# LHR Series-High Rate

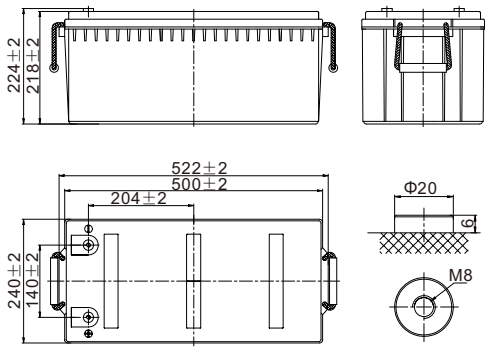
## LHR12750W(12V750W)

LEOCH BATTERY

## Specifications

| | | |
|---|---|---|
| Rated Voltage | | 12V |
| Nominal Rate($W_{15}$,1.67V/cell)<br>Nominal Capacity($C_{10}$,1.80V/cell) | | 750W/cell<br>210Ah |
| Dimension | Length | 522±2mm (20.6 inches) |
| | Width | 240±2mm (9.45 inches) |
| | Container Height | 218±2mm (8.58 inches) |
| | Total Height | 224±2mm (8.82 inches) |
| Approx Weight | | 65.3kg (144.0 lbs) |
| Terminal | | M8 |
| Container Material | | ABS: UL 94 HB or V-0 |
| Rated Capacity(25℃) | 210.0 Ah | C10(21.0A,1.80V/cell) |
| | 195.2 Ah | C8(24.4A,1.80V/cell) |
| | 185.0 Ah | C5(37.0A,1.75V/cell) |
| | 163.5 Ah | C3(54.5A,1.75V/cell) |
| | 133.6 Ah | C1(133.6A,1.60V/cell) |
| Max. Discharge Current | | 2100A (5s) |
| Internal Resistance(25℃) | | Approx 2.6mΩ |
| Operating Temp. Range | Discharge | -20 ~ 55℃ (-4 ~ 131℉) |
| | Charge | -20 ~ 40℃ (-4 ~ 104℉) |
| | Storage | -15 ~ 50℃ (5 ~ 122℉) |
| Nominal Operating Temp. Range | | 25±3℃ (77±5℉) |
| Max.Charging Current(25℃) | | 52.5A |
| | | Charge voltage / Temp. Coefficient |
| Charge voltage(25℃) | Float | 2.25 ~2.30V/cell / -3mV/cell/℃ |
| | Equalization | 2.30~2.40V/cell / -4mV/cell/℃ |
| Effect of temp. to Capacity | 40℃ (104℉) | 106% |
| | 25℃ (77℉) | 100% |
| | 0℃ (32℉) | 86% |
| Self Discharge | | ≤3%/month @ 25℃ |

## Layout




## Constant Current Discharge (Amperes) at 25 °C (77°F )

| F.V/Time | 5min | 10min | 15min | 20min | 30min | 45min | 1h | 1.5h | 2h | 3h | 4h | 5h | 8h | 10h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 448.7 | 358.2 | 310.6 | 244.2 | 172.3 | 128.6 | 115.6 | 84.9 | 69.4 | 51.7 | 40.9 | 34.6 | 23.9 | 20.4 |
| 1.80V/cell | 510.2 | 406.6 | 351.9 | 276.1 | 194.3 | 137.5 | 119.5 | 87.4 | 73.5 | 53.4 | 42.4 | 35.9 | 24.4 | 21.0 |
| 1.75V/cell | 554.2 | 440.9 | 381.0 | 298.1 | 209.0 | 143.8 | 124.4 | 91.0 | 76.3 | 54.5 | 43.8 | 37.0 | 24.6 | 21.1 |
| 1.70V/cell | 592.5 | 470.1 | 404.6 | 316.1 | 221.5 | 148.9 | 129.8 | 94.8 | 78.1 | 55.7 | 44.8 | 37.8 | 25.0 | 21.2 |
| 1.67V/cell | 613.2 | 485.0 | 416.4 | 324.7 | 226.8 | 156.3 | 131.2 | 97.3 | 80.0 | 57.0 | 45.4 | 38.3 | 25.3 | 21.6 |
| 1.60V/cell | 634.9 | 501.6 | 429.4 | 333.0 | 232.3 | 165.0 | 133.6 | 100.6 | 81.6 | 58.4 | 46.5 | 39.1 | 25.4 | 21.7 |

