# LHR Series-High Rate

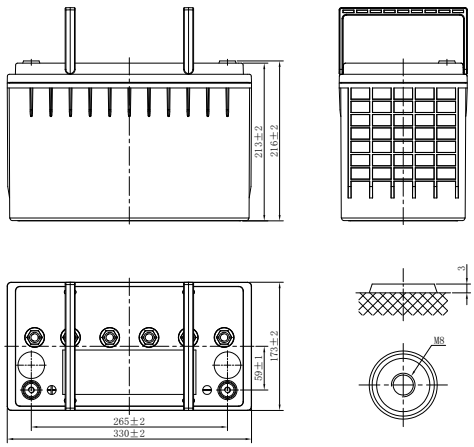
## LHR12430W(12V430W)

LEOCH BATTERY

## Specifications

| | | |
|---|---|---|
| Rated Voltage | | 12V |
| Nominal Rate($W_{15}$,1.67V/cell)<br>Nominal Capacity($C_{10}$,1.80V/cell) | | 430W/cell<br>100Ah |
| Dimension | Length | 330±2mm (13.0 inches) |
| | Width | 173±2mm (6.81 inches) |
| | Container Height | 213±2mm (8.39 inches) |
| | Total Height | 216±2mm (8.50 inches) |
| Approx Weight | | 32.0kg (70.5 lbs) |
| Terminal | | M8 |
| Container Material | | ABS: UL 94 HB or V-0 |
| Rated Capacity(25℃) | 100.0 Ah | C10(10.0A,1.80V/cell) |
| | 97.6 Ah | C8(12.2A,1.80V/cell) |
| | 89.0 Ah | C5(17.8A,1.75V/cell) |
| | 78.3 Ah | C3(26.1A,1.75V/cell) |
| | 68.4 Ah | C1(68.4A,1.60V/cell) |
| Max. Discharge Current | | 1000A (5s) |
| Internal Resistance(25℃) | | Approx 3.5mΩ |
| 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℃) | | 25.0A |
| | | 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 | 294.7 | 231.6 | 186.2 | 145.5 | 102.0 | 73.1 | 57.3 | 40.9 | 32.6 | 24.0 | 19.6 | 16.7 | 11.9 | 9.70 |
| 1.80V/cell | 335.8 | 258.8 | 208.5 | 163.0 | 108.3 | 77.6 | 60.9 | 43.2 | 34.3 | 25.1 | 20.4 | 17.3 | 12.2 | 10.0 |
| 1.75V/cell | 362.9 | 271.3 | 218.6 | 174.3 | 113.8 | 80.9 | 63.5 | 44.8 | 35.6 | 26.1 | 21.0 | 17.8 | 12.3 | 10.1 |
| 1.70V/cell | 385.7 | 281.4 | 224.1 | 183.5 | 118.9 | 83.5 | 65.3 | 46.3 | 36.7 | 26.7 | 21.5 | 18.2 | 12.5 | 10.2 |
| 1.67V/cell | 397.8 | 290.8 | 230.5 | 189.4 | 122.9 | 85.6 | 67.0 | 47.3 | 37.5 | 27.2 | 21.8 | 18.4 | 12.6 | 10.3 |
| 1.60V/cell | 403.8 | 299.3 | 238.1 | 192.9 | 126.3 | 87.4 | 68.4 | 48.2 | 38.2 | 27.9 | 22.3 | 18.8 | 12.7 | 10.4 |

