

One powerful package.



Deka®

QUALITY BATTERIES

Backed by one powerful company.



D-Series™

Durable and dependable for almost any motive power application. In addition to its versatility, it is designed to be utilized in both conventional and opportunity charging operations.



MaxPower®

Through optimized active material efficiencies, balanced plate ratios, and increased electrolyte concentration, it can deliver up to 10% more amp-hours in the same size battery.



HydraSaver®

Exclusive alloy combinations and separator material results in less water consumption resulting in watering intervals of ten weeks. Factory installed flip-top vent caps and LED water level indicator simplify maintenance programs.



MaintenanceSaver®

Built specifically for low maintenance applications, it boasts a large reservoir allowing an increased volume of electrolyte. Reduces watering to four times a year under normal operating conditions.



FastCharge™

Optimized for electrical conductivity and extended performance, it is built to last longer under rigorous fast charge conditions. Features heavy-duty intercell connectors, copper inserted posts, and dual cables and connectors.



Dominator®

Maintenance-free gel design to save countless maintenance hours. Designed for either conventional and opportunity charging operations. Spillproof and leakproof.



ChargeMate™

Combines a flooded battery and charger into one unit eliminating the need for remote charging equipment. The charger can be connected into any 15 amp, 120 volt AC outlet for safe and easy charging.



PowrMate®

Provides all the benefits of a maintenance-free gel battery with an on-board charger that can be connected to a 15 amp, 120 volt AC outlet. It is designed specifically for pallet jack applications. Spillproof and leakproof.



Gel-Mate®

Offers the combination of a maintenance-free gel design in addition to a built-in charger that is compatible with a 15 amp, 120 volt AC outlet. Spillproof and leakproof.

Battery Type	Ah Throughput			Operating Temperature		
	High	Medium	Low	Cool/Cold	Normal	High
D-Series™	✓	✓	✓	✓	✓	✓
MaxPowr®	✓	✓		✓	✓	✓
HydraSaver®		✓	✓	✓	✓	✓
MaintenanceSaver®		✓	✓	✓	✓	
FastCharge™	✓					
Dominator®		✓	✓	✓		
ChargeMate™		✓	✓		✓	
PowrMate®		✓	✓	✓	✓	
Gel-Mate®		✓	✓	✓	✓	

One powerful company.



COMPANY OVERVIEW

East Penn, a privately-held manufacturer of the Deka Motive Power brand battery, has grown to be one of the largest and most progressive independent battery manufacturers in its industry. By continuing to focus on its core business of producing the highest quality product backed by an extensive nationwide sales and service network with superior customer service, the company delivers the best value in reliability, performance, long life, and service. The advantages are the result of the company's commitment to a long-term investment in quality, manufacturing, engineering, research and development, service, distribution, safety, and environmental sustainability. No other company can offer the distinct advantages that East Penn incorporates into its everyday philosophy.

Being a single-site location enables East Penn to keep the management, engineering, development, environmental, and manufacturing team in close communication and allows the company the unique ability to utilize knowledge gained unilaterally across the enterprise. What is learned in one facility can very easily be integrated into the facility next door in hours.

World class quality, superior engineering, safe recycling of spent batteries, the broadest line of application specific products, fast and accurate delivery via a nationwide distribution network, and the best customer and technical support in the industry. It all adds up to ***“One Powerful Package backed by One Powerful Company.”*** When it comes to Motive Power, Deka delivers.

One powerful product.

MANUFACTURING

Every facet in East Penn's manufacturing process benefits by the close logistical proximity of its individual facilities. This is used as an advantage to optimize efficiency. Each facility is its own independent, fully operational unit and can sustain production needs for its intended market or even help supplement products for other East Penn markets.

Raw Materials

By having a single-site with three fully equipped technical centers, East Penn is able to test all incoming raw materials as well as any materials that the company produces at its smelter, oxide, and injection molding facilities. Producing this material on-site allows the company to control quality and supply demands.

Grids

East Penn utilizes highly sophisticated machines to cast superior, heavy-duty flat plate grids. Computer control processes deliver a high level of consistency meaning no missing wires, thin spots, or flashing. This results in high productivity, lower costs, and superior battery performance, life, and efficiency.