## Constant Power Discharge (Watts/cell) at 25 °C (77°F )

| F.V/Time | 5min | 10min | 15min | 20min | 30min | 45min | 1h | 1.5h | 2h | 3h | 4h | 5h | 8h | 10h |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1.85V/cell | 837.9 | 673.8 | 588.0 | 464.5 | 329.3 | 247.3 | 223.6 | 164.5 | 135.0 | 101.0 | 80.2 | 68.1 | 47.4 | 40.6 |
| 1.80V/cell | 937.3 | 753.8 | 657.8 | 519.6 | 368.3 | 262.5 | 229.8 | 168.6 | 142.2 | 103.9 | 82.8 | 70.5 | 48.3 | 41.7 |
| 1.75V/cell | 1000.4 | 804.5 | 702.0 | 554.6 | 393.1 | 273.0 | 238.2 | 174.8 | 147.1 | 105.8 | 85.3 | 72.3 | 48.6 | 41.8 |
| 1.70V/cell | 1051.7 | 845.7 | 738.0 | 583.0 | 413.3 | 280.8 | 247.3 | 181.2 | 150.0 | 107.7 | 87.0 | 73.7 | 49.3 | 42.1 |
| 1.67V/cell | 1068.8 | 859.5 | 750.0 | 592.5 | 420.0 | 293.1 | 248.6 | 185.0 | 152.9 | 109.6 | 87.8 | 74.4 | 49.8 | 42.7 |
| 1.60V/cell | 1083.7 | 871.5 | 760.5 | 600.8 | 425.9 | 306.5 | 251.4 | 189.9 | 155.0 | 111.8 | 89.5 | 75.5 | 49.9 | 42.8 |

# LHR Series-High Rate

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### Applications

- UPS
- Hospitals & Testing Laboratories
- Emergency Power Supply
- Banks & Financial Markets
- Industrial Process Control Facilities
- Data & Network Operation Centers

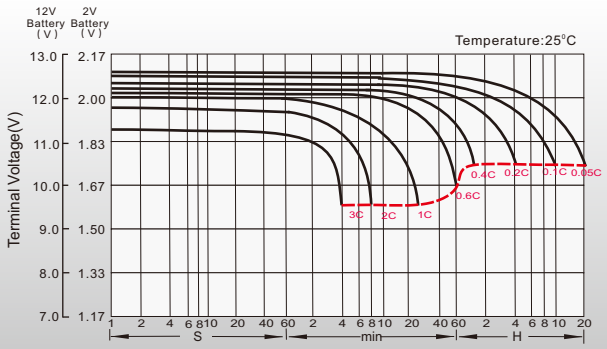
### General Features

- High quality AGM separator: extend cycle life and prevent micro short circuit
- PbCaSn alloy for plate grids: less gassing, less self-discharging
- Unique vent valve design: reduce water losing and prevent air/spark going inside

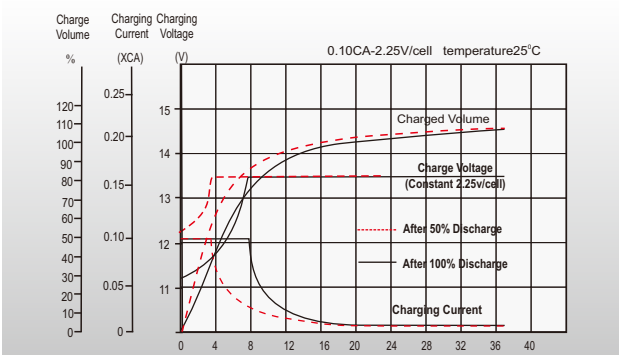
### Standards

- Compliance with IEC 60896 standards
- Classified as “Long Life” according to Eurobat
- CE, UL, IEC Certified
- Manufactured in Leoch®IATF16949, ISO 45001,ISO 9001 and ISO 14001 certified production facilities

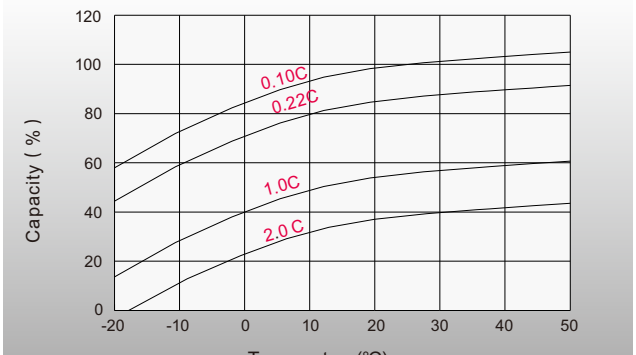
### Discharge Characteristics



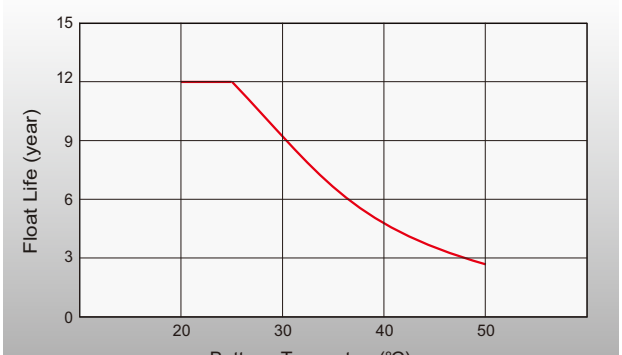

### Float Charging Characteristics




### Temperature Effects in Relation to Battery Capacity




### Effect of Temperature on Long Term Float Life

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Publication No.: LB-LHR12750W-PD-EN-V1.3-202304