## 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 | 544.7 | 452.1 | 359.6 | 290.0 | 209.9 | 148.3 | 115.6 | 82.1 | 65.3 | 48.3 | 39.8 | 34.1 | 24.1 | 20.1 |
| 1.80V/cell | 615.6 | 503.9 | 400.8 | 315.2 | 225.1 | 157.0 | 122.3 | 86.2 | 68.1 | 50.1 | 41.0 | 35.1 | 24.5 | 20.5 |
| 1.75V/cell | 663.5 | 525.8 | 418.3 | 336.3 | 236.7 | 164.9 | 128.0 | 90.2 | 71.3 | 51.9 | 42.2 | 36.0 | 24.9 | 20.6 |
| 1.70V/cell | 705.1 | 532.4 | 423.6 | 350.8 | 245.6 | 171.1 | 132.3 | 93.0 | 73.2 | 53.4 | 43.3 | 36.7 | 25.2 | 20.8 |
| 1.67V/cell | 731.0 | 540.5 | 430.0 | 358.7 | 251.9 | 175.6 | 135.5 | 95.0 | 74.7 | 54.5 | 44.1 | 37.1 | 25.6 | 21.0 |
| 1.60V/cell | 741.5 | 548.7 | 443.2 | 362.6 | 255.2 | 178.1 | 137.7 | 96.7 | 76.0 | 55.1 | 44.6 | 37.6 | 25.9 | 21.2 |

# LHR Series-High Rate

## LHR12430W(12V430W)

LEOCH BATTERY

### Applications

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

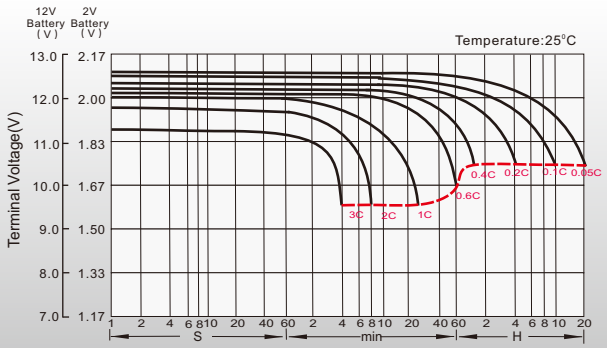
### General Features

- 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

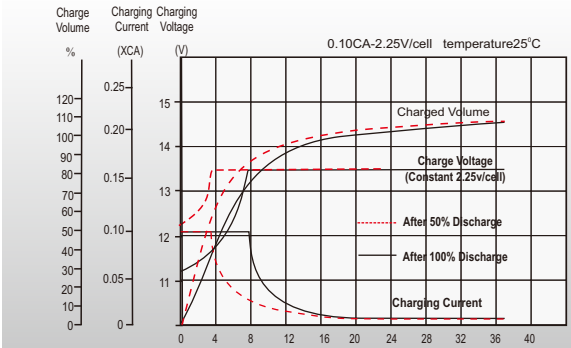
### Standards

- 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

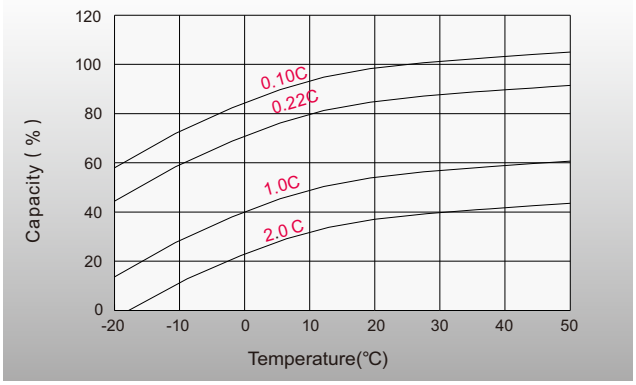
### Discharge Characteristics



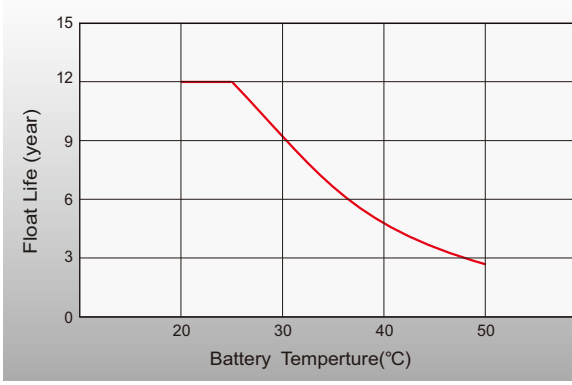

### Float Charging Characteristics




### Temperature Effects in Relation to Battery Capacity




### Effect of Temperature on Long Term Float Life

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