 kg)       | 95 lbs (43 kg)      | 95 lbs (43 kg)       |
| <b>Plate thickness positive</b>                           | 0.140 in (3.56 mm)  |                     |   |                      |                     |                      |
| <b>negative</b>   | 0.085 in (2.16 mm)  |                     |   |                      |                     |                      |
| <b>Terminal characteristics</b>                           | 0.55 in diameter, threaded-brass insert, 0.50 in deep Fasten with 10-32 stainless steel hex bolt /washer. |                     | 0.625 in diameter, threaded copper insert, 0.75 in deep. Fasten with 1/4-20 stainless steel hex bolt /washer. |                      |                     |                      |

\* 2 cells connected in parallel for 2-volt units

**RATINGS IN AMPERES AT 77°F (25°C)**

| Final volts per cell | Reserve Time |        |        |        |        |        |       |       |       |       |       |      |      |       |       |
|----------------------|--------------|--------|--------|--------|--------|--------|-------|-------|-------|-------|-------|------|------|-------|-------|
|                      | Models       | 1 min  | 5 min  | 10 min | 15 min | 30 min | 1 hr  | 2 hr  | 3 hr  | 4 hr  | 5 hr  | 6 hr | 8 hr | 10 hr | 20 hr |
| <b>1.95</b>          | LS12-55      | 61.6   | 57.6   | 52.4   | 47.3   | 35.0   | 22.8  | 14.1  | 10.3  | 8.2   | 6.8   | 5.8  | 4.5  | 3.8   | 2.1   |
|                      | LS12-80      | 98.6   | 92.1   | 83.8   | 75.7   | 56.0   | 36.6  | 22.5  | 16.5  | 13.1  | 10.8  | 9.2  | 7.2  | 6.0   | 3.3   |
|                      | LS12-100     | 123.2  | 115.1  | 104.8  | 94.6   | 70.0   | 45.7  | 28.1  | 20.7  | 16.3  | 13.5  | 11.6 | 9.1  | 7.5   | 4.1   |
|                      | LS6-200      | 246.5  | 230.2  | 209.5  | 189.3  | 140.1  | 91.4  | 56.3  | 41.3  | 32.7  | 27.0  | 23.1 | 18.1 | 15.0  | 8.3   |
|                      | LS4-300      | 372.6  | 348.5  | 317.8  | 287.6  | 213.4  | 139.1 | 85.5  | 62.0  | 49.0  | 40.5  | 34.7 | 27.2 | 22.5  | 12.4  |
|                      | LS2-600      | 739.4  | 690.6  | 628.6  | 567.8  | 420.2  | 274.2 | 168.8 | 124.0 | 98.0  | 81.0  | 69.3 | 54.3 | 45.0  | 24.8  |
| <b>1.90</b>          | LS12-55      | 93.7   | 84.7   | 73.5   | 63.4   | 43.7   | 27.7  | 16.7  | 12.1  | 9.5   | 7.9   | 6.7  | 5.2  | 4.3   | 2.3   |
|                      | LS12-80      | 150.0  | 135.5  | 117.6  | 101.5  | 69.9   | 44.4  | 26.7  | 19.3  | 15.2  | 12.6  | 10.8 | 8.4  | 6.9   | 3.7   |
|                      | LS12-100     | 187.5  | 169.4  | 147.0  | 126.8  | 87.4   | 55.5  | 33.4  | 24.2  | 19.0  | 15.8  | 13.5 | 10.5 | 8.6   | 4.7   |
|                      | LS6-200      | 374.9  | 338.8  | 293.9  | 253.6  | 174.9  | 110.9 | 66.7  | 47.2  | 38.1  | 31.6  | 27.0 | 21.0 | 17.2  | 9.3   |
