



PUTTING PRODUCTIVITY IN MOTION

APAC MOTIVE POWER SOLUTIONS
FROM ENERSYS®



ADVANCING MOTIVE POWER FROM THE START

As the global leader in stored energy solutions for industrial applications, EnerSys® has long been developing technologies to help material handlers maximise productivity and profitability. For over 100 years, our powerful solutions have been helping our customers move past the competition. Although we've been future-proofing motive power technologies for well over a century, we're really just getting started.



OUR SOLUTIONS PUT PRODUCTIVITY IN MOTION

At EnerSys®, our batteries range from the hardest-working flooded lead acid designs to the industry's most advanced Thin Plate Pure Lead (TPPL) and Lithium-ion (Li-ion) technologies. Our high-frequency chargers feature modular, low-component designs to fit any performance and charging profile. And our programs and services can help your operation manage whatever stored power technologies you use more efficiently and cost-effectively.

But even more important, everything EnerSys® offers is informed by more than a century of knowledge that reflects our evolving, but constant mission: helping our customers make their operations more productive and profitable.





OPTIMIZE YOUR POWER SOLUTION WITH THE LOWEST TCO

Before EnSite™ modeling software, finding the most efficient power solution for your material handling equipment meant relying on hand calculations and guesswork. But with EnSite™ modeling software, we use your application data to determine which battery and charger combination will be optimal for your operation's needs and goals.

We work with you to collect a range of data about your application. Then we use your data in our EnSite™ modeling software to find a solution that meets your requirements for the lowest TCO for your operation.

- Tailors solutions to meet application demands
- Compares battery and charger combinations
- Predicts overall application performance
- Estimates greenhouse gas reductions
- Predicts overall application performance
- Calculates TCO reductions and overall ROI





A SUPERIOR POWER EXPERIENCE

NexSys® TPPL batteries provide simpler, more productive, predictable power that slashes unplanned downtime and unexpected operating costs associated with conventional lead acid batteries.



An effective alternative to Lithium-ion (Li-ion) chemistry, based on Thin Plate Pure Lead (TPPL) technology. A maintenance-free solution, optimised for fast and opportunity-charging and ideal for light to medium duty applications, while an optional Accelerated Throughput Package is available for certain higher-volume applications.



NexSys® TPPL bloc batteries provide exceptional flexibility. Combining advanced bloc design technology with robust materials and construction, NexSys® TPPL bloc batteries also provide exceptional performance. Maintenance-free and highly resistant to shock and vibration.



NexSys® TPPL batteries are certified to ATEX standards, specifically designed for use in material handling equipment operating in hazardous areas. The batteries conform with the relevant provision of directive 94/9/EC of 23 March 1994. Conformity has been demonstrated with reference to SIRA ATEX and SIRA IECEx documentation.

NexSys[®] iON

NexSys[®] iON battery solutions feature the material handling industries most advanced Lithium-ion (Li-ion) technology from EnerSys[®] — a technology that powered the world's first Li-ion battery powered satellite in 2001 and currently powers hundreds of satellites in orbit.

Built to the highest safety, design and manufacturing standards, and ideal for heavy-duty applications, maintenance-free NexSys[®] iON batteries are available in a scalable range of sizes and configurations. They also feature fully integrated battery management controls that support greater safety, reliability and battery life.

Whatever the size of your fleet or facility, NexSys[®] iON batteries can help cut downtime and battery ownership costs, contributing to more productive and profitable operations.



Battery Technologies



HAWKER *perfect plus*[®]

Perfect Plus™ batteries provide a high level of power and reliability for all industrial truck applications, from simple shifts with a low capacity loading up to heavy-duty multi-shift workload.

Perfect Plus™ battery cells provide higher capacity and efficiency in discharge achieved by advanced components used in the construction of the positive plates.



HAWKER *evolution*[®]

Evolution® batteries are valve regulated gas recombination batteries with gelled electrolyte. This prevents any acid leakage and topping up water is not required.

Evolution® battery is maintenance-free over the entire operational life. This battery range is suitable for use in material handling equipment in light and low duty applications accepting up to 80% Depth of Discharge (DoD).



HAWKER *Water Less*[®]

Water Less® batteries combine the power and reliability of tubular vented technology (PzS) with the convenience of extended watering intervals – 4, 8 or 13 weeks, depending on the charging technology. Less frequent topping up means reduced labour costs. Water Less® traction batteries provide a high level of power and reliability for all industrial truck applications.





