

# RELIABLE **POWER SOURCE** SERIES

<u>E</u>



LPC seriesLDC series





# Your Global Battery Partner....

directly; to general battery distributors and market-specific providers,

plus end-user customers via our retail offering Battery Store.



1999

Company Establishment

**14** Subsidiaries

and Sales Offices

Worldwide



10

10

Manufacturing

Plants



Lines

12.000

Employees

Worldwide



GVAH US \$ Production Annual Capacity Sales per Year

# ...providing a comprehensive range of maintenance-free mobility batteries

It is hard to find a more critical application than mobility scooters and assisted living products where there is simply no alternative to supplying reliable power sources. Leoch mobility batteries are offered in a variety of technologies and capacities to ensure safety and peace of mind. Our technical know-how and manufacturing integrity are reassuring for both distributors and end-users regarding their batteries' longevity and quality.





# Manufacturing Plants (10)

- China Zhaoqing
- China Jiangsu
- China Anhui (3)
- Sri Lanka
- Malaysia (2)
- India
- Vietnam

## Subsidiaries / Sales Offices

### EMEA region (10)

- Athens, Greece
- Leicestershire, UK
- Paris, France
- Paderborn, Germany
- Milan, Italy
- Madrid, Spain
- Ankara, Turkey
- Johannesburg, S. Africa
- Stockholm, Sweden
- Budapest, Hungary

# APAC region (5)

- Shenzen, China
- Singapore
- Bangalore, India
- Sydney, Australia
- Bangkok, Thailand

Los Angeles, USA



# Why choose us?

The Leoch Battery UK Team offers over 100 years' collective experience in the import, export, and distribution of batteries throughout the UK & Europe.







# **Central UK warehouse**

Our centrally located headquarters and warehouse in Market Harborough, Leicestershire, in the heart of the East Midlands, allow us to distribute our extensive range of batteries with ease and speed across the entirety of the country.



## **Quality assured products**

Partnering directly with Leoch, one of the largest battery producers in the world, means we know where our products have been manufactured. Continuity of supply is assured: a rarity in the industry.



## **UN 38.3 Accreditation**

Leoch Lithium 12 and 24V Lithium batteries boast Section 38.3 accreditation from the UN Manual of Tests and Criteria (UN Transportation Testing). This means they are safe to be transported by air, sea, rail and road and throughout the battery's transportation process right through to the end user.

The protocol includes identifying/classifying lithium batteries; testing/ gualification requirements; design guidance/conditions and packaging/shipping obligations



### **CE Marking**

Leoch Battery's 12 and 24V Lithium batteries are CE accredited, signifying that they conform with health, safety and environmental protection standards for products sold within the European Economic area. The batteries are assembled according to tests including IEC-61000-6-1 and 61000-6-3 which relate to the Electromagnetic Compatibility (EMC) Directive 2014/30/EU.

# National sales team

**Own branding** 

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We have a dedicated sales team of highly experienced battery professionals out on the road, who are backed up by operations and sales experts inhouse. Whether on the end of a phone or making a visit to you in person, our representatives are always on hand to provide expert advice on any technical, sales or after-sales service matters.



Trade customers of Leoch Battery UK can take advantage of the technologies of one of the largest

practice, own-branding can lower your costs and increase your profit margins. Both paper and

screenprint labelling are possible and we welcome all enquiries.

battery manufacturers in the world and develop their own private labelling. An increasingly popular

# National warranty coverage

For your convenience, Leoch Battery UK's warranty coverage (Link to warranty page) extends to all batteries distributed by the company, whether purchased directly from us or bought through one of our customers. Our batteries are supported by excellent manufacturer warranties of 12 months and tested by trained experts at our UK facility.

# **Our Website**



is the site to bookmark for up-to-date Company information and the latest product news. Blogs, downloads and product advice can all be found here, as well as details of the latest exhibitions we're attending.

Please note that all products and specifications are subject to change © Leoch Battery 2020.

**Our team of dedicated Account Managers and office staff** would be delighted to advise on further product information, technical data and suitability, regardless of the application.





# www.leochbattery.co.uk







The mobility sector demands reliability when it comes to its battery needs and the Leoch AGM LPC series is a great option for any mobility scooter. Available in most popular sizes to accommodate any make or model of mobility scooter.

# **GENERAL FEATURES**

Designed and optimized for cyclic intensive applications LPM series offer high resilience for deep discharge recovery.



DEEP CYCLE

Unique anti-explosion one-way vent valve design to minimize water loss and increase safety.



Thick plates using a special pasting formula ensures long service life.



ABS case UL94-HB (UL94-V0 Optional) is used for increased container strength.