|                      | LS4-300      | 562.4  | 508.2  | 440.9  | 380.4  | 262.3  | 166.4 | 100.1 | 72.6  | 57.1  | 47.4  | 40.5 | 31.5 | 25.9  | 14.0  |
|                      | LS2-600      | 1124.7 | 1016.4 | 881.8  | 760.9  | 524.6  | 332.7 | 200.2 | 145.1 | 114.3 | 94.8  | 81.0 | 62.9 | 51.7  | 27.9  |
| <b>1.88</b>          | LS12-55      | 108.0  | 95.5   | 80.7   | 68.5   | 46.5   | 29.0  | 17.3  | 12.6  | 9.9   | 8.2   | 7.1  | 5.5  | 4.5   | 2.4   |
|                      | LS12-80      | 172.6  | 153.2  | 129.5  | 109.5  | 74.0   | 46.7  | 27.9  | 20.2  | 16.0  | 13.2  | 11.2 | 8.7  | 7.2   | 3.8   |
|                      | LS12-100     | 216.1  | 191.0  | 161.5  | 137.0  | 93.0   | 58.1  | 34.8  | 25.2  | 19.9  | 16.5  | 14.2 | 11.0 | 9.1   | 4.8   |
|                      | LS6-200      | 431.9  | 382.3  | 323.2  | 273.9  | 185.7  | 113.5 | 69.7  | 50.4  | 39.8  | 33.0  | 28.3 | 22.1 | 18.1  | 9.7   |
|                      | LS4-300      | 616.2  | 548.5  | 467.9  | 399.6  | 273.0  | 171.3 | 102.5 | 74.3  | 58.9  | 49.0  | 42.1 | 32.9 | 27.1  | 14.4  |
|                      | LS2-600      | 1295.2 | 1148.3 | 970.7  | 820.2  | 562.0  | 350.9 | 208.0 | 151.1 | 119.5 | 99.1  | 84.7 | 65.8 | 53.9  | 28.3  |
| <b>1.85</b>          | LS12-55      | 129.3  | 112.1  | 91.7   | 76.0   | 50.7   | 31.2  | 18.6  | 13.4  | 10.6  | 8.8   | 7.5  | 5.8  | 4.7   | 2.5   |
|                      | LS12-80      | 206.9  | 179.4  | 146.8  | 121.5  | 81.2   | 49.9  | 29.7  | 21.5  | 17.0  | 14.0  | 12.0 | 9.3  | 7.6   | 4.0   |
|                      | LS12-100     | 258.6  | 224.2  | 183.5  | 151.9  | 101.5  | 62.4  | 37.1  | 26.9  | 21.2  | 17.5  | 15.0 | 11.6 | 9.5   | 5.0   |
|                      | LS6-200      | 517.1  | 448.4  | 367.0  | 303.8  | 203.0  | 124.8 | 74.2  | 53.8  | 42.4  | 35.1  | 30.0 | 23.2 | 19.0  | 9.9   |
|                      | LS4-300      | 775.7  | 672.6  | 550.5  | 455.8  | 304.5  | 187.3 | 111.3 | 80.7  | 63.6  | 52.6  | 44.9 | 34.8 | 28.4  | 14.9  |
|                      | LS2-600      | 1551.4 | 1345.3 | 1100.9 | 911.5  | 609.0  | 374.5 | 222.6 | 161.4 | 127.2 | 105.3 | 89.9 | 69.6 | 56.9  | 29.7  |
| <b>1.84</b>          | LS12-55      | 136.4  | 117.0  | 94.7   | 77.9   | 51.6   | 31.6  | 18.8  | 13.6  | 10.7  | 8.9   | 7.6  | 5.9  | 4.8   | 2.5   |
|                      | LS12-80      | 218.2  | 187.1  | 151.4  | 124.7  | 82.6   | 50.6  | 30.1  | 21.8  | 17.2  | 14.2  | 12.1 | 9.4  | 7.7   | 4.0   |
|                      | LS12-100     | 272.7  | 233.9  | 189.3  | 155.8  | 103.2  | 63.3  | 37.6  | 27.3  | 21.6  | 17.9  | 15.3 | 11.9 | 9.7   | 5.1   |
|                      | LS6-200      | 545.4  | 467.9  | 378.6  | 311.7  | 206.5  | 126.6 | 75.1  | 54.6  | 43.2  | 35.8  | 30.6 | 23.8 | 19.5  | 10.2  |
|                      | LS4-300      | 818.2  | 701.8  | 567.9  | 467.5  | 309.7  | 189.8 | 112.9 | 81.8  | 64.4  | 53.3  | 45.5 | 35.2 | 28.7  | 15.0  |
