

POWERLINE™

THE RUGGED, FULL-SHIFT POWER SOURCE



Get the most out of your equipment with the POWERLINE™ series from HAWKER®. Whether you're operating sit-down rider forklifts, walkies, or narrow-aisle lift trucks, POWERLINE™ will keep you up and running.



TOTAL INTEGRATED QUALITY

POWERLINE™ is produced in the most modern, environmentally-friendly, and quality-driven plant in the industry. At every step in production, we use the best processes and materials to achieve one goal – making POWERLINE™ the most dependable battery you can buy. Take for example our “signature system.”

Whether it's the stripe Melvin Sanchez paints on the grids he casts or the initials Earl Thompson stamps into the posts he burns – each and every person who helps build a HAWKER® battery places his or her mark of quality on it.

The quality goes in before the name goes on!

The National Standards Association of Ireland (NSAI) has also placed its mark of quality – *ISO 9001:2008 Certification* – on our manufacturing process.

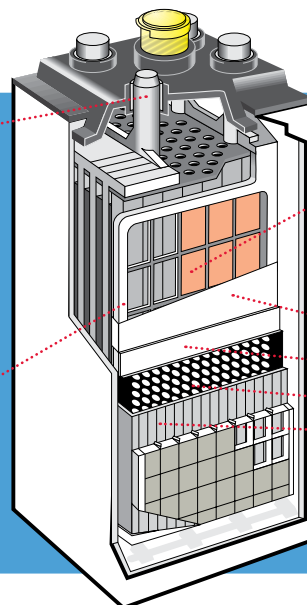
QUALITY BY DESIGN

The foundation of the superior performance and long life cycle of a POWERLINE™ battery is based on the battery's design and construction.

Let's take a closer look at the POWERLINE™ battery's construction:

- **Thickest Positive Grid in the Industry:** We offer a rough, tough grid construction and the thickest grid in the industry. (Our grids are matched for improved current distribution through the grid network.)

- **Densest Positive Paste:** The pasted plate is the heart and soul of your lead-acid battery. The positive grids are pasted with the most active material and is the densest available anywhere in the industry today.
- **POWERPLUS™ Formation System:** Our revolutionary formation system uses an acid recirculation and two shot forming process. This ensures that every cell of every battery receives a uniform temperature-controlled acid bath.
- **Multi-Layer Retention System:** Includes the horizontal wrap, vertical wrap, and koroseal jacket, all encased in a bottom boot. Wrapped plates are then sleeved in a high-quality, microporous plastic material.



INNOVATIVE EXTRAS:

Custom-made posts and grommets and impermeable heat seal process

ROUGH, TOUGH GRID CONSTRUCTION:

Thickest positive grids in the industry

MAXIMUM DENSITY POSITIVE PASTE:

Computer monitored for maximum density

MULTI-LAYER RETENTION SYSTEM:

- Retention of active material
- Vertical wrap
- Horizontal wrap
- Koroseal jacket
- Sleeved separator
- All encased in a bottom boot (not shown)

Let's take a closer look at the POWERLINE™ battery's added benefits:

- HAWKER®'s tough, thick positive grid construction reduces corrosion and generates cooler battery operating temperatures — both leading to increased battery life.
- HAWKER®'s dense positive pasted plate ensures long-life operation under deep cycling as well as continued, uninterrupted power.
- Sleeved separators in the Multi-Layer Retention System eliminate failures caused by separator misalignment.

HAWKER®'S POWER SOLUTIONS

HAWKER® is the source for power solutions. Whether you're running a warehouse operation, a production line, or simply moving a couple of pallets a day, we have a product solution that can increase your productivity and save you money.



BATTERY SOLUTIONS

WATER LESS® *The Power to Reduce Expenses*

Requiring watering just four to six times per year in normal applications, WATER LESS® combines the benefit of full power and reduced cost, without the expense of a special charger. When packaged with a comprehensive maintenance plan, WATER LESS® can help get you out of the maintenance business.

ENERGY-PLUS™ *The Ultimate Power Source*

When your operation depends on a heavy-duty battery – a battery that can stand up and deliver even under the most demanding applications, you want the ENERGY-PLUS™ battery. ENERGY-PLUS™ employs a unique multi-plate design to pack more active material – and more power – into the same space, not just added acid.

MODULAR CHARGER SOLUTIONS

LIFESPEED® MOD3

Where Technology Meets Innovation™

As HAWKER®'s most advanced modular charger, the LIFESPEED® MOD3 represents the latest innovation of high-frequency switch-mode smart chargers. LIFESPEED® MOD3 modules are the most flexible in the industry, operating as a fast, IONIC, or opportunity charger. The LIFESPEED® MOD3 charger series delivers optimum charging,

peak efficiency, and non-stop power while reducing charging costs and energy demands.

LIFEPLUS® MOD3 *Where Technology Meets Innovation™*

Patented LIFEPLUS® MOD3 chargers – the result of more than 30 years of high-frequency, smart charging experience – are the smartest and most energy-efficient chargers in the business. The LIFEPLUS® MOD3 high-frequency switch-mode IONIC smart charger offers five different charge profile options for operational flexibility: IONIC, cold storage, ENVIROLINK™, TPPL, and opportunity charging. The LIFEPLUS® MOD3 charger series provides peak efficiency and non-stop power while reducing your battery charging costs, water consumption, and battery maintenance and repair costs.

PTO™ MOD3 *Where Technology Meets Innovation™*

The modular high-frequency PTO™ MOD3 conventional and opportunity charger provides economical opportunity charging capabilities and an adjustable I-U-I conventional charging profile. The opportunity profile allows operators to plug in for a quick charge during break times. The PTO™ MOD3 charger has a start rate of up to 25% of the battery's rated capacity or the maximum output of the charger (whichever is less) to consistently maintain the battery's state of charge in opportunity mode. The battery is then completely charged daily via the charger's constant current finish charge to bring the battery back to full capacity.

LIFETECH™ MOD1 / MOD1C

Where Technology Meets Innovation™

HAWKER® LIFETECH™ MOD1 and MOD1C modular, high-frequency smart chargers provide optimum charging, peak efficiency, maximum reliability, and non-stop power to meet the growing demands of our customers. The modular design of these chargers allows each individual power module to operate independently. Even if one module stops working, the other modules continue charging the battery. This eliminates the risk of catastrophic failures and downtime.

For the right HAWKER® power system solution to meet your needs, please call 1-877-7HAWKER for a HAWKER® representative in your area.



With more than 85 years of motive power experience and innovation, HAWKER® offers a complete line of battery and charger motive power system solutions. HAWKER® power system solutions are designed to reduce environmental impact, lower operational costs, increase productivity, and improve customer operations.

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LEADING EDGE MOTIVE POWER SYSTEM SOLUTIONS

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