Environmentally friendly, no toxic materials.



Sealed and safe, maintenance-free design.

# **BATTERY SPECIFICATIONS**

| Model     | Nominal        | Rated<br>Capacity 10Hr<br>@ 1.80V/cell<br>(AH) | Approx. Dimensions |       |       |      |        |      |              |      |                | Approx. Weight |      |
|-----------|----------------|--|--------------------|-------|-------|------|--------|------|--------------|------|----------------|----------------|------|
|           | Voltage<br>(V) |  | Length             |       | Width |      | Height |      | Total Height |      | Approx. Weight |                | Туре |
|           |                |  | mm                 | in.   | mm    | in.  | mm     | in.  | mm           | in.  | kg             | lbs            |      |
| LPC6-5.6  | 6              | 5.6  | 70.00              | 2.76  | 47    | 1.85 | 100.00 | 3.94 | 106.00       | 4.17 | 0.90           | 1.98           | T2   |
| LPC6-13   | 6              | 13   | 151.00             | 5.94  | 51    | 2.01 | 94.00  | 3.70 | 100.00       | 3.94 | 2.05           | 4.52           | T2   |
| LPC12-3.5 | 12             | 3.2  | 134.00             | 5.28  | 67    | 2.64 | 60.50  | 2.38 | 66.50        | 2.62 | 1.35           | 2.98           | T1   |
| LPC12-5.6 | 12             | 5  | 90.00              | 3.54  | 70    | 2.76 | 101.00 | 3.98 | 107.00       | 4.21 | 1.83           | 4.04           | T1   |
| LPC12-7.2 | 12             | 7.2  | 151.00             | 5.94  | 65    | 2.56 | 93.50  | 3.68 | 99.50        | 3.92 | 2.50           | 5.51           | T2   |
| LPC12-8.0 | 12             | 8  | 151.00             | 5.94  | 65    | 2.56 | 93.50  | 3.68 | 99.50        | 3.92 | 2.47           | 5.45           | T2   |
| LPC12-13  | 12             | 13   | 151.00             | 5.94  | 98    | 3.86 | 95.00  | 3.74 | 101.00       | 3.98 | 4.05           | 8.93           | T2   |
| LPC12-18  | 12             | 18   | 181.50             | 7.15  | 76.5  | 3.01 | 167.50 | 6.59 | 167.50       | 6.59 | 6.00           | 13.20          | T3   |
| LPC12-24  | 12             | 24   | 166.00             | 6.54  | 175   | 6.89 | 126.00 | 4.96 | 126.00       | 4.96 | 8.57           | 18.90          | M5   |
| LPC12-24H | 12             | 24   | 164.00             | 6.46  | 125   | 4.92 | 176.00 | 6.93 | 176.00       | 6.93 | 9.10           | 20.10          | T3-A |
| LPC12-26  | 12             | 26   | 166.00             | 6.54  | 175   | 6.89 | 125.00 | 4.92 | 125.00       | 4.92 | 9.35           | 20.60          | T3   |
| LPC12-33  | 12             | 33   | 195.00             | 7.68  | 130   | 5.12 | 164.00 | 6.46 | 182.00       | 7.17 | 11.65          | 25.70          | T5   |
| LPC12-38  | 12             | 38   | 197.00             | 7.76  | 165   | 6.50 | 170.00 | 6.69 | 170.00       | 6.69 | 14.20          | 31.30          | M6   |
| LPC12-50  | 12             | 50   | 257.00             | 10.12 | 132   | 5.20 | 200.00 | 7.87 | 200.00       | 7.87 | 17.60          | 38.80          | M6   |
| LPC12-55  | 12             | 55   | 229.00             | 9.02  | 138   | 5.43 | 210.00 | 8.27 | 230.00       | 9.06 | 17.70          | 39.00          | Т9   |
| LPC12-75  | 12             | 75   | 260.00             | 10.24 | 168   | 6.61 | 208.00 | 8.19 | 214.00       | 8.43 | 22.30          | 49.20          | M6   |
| LPC12-100 | 12             | 100  | 330.00             | 12.99 | 173   | 6.81 | 212.00 | 8.35 | 220.00       | 8.66 | 30.60          | 67.50          | M8   |
| LPC12-120 | 12             | 120  | 408.00             | 16.06 | 177   | 6.97 | 225.00 | 8.86 | 225.00       | 8.86 | 37.30          | 82.20          | M8   |
| LPC12-150 | 12             | 150  | 483.00             | 19.02 | 170   | 6.69 | 238.50 | 9.39 | 238.50       | 9.39 | 43.20          | 95.30          | M8   |
| LPC12-200 | 12             | 200  | 522.00             | 20.55 | 240   | 9.45 | 218.00 | 8.58 | 224.00       | 8.82 | 62.20          | 137.20         | M8   |