|                      | LS2-600      | 1636.4 | 1403.6 | 1135.8 | 935.0  | 619.4  | 379.6 | 225.8 | 163.6 | 128.9 | 106.6 | 90.9 | 70.4 | 57.4  | 30.0  |
| <b>1.80</b>          | LS12-55      | 164.7  | 136.2  | 106.5  | 85.9   | 55.0   | 33.5  | 19.9  | 14.3  | 11.3  | 9.3   | 7.9  | 6.1  | 5.0   | 2.6   |
|                      | LS12-80      | 263.5  | 218.0  | 170.4  | 137.4  | 88.0   | 53.6  | 31.8  | 22.9  | 18.0  | 14.9  | 12.7 | 9.8  | 8.0   | 4.2   |
|                      | LS12-100     | 329.4  | 272.4  | 213.0  | 171.7  | 110.1  | 67.0  | 39.7  | 28.7  | 22.5  | 18.6  | 15.8 | 12.2 | 10.0  | 5.2   |
|                      | LS6-200      | 658.8  | 544.9  | 426.0  | 343.5  | 220.1  | 134.1 | 79.4  | 57.4  | 45.1  | 37.2  | 31.7 | 24.5 | 20.0  | 10.4  |
|                      | LS4-300      | 988.2  | 817.3  | 639.0  | 515.2  | 330.2  | 201.1 | 119.2 | 86.0  | 67.6  | 55.8  | 47.5 | 36.7 | 29.9  | 15.6  |
|                      | LS2-600      | 1976.5 | 1634.7 | 1278.0 | 1030.4 | 660.3  | 402.2 | 238.3 | 172.1 | 135.3 | 111.6 | 95.1 | 73.5 | 59.9  | 31.2  |
| <b>1.78</b>          | LS12-55      | 179.1  | 142.3  | 108.8  | 87.5   | 56.1   | 34.0  | 20.2  | 14.6  | 11.5  | 9.5   | 8.1  | 6.3  | 5.1   | 2.7   |
|                      | LS12-80      | 286.7  | 227.3  | 174.5  | 140.2  | 89.6   | 54.4  | 32.2  | 23.2  | 18.3  | 15.1  | 12.8 | 9.9  | 8.1   | 4.2   |
|                      | LS12-100     | 358.4  | 284.2  | 218.2  | 175.3  | 112.0  | 68.0  | 40.2  | 29.1  | 22.8  | 18.8  | 16.1 | 12.4 | 10.1  | 5.3   |
|                      | LS6-200      | 716.5  | 569.3  | 435.1  | 350.1  | 224.5  | 135.5 | 80.5  | 58.2  | 45.7  | 37.7  | 32.1 | 24.8 | 20.2  | 10.5  |
|                      | LS4-300      | 1075.1 | 852.5  | 654.5  | 525.9  | 336.1  | 204.0 | 120.7 | 87.2  | 68.5  | 56.5  | 48.2 | 37.2 | 30.3  | 15.8  |
|                      | LS2-600      | 2149.6 | 1708.0 | 1305.3 | 1050.4 | 673.4  | 406.6 | 241.6 | 174.6 | 137.2 | 113.2 | 96.4 | 74.4 | 60.6  | 31.5  |
| <b>1.75</b>          | LS12-55      | 200.9  | 151.1  | 112.7  | 90.2   | 57.5   | 34.7  | 20.5  | 14.9  | 11.8  | 9.8   | 8.4  | 6.5  | 5.3   | 2.8   |
|                      | LS12-80      | 321.4  | 241.7  | 180.3  | 144.3  | 92.1   | 55.5  | 32.8  | 23.7  | 18.6  | 15.4  | 13.1 | 10.0 | 8.2   | 4.3   |
|                      | LS12-100     | 401.7  | 302.2  | 225.4  | 180.3  | 115.1  | 69.4  | 41.0  | 29.6  | 23.3  | 19.2  | 16.4 | 12.6 | 10.3  | 5.4   |
|                      | LS6-200      | 803.5  | 604.4  | 450.7  | 360.6  | 230.1  | 138.8 | 82.1  | 59.3  | 46.6  | 38.4  | 32.7 | 25.0 | 20.6  | 10.7  |
|                      | LS4-300      | 1205.2 | 906.5  | 676.1  | 540.9  | 345.2  | 208.2 | 123.1 | 88.9  | 69.9  | 57.7  | 49.1 | 37.5 | 30.9  | 16.1  |
|                      | LS2-600      | 2410.4 | 1813.1 | 1352.2 | 1081.9 | 690.4  | 416.4 | 246.3 | 177.8 | 139.7 | 115.3 | 98.2 | 75.0 | 61.9  | 32.2  |