IRONCLAD®



More surface area means more power. The increased work capacity of IRONCLAD® batteries is the result of its unique square tubular positive plate design, an EnerSys® exclusive. Compared to conventional round tube and flat plate battery designs, IRONCLAD® battery square tubes provide 84% more surface area on the positive plate, which exposes more positive plate active material to the electrolyte.



Express®



Express® batteries maximize productivity and profitability by pairing exclusive square tube power with optimized fast charging. Express® batteries have industry-leading amp-hour capacities. Vehicles can work harder and longer into a shift, yet Express® batteries will also run cooler than standard fast charge. Paired with an Express® charger, Express® batteries can help reduce or eliminate battery changing requirements and costs.

REDEFINING MOTIVE POWER CHARGING

The EnerSys® charger portfolio is engineered to promote reliability and optimised to meet a range of application and budget requirements.

All EnerSys® high-frequency (HF) chargers feature a modular design to maintain uptime – should one module develop a minor fault, the chargers will keep charging at reduced power. Plus, our chargers have some of the lowest component counts in the industry for better reliability.

Offering a range of performance and charging profiles, EnerSys® charging solutions can help keep your equipment moving more efficiently and predictably.

NexSys® AIR wireless chargers are designed to handle a wide range of vehicle types and sizes, offering exceptional integration flexibility.



NexSys[®] AIR

WIRELESS CHARGER

NexSys[®] AIR wireless chargers deliver the convenience of hands-free charging across a wide range of equipment applications. Engineered for multiple battery technologies, NexSys[®] AIR wireless chargers can charge flooded lead acid, Thin Plate Pure Lead (TPPL) and lithium-ion batteries. Along with eliminating cables, plugs, and related wear-and-tear, NexSys[®] AIR wireless chargers can eliminate AGV wait times for manual plug-ins.



NexSys[®] +

Ideal for mixed fleet battery management, NexSys[®] + chargers include charge profiles for multiple battery types and sizes, as well as an option for charging outdoors.* All NexSys[®] + chargers are compatible with Wi-iQ[®] battery monitoring devices- communicating critical battery information to optimise charging performance.



NexSys[®] COMpact

NexSys[®] COMpact battery charger is the onboard solution designed to fit most 24V batteries for Class 3 warehouse forklifts. With its advanced iQ intelligence** and compact size, this charger produces serious power on demand. The solution enables operators to recharge anytime at the nearest available AC socket, eliminating unprofitable and unproductive transfers to remotely located charging stations.



IMPAQ[™]

Offering value and performance in high frequency charging, IMPAQ[™] chargers feature a standard flooded lead acid charging profile, as well as charge profiles for select NexSys[®] TPPL batteries. This light and compact unit offers intelligent battery charging with advanced efficiency and flexibility for material handling equipment, floor cleaning machines and industrial electric vehicles.



Express[®]

Designed exclusively for Express[®] batteries, Express[®] chargers quickly and safely fast-charge batteries anytime during the workday. They also adapt to a wide range of battery capacities, potentially reducing the number of chargers in a fleet.



*Requires optional NexSys[®] + Outdoor charger model with IP-54 rated enclosure.

**The charger is embedded with the functionalities of the Wi-iQ[®] battery monitoring device.

ACTIONABLE INTELLIGENCE

Predictable costs. Sustainable productivity. Profitable operations. EnerSys® Battery Monitoring programs can enable all of it. Instead of just reporting data, our tools and technologies transform data into actionable intelligence that can protect assets, boost productivity, cut costs and improve operations.



Installed directly on the battery harness, the Wi-iQ® battery monitoring device communicates with remote sensors on the battery to capture and continuously share battery operating data via Bluetooth with all EnerSys® power management tools.



The Truck iQ™ smart battery dashboard is a lift truck-mounted display module that reads data via Bluetooth from the Wi-iQ® device to give drivers a live view of key battery operating conditions.



Available free for Android™ and iOS® operating systems, the E Connect™ mobile app allows users to see and share a range of real time battery and charger operating data on smartphones or tablet devices.





BATTERY MONITORING

xinx

By transforming data into actionable intelligence, the Xinx™ battery monitoring system from EnerSys® enables your battery operation to achieve and sustain your productivity and profitability goals.