# **PERFORMANCE CHARACTERISTICS**

### **Charging Characteristics (cycle use)**



### **Discharge Characteristics**





**Temperature Effects in Relation to Battery Capacity** 



# **LDC** series





The best AGM deep cycle battery on the market! The Leoch LDC range offers superior performance with AGM technology, providing a long-life and super-fast power solution for a multitude of applications in industrial and lifestyle markets. A unique mixture of carbon and other key additives found in negative material allow the LDC range to perform in Partial State of Charge, which offers numerous advantages such as excellent cycling performance and reduced sulphation, a key reason for premature failure.

# **GENERAL FEATURES**



Special mixture of carbon and other proprietary additives in negative active material (NAM) for high performance in partial state of charge (PSoC) applications.



SAFETY

Wide model range offering from 6V up to 12V blocks



One-of-a-Kind AGM Separator, designed and manufactured by Leoch itself, unlike any in the market, to lower internal resistance, maintain balanced cell compression and prevent acid stratification (one of the leading causes of failure in AGM batteries).

ABS case UL94-HB (UL94-V0 Optional) is used for increased container strength



ABS CASE

Low self-discharge at less than 3% per

month at 77°F (25°C)

# **BATTERY SPECIFICATIONS**

| Model            | Nominal<br>Voltage<br>(V) | Rated<br>Capacity<br>(AH) |     | Reserve           | Approx. Dimensions |       |        |      |        |       |              |       |                | Approx. Weight |                  |
|------------------|---------------------------|---------------------------|-----|-------------------|--------------------|-------|--------|------|--------|-------|--------------|-------|----------------|----------------|------------------|
|                  |                           |                           |     | Capacity<br>(min) | Length             |       | Width  |      | Height |       | Total Height |       | Approx. Weight |                | Terminal<br>Type |
|                  | (•)                       | 10HR                      | 3HR | @25Amps           | mm                 | in.   | mm     | in.  | mm     | in.   | mm           | in.   | kg             | lbs            | туре             |
| LDC6-210-GC2     | 6                         | 200                       | 165 | 460               | 260.00             | 10.20 | 180.00 | 7.09 | 252.00 | 9.92  | 274.00       | 10.80 | 27.20          | 60.00          | MT               |
| LDC6-224-GC2     | 6                         | 210                       | 173 | 490               | 260.00             | 10.20 | 180.00 | 7.09 | 247.00 | 9.72  | 253.00       | 10.00 | 30.50          | 67.30          | M8               |
| LDC6-245         | 6                         | 232                       | 196 | 530               | 243.00             | 9.57  | 187.50 | 7.38 | 275.00 | 10.80 | 275.00       | 10.80 | 32.40          | 71.40          | M8               |
| LDC6-265-GC2     | 6                         | 240                       | 200 | /                 | 260.00             | 10.20 | 180.00 | 7.09 | 263.00 | 10.40 | 268.00       | 10.60 | 32.90          | 72.50          | M8               |
| LDC6-275         | 6                         | 260                       | 225 | 625               | 295.00             | 11.60 | 180.00 | 7.09 | 274.00 | 10.80 | 296.00       | 11.70 | 36.50          | 80.50          | MT               |
| LDC6-280         | 6                         | 264                       | 225 | /                 | 260.00             | 10.20 | 180.00 | 7.09 | 263.00 | 10.40 | 268.00       | 10.60 | 34.70          | 76.50          | M8               |
| LDC6-350         | 6                         | 332                       | 285 | 820               | 295.00             | 11.60 | 180.00 | 7.09 | 346.00 | 13.60 | 368.00       | 14.50 | 48.20          | 106.30         | MT               |
| LDC6-400-L16     | 6                         | 375                       | 320 | 925               | 295.00             | 11.60 | 180.00 | 7.09 | 406.00 | 16.00 | 428.00       | 16.90 | 54.20          | 119.50         | MT               |
| LDC8-165-GC8     | 8                         | 155                       | 125 | 325               | 260.00             | 10.20 | 180.00 | 7.09 | 252.00 | 9.92  | 274.00       | 10.80 | 29.30          | 64.50          | MT               |
| LDC8-180-GC8     | 8                         | 170                       | 135 | 365               | 260.00             | 10.20 | 180.00 | 7.09 | 252.00 | 9.92  | 274.00       | 10.80 | 30.80          | 67.90          | MT               |
| LDC8-195         | 8                         | 178                       | 150 | /                 | 262.00             | 10.30 | 180.00 | 7.09 | 278.50 | 11.00 | 278.50       | 11.00 | 34.50          | 76.10          | M8               |