**Note:** Liberty Series 1000 batteries are tested to 95 percent of published rates at time of shipment at 8 hour rate to 1.75 VPC. Additional ratings and application information is available in the Battery Selection Program at [www.cdstandbypower.net](http://www.cdstandbypower.net)

### RATINGS IN KW PER CELL AT 77°F (25°C)

| Final volts per cell | Reserve Time |       |       |        |        |   |        |       |  |       |       |
|----------------------|--------------|-------|-------|--------|--------|---|--------|-------|--|-------|-------|
|                      | Models       | 1 min | 5 min | 10 min | 15 min | 20 min  | 30 min | 1 hr  | 3 hr   | 5 hr  | 8 hr  |
| 1.95                 | LS12-55      | 0.120 | 0.113 | 0.103  | 0.094  | 0.085   | 0.070  | 0.045 | 0.021  | 0.014 | 0.009 |
|                      | LS12-80      | 0.200 | 0.188 | 0.172  | 0.156  | 0.141   | 0.116  | 0.076 | 0.034  | 0.023 | 0.015 |
|                      | LS12-100     | 0.240 | 0.225 | 0.207  | 0.188  | 0.170   | 0.139  | 0.091 | 0.041  | 0.028 | 0.018 |
|                      | LS6-200      | 0.480 | 0.451 | 0.413  | 0.375  | 0.339   | 0.279  | 0.181 | 0.083  | 0.055 | 0.037 |
|                      | LS4-300      | 0.720 | 0.676 | 0.620  | 0.563  | 0.509   | 0.418  | 0.272 | 0.124  | 0.083 | 0.055 |
|                      | LS2-600      | 1.440 | 1.353 | 1.239  | 1.126  | 1.017   | 0.836  | 0.544 | 0.248  | 0.165 | 0.111 |
| 1.90                 | LS12-55      | 0.178 | 0.162 | 0.142  | 0.123  | 0.108   | 0.086  | 0.055 | 0.024  | 0.016 | 0.010 |
|                      | LS12-80      | 0.297 | 0.270 | 0.236  | 0.206  | 0.180   | 0.143  | 0.091 | 0.040  | 0.026 | 0.017 |
|                      | LS12-100     | 0.357 | 0.324 | 0.284  | 0.247  | 0.216   | 0.172  | 0.109 | 0.048  | 0.032 | 0.021 |
|                      | LS6-200      | 0.713 | 0.649 | 0.568  | 0.493  | 0.431   | 0.343  | 0.219 | 0.096  | 0.063 | 0.042 |
|                      | LS4-300      | 1.070 | 0.973 | 0.851  | 0.740  | 0.647   | 0.515  | 0.328 | 0.144  | 0.095 | 0.063 |
|                      | LS2-600      | 2.139 | 1.946 | 1.703  | 1.480  | 1.294   | 1.030  | 0.657 | 0.289  | 0.189 | 0.126 |
| 1.85                 | LS12-55      | 0.296 | 0.251 | 0.200  | 0.162  | 0.137   | 0.105  | 0.065 | 0.028  | 0.018 | 0.012 |
|                      | LS12-80      | 0.399 | 0.351 | 0.291  | 0.242  | 0.207   | 0.163  | 0.101 | 0.044  | 0.029 | 0.019 |
|                      | LS12-100     | 0.479 | 0.421 | 0.349  | 0.291  | 0.249   | 0.196  | 0.122 | 0.053  | 0.035 | 0.023 |
|                      | LS6-200      | 0.958 | 0.842 | 0.698  | 0.581  | 0.497   | 0.392  | 0.243 | 0.106  | 0.070 | 0.046 |
|                      | LS4-300      | 1.436 | 1.263 | 1.047  | 0.872  | 0.746   | 0.588  | 0.365 | 0.159  | 0.105 | 0.070 |
|                      | LS2-600      | 2.873 | 2.525 | 2.094  | 1.744  | 1.492   | 1.175  | 0.729 | 0.319  | 0.209 | 0.139 |
| 1.80                 | LS12-55      | 0.296 | 0.251 | 0.200  | 0.162  | 0.137   | 0.105  | 0.065 | 0.028  | 0.018 | 0.012 |
|                      | LS12-80      | 0.494 | 0.419 | 0.333  | 0.270  | 0.228   | 0.176  | 0.108 | 0.047  | 0.030 | 0.020 |
|                      | LS12-100     | 0.593 | 0.502 | 0.399  | 0.324  | 0.274   | 0.211  | 0.130 | 0.056  | 0.037 | 0.024 |
|                      | LS6-200      | 1.186 | 1.005 | 0.799  | 0.649  | 0.548   | 0.422  | 0.260 | 0.113  | 0.073 | 0.048 |
|                      | LS4-300      | 1.779 | 1.507 | 1.198  | 0.973  | 0.822   | 0.633  | 0.391 | 0.169  | 0.110 | 0.072 |
|                      | LS2-600      | 3.558 | 3.015 | 2.396  | 1.946  | 1.643   | 1.265  | 0.781 | 0.338  | 0.219 | 0.145 |