Plates

Paste is applied uniformly using East Penn's automatic computer integrated pasting machines resulting in excellent material retention and conductivity. The density and formulation of the active material is carefully controlled to predetermined values.

After pasting, Deka plates are cured in large temperature and moisture controlled chambers for longer life and optimized power performance. The exclusive curing process paired with the unique crystallization structure of Deka's active material optimizes the plate's performance and extends life.

Plate Formation

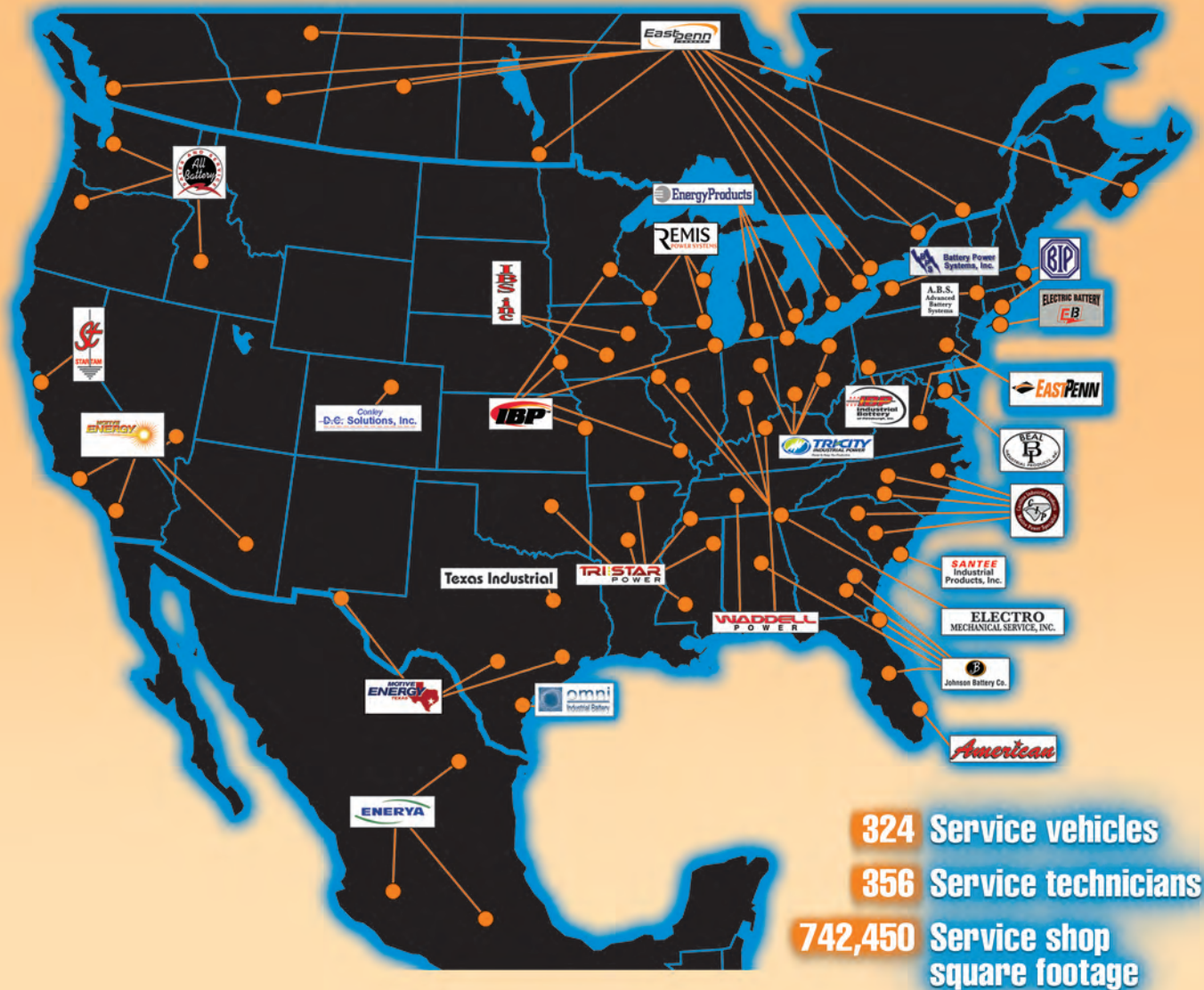
East Penn uses a two-step formation process that ensures optimized power capacity, cell consistency, and long term reliability from every plate and ultimately each cell, in terms of amp-hour capacity and cycle life. Key factors such as temperature control, specific gravity density, and charging create a unique East Penn formation profile. This profile creates maximum plate to paste reaction efficiency and adhesion characteristics that ensure voltage uniformity and extended life performance. Each cell is checked for voltage and specific gravity meeting strict quality parameters. As a result of the uniform formation of each plate, cell voltages are equalized and consistent. When cells have equal voltages, charging will be more efficient preventing gassing and sulfation, significantly extending the battery's overall life.