| LDC8-210-GC8H    | 8                         | 190                       | 165 | 480               | 260.00             | 10.20 | 182.00 | 7.17 | 295.00 | 11.60 | 298.00       | 11.70 | 40.50          | 89.30          | M8               |
| LDC8-230         | 8                         | 214                       | 180 | /                 | 262.00             | 10.30 | 180.00 | 7.09 | 278.50 | 11.00 | 278.50       | 11.00 | 37.20          | 82.00          | M8               |
| LDC12-90-G24-T   | 12                        | 85                        | 72  | 175               | 260.00             | 10.20 | 168.00 | 6.61 | 208.00 | 8.19  | 214.00       | 8.43  | 23.50          | 51.80          | M8               |
| LDC12-90-G24-DT  | 12                        | 85                        | 72  | 175               | 260.00             | 10.20 | 168.00 | 6.61 | 208.00 | 8.19  | 232.50       | 9.15  | 23.80          | 52.50          | MT               |
| LDC12-105-G27-T  | 12                        | 104                       | 90  | 220               | 306.00             | 12.00 | 168.00 | 6.61 | 208.00 | 8.19  | 214.00       | 8.43  | 27.30          | 60.20          | M8               |
| LDC12-105-G27-DT | 12                        | 104                       | 90  | 220               | 306.00             | 12.00 | 168.00 | 6.61 | 208.00 | 8.19  | 232.50       | 9.15  | 27.80          | 61.30          | MT               |
| LDC12-112        | 12                        | 104                       | 90  | /                 | 305.00             | 12.00 | 168.00 | 6.61 | 207.00 | 8.15  | 213.00       | 8.39  | 29.50          | 65.00          | M6               |
| LDC12-112C       | 12                        | 104                       | 90  | /                 | 305.00             | 12.00 | 168.00 | 6.61 | 207.00 | 8.15  | 213.00       | 8.39  | 29.50          | 65.00          | M8               |
| LDC12-115-G31-DT | 12                        | 113                       | 98  | 239               | 330.00             | 13.00 | 173.00 | 6.81 | 212.00 | 8.35  | 237.00       | 9.33  | 31.70          | 69.90          | MT               |
| LDC12-115-G31-T  | 12                        | 113                       | 98  | 239               | 330.00             | 13.00 | 173.00 | 6.81 | 212.00 | 8.35  | 220.00       | 8.66  | 31.40          | 69.20          | M8               |
| LDC12-120A       | 12                        | 114                       | 100 | /                 | 330.00             | 13.00 | 173.00 | 6.81 | 213.00 | 8.39  | 220.00       | 8.66  | 35.00          | 77.20          | M8               |
| LDC12-120        | 12                        | 114                       | 100 | /                 | 330.00             | 13.00 | 173.00 | 6.81 | 213.00 | 8.39  | 220.00       | 8.66  | 32.80          | 72.30          | M8               |
| LDC12-140        | 12                        | 138                       | 120 | /                 | 408.00             | 16.10 | 176.00 | 6.93 | 224.50 | 8.84  | 224.50       | 8.84  | 39.20          | 86.40          | M8               |
| LDC12-145        | 12                        | 141                       | 118 | 308               | 340.00             | 13.40 | 172.00 | 6.77 | 280.00 | 11.00 | 286.00       | 11.30 | 42.50          | 93.60          | M8               |
| LDC12-150-GC12   | 12                        | 143                       | 125 | 323               | 327.00             | 12.90 | 180.00 | 7.09 | 274.00 | 10.80 | 274.00       | 10.80 | 42.20          | 93.00          | M8               |
| LDC12-180        | 12                        | 174                       | 150 | /                 | 483.00             | 19.00 | 170.00 | 6.69 | 238.50 | 9.39  | 238.50       | 9.39  | 50.10          | 110.50         | M8               |
| LDC12-220        | 12                        | 210                       | 170 | 470               | 387.00             | 15.20 | 180.00 | 7.09 | 346.00 | 13.60 | 368.00       | 14.50 | 59.70          | 131.70         | MT               |
| LDC12-245        | 12                        | 233                       | 185 | 535               | 387.00             | 15.20 | 180.00 | 7.09 | 346.00 | 13.60 | 368.00       | 14.50 | 64.30          | 141.80         | MT               |

# **PERFORMANCE CHARACTERISTICS**



### Relationship of OCV and State Of Charge (25°C, 77°F)



Unique anti-explosion one-way vent valve design to minimize water loss and increase safety





# Lithium 12V





Engineered to the highest quality standards, Leoch's new range of Lithium Iron Phosphate (LiFePO4) batteries offer extreme cyclic abilities compared to lead-acid batteries. Long life, no maintenance, lightweight and fast charging – all the attributes you'd expect from lithium and a long warranty included.