| 1.75                 | LS12-55      | 0.352 | 0.274 | 0.208  | 0.168  | 0.142   | 0.110  | 0.067 | 0.029  | 0.019 | 0.013 |
|                      | LS12-80      | 0.586 | 0.456 | 0.347  | 0.281  | 0.237   | 0.183  | 0.112 | 0.048  | 0.031 | 0.021 |
|                      | LS12-100     | 0.703 | 0.547 | 0.416  | 0.337  | 0.284   | 0.219  | 0.134 | 0.058  | 0.038 | 0.025 |
|                      | LS6-200      | 1.406 | 1.094 | 0.832  | 0.673  | 0.568   | 0.438  | 0.268 | 0.116  | 0.075 | 0.050 |
|                      | LS4-300      | 2.109 | 1.642 | 1.249  | 1.010  | 0.853   | 0.657  | 0.402 | 0.174  | 0.113 | 0.074 |
|                      | LS2-600      | 4.218 | 3.283 | 2.497  | 2.020  | 1.705   | 1.314  | 0.804 | 0.348  | 0.226 | 0.149 |
| 1.70                 | LS12-55      | 0.400 | 0.287 | 0.213  | 0.172  | 0.145   | 0.111  | 0.067 | <b>Not recommended to discharge longer than 1 hour below 1.75 VPC.</b> |       |       |
|                      | LS12-80      | 0.667 | 0.479 | 0.355  | 0.286  | 0.241   | 0.185  | 0.112 |  |       |       |
|                      | LS12-100     | 0.801 | 0.575 | 0.426  | 0.343  | 0.289   | 0.222  | 0.134 |  |       |       |
|                      | LS6-200      | 1.602 | 1.149 | 0.853  | 0.687  | 0.579   | 0.445  | 0.268 |  |       |       |
|                      | LS4-300      | 2.403 | 1.724 | 1.279  | 1.030  | 0.868   | 0.667  | 0.402 |  |       |       |
|                      | LS2-600      | 4.805 | 3.448 | 2.558  | 2.060  | 1.737   | 1.335  | 0.803 |  |       |       |
| 1.67                 | LS12-55      | 0.429 | 0.296 | 0.218  | 0.172  | <b>Not recommended to discharge longer than 15 min. below 1.70 VPC.</b> |        |       |  |       |       |
|                      | LS12-80      | 0.714 | 0.494 | 0.363  | 0.286  |   |        |       |  |       |       |
|                      | LS12-100     | 0.857 | 0.592 | 0.436  | 0.343  |   |        |       |  |       |       |
|                      | LS6-200      | 1.715 | 1.186 | 0.872  | 0.687  |   |        |       |  |       |       |
|                      | LS4-300      | 2.571 | 1.777 | 1.309  | 1.030  |   |        |       |  |       |       |
|                      | LS2-600      | 5.143 | 3.554 | 2.618  | 2.060  |   |        |       |  |       |       |
| 1.65                 | LS12-55      | 0.447 | 0.302 | 0.219  | 0.172  | <b>Not recommended to discharge longer than 15 min. below 1.70 VPC.</b> |        |       |  |       |       |
|                      | LS12-80      | 0.738 | 0.501 | 0.364  | 0.287  |   |        |       |  |       |       |
|                      | LS12-100     | 0.893 | 0.603 | 0.436  | 0.344  |   |        |       |  |       |       |
|                      | LS6-200      | 1.787 | 1.205 | 0.873  | 0.689  |   |        |       |  |       |       |
|                      | LS4-300      | 2.680 | 1.808 | 1.309  | 1.033  |   |        |       |  |       |       |
|                      | LS2-600      | 5.360 | 3.615 | 2.618  | 2.067  |   |        |       |  |       |       |
| 1.63                 | LS12-55      | 0.465 | 0.306 | 0.219  | 0.173  | <b>Not recommended to discharge longer than 15 min. below 1.70 VPC.</b> |        |       |  |       |       |
|                      | LS12-80      | 0.774 | 0.509 | 0.364  | 0.288  |   |        |       |  |       |       |
|                      | LS12-100     | 0.929 | 0.612 | 0.437  | 0.345  |   |        |       |  |       |       |
|                      | LS6-200      | 1.859 | 1.223 | 0.874  | 0.691  |   |        |       |  |       |       |
|                      | LS4-300      | 2.788 | 1.836 | 1.310  | 1.036  |   |        |       |  |       |       |
|                      | LS2-600      | 5.576 | 3.671 | 2.620  | 2.072  |   |        |       |  |       |       |