- Improved operator compliance
- Higher performing assets
- Streamlined maintenance processes
- Better decision making



LIFE Network iQ™

EnerSys® offers a solution that makes managing the battery fleet straightforward and affordable.

The BSI40™ (Battery Status Indicator) and LifeNetwork iQ™ management systems are the spearheads of battery fleet management, enabling charging room management and communication with state of charge monitoring.

Totally customised to your needs, these solutions will make your energy and facility management easy and efficient.

BSI40™



PROSERIES®

Our comprehensive portfolio of battery handling systems means, whatever your requirement, we can provide a solution that will streamline your battery changes and save you both time and money. With an EnerSys® battery handling system, you can improve the safety of your warehouse and reduce risk of injuries by taking all the manual labour out of battery changes.

BATTERY TUGGER SYSTEMS

The Battery Tugger has become the global standard in low-volume high-efficiency battery changing. The reliability, safety standards and changing efficiency are second to none and unrivalled in today's battery changing industry.

The increased use of roll-out designs in lift trucks has greatly improved change efficiency and speed.

Roller stands are the cornerstone of any battery handling system. The robust design is proven to last, even in the toughest environments.

From single roller stands with/without charger shelves to multi-level systems for 300+ batteries, EnerSys® handling systems are available for any size of operation.





BATTERY BULL SYSTEMS

The Battery Bull Hydraulic System delivers the highest throughput in battery changing, while maintaining a small footprint to help save you costly warehouse space.

The Battery Bull Electric System offers new levels of performance, reliability and safety to support your high-volume and high-density battery change requirements. This product is available as a single level system, up to a 6-level system.



AUTOMATED SYSTEMS

The Battery Bull Electric-Fully Automated system is a flexible and effective solution to support battery change requirements for broad-scale automated applications.

This system provides significant cost benefits with reduced labour, reduced asset damage and increased productivity.

PROSERIES®

All battery handling systems are fully customised to meet customer needs. Our PRO Series® line of battery and charger accessories includes everything you need to manage and maintain your battery and charger fleet, including:

- Battery Tugger Systems
- Man-Aboard Battery Bull Systems (single to multi level)
- Automated Systems
- Rollerbeds
- Ventilation Systems
- Crane Systems
- Park and Charge Stands
- Battery Room Accessories
- **And much more...**

WORLD-CLASS SERVICE AND SUPPORT

Stop worrying about batteries and focus on your operations to drive productivity. The EnerSys® team of service technicians and partners will help you get the most from your battery systems, from installation and certification to diagnostics, maintenance, repair and monitoring.

- 24/7 coverage from 40+ locations and 150+ factory-certified technicians
- Comprehensive maintenance reporting and monitoring plans
- Service and support agreements tailored to your requirements
- Cloud-based monitoring and reporting tools
- Dedicated recycling programs that comply with environmental requirements



**200+
FACTORY-CERTIFIED
TECHNICIANS**



**24/7
MAINTENANCE
COVERAGE**



**CLOUD-BASED
REPORTING TOOLS***



40+ SERVICE LOCATIONS

Wherever you are in the vast Asia Pacific region, EnerSys® is within reach and ready to support your fleet. EnerSys® can offer configurable service contracts with different service modules tailored to your requirements. Our Service fleet tracking technology and cloud-based software enables real-time scheduling based on technician skill set, service level agreements, travel times, traffic delays, shift patterns and more.



*It varies depending on the country.



WHY SUSTAINABILITY IS IMPORTANT TO ENERSYS®

Sustainability at EnerSys®, is about more than just the benefits and impacts of our products. Our commitment to sustainability encompasses many important environmental, social and governance issues. Sustainability is a fundamental part of how we manage our own operations. Minimizing our environmental footprint is a priority. Sustainability is our commitment to our employees, our customers and the communities we serve. Our products facilitate positive environmental, social and economic impacts around the world.

To learn more visit:

<https://www.enersys.com/en/about-us/sustainability>



Along with our own batteries, EnerSys® Battery Recycling program accepts lead acid batteries of all sizes and from all manufacturers. This leads to a recycle rate for lead acid batteries of up to 99%. We make compliance easy. So instead of analysing complicated regulations you can focus on running your business.



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