# **GENERAL FEATURES**

| /           |              |
|-------------|--------------|
| /`          |              |
| $\langle  $ |              |
|             | ECO FRIENDLY |
|             |              |

Environmentally friendly without any heavy metals inside.



Fast charge capability of up to 1C10\* offers unparalleled charging performance (\*Model dependent).



Light weighted, with high energy density make these batteries ideal for communications, mobility, medical and hybrid applications.



Lithium-Ion Phosphate chemistry has a high thermal runaway threshold being the safest market lithium technology.



Low self-discharge (≤2% per month)



Wide temperature range operating from -20°C up to 60°C

# **BATTERY SPECIFICATIONS**

|              | Nominal<br>Voltage<br>(V) | Rated<br>Capacity 10Hr<br>@ 2.70V/cell<br>(AH) |        | Approx. Weight |        |      |        |      |              |      |                                       |       |
|--------------|---------------------------|--|--------|----------------|--------|------|--------|------|--------------|------|---------------------------------------|-------|
|              |                           |  | Length |                | Width  |      | Height |      | Total Height |      | , , , , , , , , , , , , , , , , , , , |       |
|              | (-7                       |  | mm     | in.            | mm     | in.  | mm     | in.  | mm           | in.  | kg                                    | lbs   |
| LFeLi-1207M  | 12.8                      | 7  | 151.00 | 5.94           | 65.00  | 2.56 | 93.50  | 3.68 | 99.00        | 3.90 | 0.90                                  | 2.10  |
| LFeLi-1209M  | 12.8                      | 9  | 151.00 | 5.94           | 65.00  | 2.56 | 93.50  | 3.68 | 99.00        | 3.90 | 1.00                                  | 2.20  |
| LFeLi-1212M  | 12.8                      | 12   | 151.00 | 5.94           | 98.00  | 3.86 | 95.00  | 3.74 | 101.00       | 3.98 | 1.90                                  | 4.20  |
| LFeLi-1220M  | 12.8                      | 20   | 181.50 | 7.15           | 77.00  | 3.03 | 167.50 | 6.59 | 167.50       | 6.59 | 2.60                                  | 5.70  |
| LFeLi-1233M  | 12.8                      | 33   | 166.00 | 6.54           | 175.00 | 6.89 | 125.00 | 4.92 | 125.00       | 4.92 | 4.20                                  | 9.30  |
| LFeLi-1240M  | 12.8                      | 40   | 197.00 | 7.76           | 165.00 | 6.50 | 170.00 | 6.69 | 170.00       | 6.69 | 5.40                                  | 11.90 |
| LFeLi-1250M  | 12.8                      | 50   | 257.00 | 10.12          | 132.00 | 5.20 | 200.00 | 7.87 | 200.00       | 7.87 | 7.00                                  | 15.40 |
| LFeLi-1255M  | 12.8                      | 55   | 257.00 | 10.12          | 132.00 | 5.20 | 200.00 | 8.07 | 211.00       | 8.31 | 7.40                                  | 16.30 |
| LFeLi-1260M  | 12.8                      | 60   | 260.00 | 10.24          | 168.00 | 6.61 | 208.00 | 8.07 | 211.00       | 8.31 | 8.40                                  | 18.50 |
| LFeLi-1275M  | 12.8                      | 75   | 260.00 | 10.24          | 168.00 | 6.61 | 208.00 | 8.19 | 214.00       | 8.43 | 9.30                                  | 20.50 |
| LFeLi-12100M | 12.8                      | 100  | 330.00 | 12.99          | 173.00 | 6.81 | 212.00 | 8.35 | 220.00       | 8.66 | 13.10                                 | 28.90 |
| LFeLi-12150M | 12.8                      | 150  | 483.00 | 19.02          | 170.00 | 6.69 | 238.50 | 9.39 | 238.50       | 9.39 | 21.30                                 | 47.00 |
| LFeLi-12200M | 12.8                      | 200  | 522.00 | 20.55          | 240.00 | 9.45 | 218.00 | 8.58 | 224.00       | 8.82 | 24.20                                 | 53.40 |

# **PERFORMANCE CHARACTERISTICS**

## Charging Characteristics (0.5C, 25°C)



### Different Rate Discharge Curve (25°C)









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