

# GNB Industrial Power

*TOTAL ENERGY SOLUTIONS*



## Motive Power System Line Card

# OUR TOTAL ENERGY SOLUTIONS

GNB Industrial Power is a leading developer and manufacturer of battery systems for motive power applications in industrial and commercial markets including material handling, railroad, and construction.

## Batteries

GNB's large family of flooded lead acid cells are filled with liquid electrolyte and are available in a wide variety of flat and tubular plate sizes. Tubular batteries offer longer run times for your lift truck, which leads to lower operating costs and increased productivity. GNB batteries are primarily used in forklift trucks, railroad, military, and mining applications. Additionally, GNB's line of sealed AGM and VRLA batteries are some of the world's best power solutions for stationary backup power sources including telecommunications, UPS and data centers.

### Value Offerings



#### Classic® Batteries

Economical flooded flat-plate batteries have been designed to deliver consistent and reliable power. These Classic batteries are optimized for better electron flow through the rugged lead grid plates with improved electrolyte efficiency gained by wavy plate separators.



#### Classic Platinum™ Batteries

Higher density grid wires and 'star' grid intersections within each plate deliver improved truck runtime in these premium flooded cell industrial batteries. Classic Platinum batteries have up to 14% more active material and reduce chemical and physical stress.

### Performance Line



#### Tubular-HP® High Performance Batteries

Unique tubular design provides higher energy density than flat plate batteries of the same size. They are designed to achieve 1,800 cycles when operated to 80% Depth of Discharge (DoD) and features non-woven gauntlets for reduced shedding and increased active material surface area.



#### Tubular-LM™ Low Maintenance Batteries

This family of tubular batteries provide the benefit of 90 day watering cycles. An innovative plate design provides over 70% more electrolyte headspace. The combination of low antimony positive grids and an optimized charging profile reduces water loss during charging.



#### Element® Valve-Regulated Lead-Acid Batteries

Element® valve-regulated lead-acid batteries never need watering and are designed for light retail and medium warehouse material handling applications.



### Opportunity & Fast Charge Applications



#### GNB Fusion™ Fast Charge Batteries

Rugged flooded flat-plate batteries designed especially for use with GNB Fusion Fast Chargers.



Our Total Energy Solutions include high-power-density batteries, multistage energy-conserving "smart" chargers and integrated watering and monitoring systems. GNB provides industry-leading rapid-response sales, service and recycling capabilities.

## Opportunity and Fast Charging Applications

GNB's family of high-frequency chargers are designed for the latest in opportunity and fast charging environments. These applications require real-time monitoring of the battery temperature and other parameters.

### EHI family

This family offers the latest in software-programmable customized battery charging profiles. Temperature from the battery is transmitted to the charger as data over power line to automatically adjust the shortest and optimal charging profile. Data stored in the charger's memory can be downloaded wirelessly to a management application on PC.



### EHP family

This product line is based on GNB's proprietary MOSFET product architecture with custom programmable controllers. This results in improved power efficiency, smaller size, and lighter packaging.



### Fusion™ family

The GNB Fusion charger is designed specifically for fast/rapid charge applications. The charger features a modular design (10 kW increments) that allows for greater flexibility, increased availability or up-time and is easy to install and operate.



## Conventional Charging Applications:

Industrial chargers used for light-duty to heavy-duty applications are available in a wide range from high-frequency dedicated chargers to ferroresonant and SCR-based chargers. These chargers are designed for applications that typically have more than one battery per truck and where batteries are swapped-out at the end of each work shift.

### EHF & EHY product family

These chargers are 100% rated, eight-hour recharge, high frequency chargers that deliver multi-profile and multi-chemistry performance for all battery types including flooded, flat plate or tubular.

The newest EHY models are fully CEC-approved and offer energy-saving charging for multiple line voltages, mostly found in smaller facilities.



### EF Ferroresonant Chargers

This family of GNB industrial chargers based on ferroresonant technology provides full recharge of a 100% discharged battery within eight hours. Industry-proven ferro circuitry protects against battery overcharge and incorrect battery connections.



### SCR200 Chargers

This GNB charger line uses precise electronic SCR control to maximize battery life and minimize the battery recharge time required. When bundled with the Tubular-LM battery, the SCR200 charger provides the maximum available watering interval of 90 days.



## Accessories & Services

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GNB offers a wide variety of battery and charger accessories and advantages to save you time and money. Single-point battery watering systems kits can be installed at our factory or at your location and are a low-cost way to save labor and maximize battery life. Battery monitoring devices help you understand how a battery is being used and if it's right for the application. Our line of data loggers and BMSs also optimize the charge cycle. GNB also offers product afterlife recycling services.

### Battery Watering Systems & Charger Networking

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The GNB families of flooded-cell industrial batteries are high-performance power sources for motive power applications. The charge-discharge process creates a loss of water in the cells. Single-point battery watering systems (SPWS) can be installed at our factory or at your location and are a low-cost way to save labor and maximize battery life.

Battery charging systems have become more complex and networked. GNB Industrial offers a line of chargers that can be used in "opportunity" and "rapid charging" applications. Our batteries and chargers are connected in real-time to communicate battery parameters including temperature and voltage so that the charger automatically adjusts the charging profile.



### Service & Preventative Maintenance

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GNB Industrial offers a complete array of services including preventative maintenance programs to keep your business moving. The GNB Industrial Power portfolio is a comprehensive single source of professional services. Our key strengths are in the areas of first-time fix and rapid response calls.

- Parts ordering is easy with 24/7 online access to our inventory of over 300,000 parts.
- Periodic maintenance services are available as an outsource from GNB to allow you to keep your key people directly involved in your business. We tailor maintenance programs to your environment with our factory-trained "first-time fix" professional.
- GNB also offers you value-added customer programs to help train your workers in plant safety beyond the battery room.



### Recycling

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A unique advantage to GNB and its parent corporation, Exide Technologies, is our integrated ability to recycle lead into new products. Our recycling is as friendly to business as it is to the environment. By taking advantage of this value proposition, you can be free from regulatory burdens of handling spent battery lead. Our in-house recycling keeps these materials in the manufacturing stream instead of landfills. Over 99% of all lead received at our facilities is reclaimed. Exide Technologies and GNB Industrial Power have corporate oversight of over two million pounds of lead daily. We also recover over 25 million pounds of plastic annually.



**GNB Industrial Product Recycling: 888-GET-JUNK**

**Transportation Product Recycling: 888-438-5865**