**Note:** Liberty Series 1000 batteries are tested to 95 percent of published rates at time of shipment at 8 hour rate to 1.75 VPC. Additional ratings and application information is available in the Battery Selection Program at [www.cdstandbypower.net](http://www.cdstandbypower.net)

## OPTIONAL ACCESSORIES

### Steel Jackets

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.



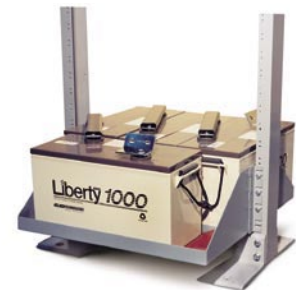
### Wiring Harnesses

Special wiring harnesses are available which speed battery installation.



### Relay Rack Battery Trays

C&D manufactures a wide range of battery trays to mount in 19 inch (48.3 cm) and 23 inch (58.4 cm) 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. Contact C&D Technologies for additional information.

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 inch (73.7 cm) and 43 inch (109.2 cm) lengths and are stackable. Optional panels are available to completely enclose racks, providing a cabinet-like appearance. Please see 12-380 for more information. Complete standby power systems from C&D include batteries, racks, and electronics.



**Modular Rack with Panels**



**Modular Rack**

## **NTEGRITY BATTERY CABINET SYSTEMS**

Complete, pre-packaged battery cabinet systems are available from C&D Technologies. Systems include battery breaker or fuse, battery cabling and batteries – all installed and ready to connect to UPS upon installation. Options for battery monitoring will also be available.

Powder-coated steel cabinets are UL1778 listed with seismic zone 4 capability available as an option. Fast acting fuses or circuit breakers are provided for system protection. Batteries are tested to assure system integrity.

Mechanical robustness, approved electrical disconnects and high quality C&D batteries all combine to provide an easily installed complete battery system with the finished appearance of a UPS cabinet.



**LCT II 1700**



**Liberty 1000**



**SAGE**



**DYNASTY**

**MCT II**

## **A CENTURY OF EXPERIENCE YOU CAN TRUST**

From our inception 100 years ago, C&D Technologies has been a pioneer in the development of energy storage and conversion systems that enable telecommunications, data transmission, computer system infrastructure and utilities to maintain critical operations during power outages. C&D supplies products to leading telecommunication companies, from the smallest outside plant and wireless site to the largest major central office switch facilities preventing loss of traffic and associated revenue. Our products are used in electrical power generation plants and substations for major electric utility companies, preventing damage to expensive infrastructure equipment. To this day, C&D continues to be the industry leader providing the highest quality of products and service along with reliable long lasting batteries for all applications. Our web site [www.cdtechno.com](http://www.cdtechno.com) can provide access to a nearby representative located in over 40 countries. Our century long success is due to many factors including; our products and service, our employees and sales partners, but mostly C&D's success is due to the loyalty of our customers.

**C&D TECHNOLOGIES, INC.**

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