Multiple Step Retention System

This effective five-step retention system first wraps the positive plate with a vertical mat consisting of fiberglass tape and interwoven glass fibers. The glass fibers imbed into the active material, strengthening in a way similar to reinforcing rods in concrete. A horizontal glass fiber mat is then wrapped around the plate to break up any gas bubbles and increase the plate's insulation. Next a perforated plastic retainer envelope firmly holds the glass wrap in contact with the plate while allowing the free-flow of electrolyte to have access to every part of the plate surface. The positive plate is encased in a separator which protects against shorts and corrosion. The final step is placing a boot across the bottom of the plate to prevent sediment from bridging across the bottom of the plates and shorting out the cell.



One powerful network.



SALES AND SERVICE NETWORK SUPPORT

All Deka industrial batteries and chargers are backed by a nationwide network of qualified sales personnel and service technicians ready to handle emergency repair and preventive maintenance needs. This extensive support network consists of qualified and dedicated independent dealer network, national sales branches, and subsidiaries who are all exclusive to Deka products and service the country nationwide bringing expertise, service, and support to all accounts. This network includes 352 trained and motivated service specialists and 328 transportation support vehicles with 731,822 square feet of service shop facilities. The coverage is comprehensive with 71 total locations throughout the U.S., Canada, and Mexico.

These professionals provide convenient on-site service for batteries and chargers, keeping downtime to a minimum. The service vehicles are fully equipped to handle any battery or charger prob-

lem, eliminating the need for bothersome and expensive follow-up service calls. For major overhaul and repair, batteries and chargers are returned to nearby fully equipped and staffed service shops. Trained service technicians will return the product in the shortest time possible.

Comprehensive support includes technical advice and assistance, proper battery care and maintenance training, annual battery and charger audits, water analysis, discharge testing, manuals, and safety videos. Routine maintenance contracts protect battery and charger investment and ensure longest, safest operation. The service network also has loaner and rental batteries, battery and charger inventory on-site for quick delivery, extensive part inventories, and technical assistance. With regional facilities fully equipped and staffed with expert service technicians, response time is first-rate keeping customer satisfaction at the highest levels.

One powerful process.

ENVIRONMENTAL PROTECTION PROGRAM

East Penn has implemented the highest environmental standards and has labeled this sixty-five year tradition as its "Environmental Protection Program." Through state-of-the-art recycling facilities and a company wide dedication to environmental health and safety, the company has made safe recycling and environmental stewardship an everyday practice.

Its lead smelter and refinery is a model for the industry, recycling virtually 100% of every used lead-acid battery component brought to the facility. East Penn built the battery industry's first acid reclamation plant, avoiding potentially hazardous acid disposal.

The company also treats and



reuses wastewater from its manufacturing plants in its modern Wastewater Distillation and Treatment Plant with no discharge into the environment. Company wide sustainability initiatives are spread throughout its facilities such as collections to recycle paper, cardboard, plastic, used aluminum cans, and glass bottles.

The company continually monitors the ambient emissions around its plant site, which continues to decline even with a steady increase in production.

The company's modern facilities as well as its long-standing "green" culture has made East Penn the most environmentally conscious proactive battery manufacturer, and recycler in the world.



ENGINEERING AND QUALITY CONTROL

Almost 30,000 square feet of space is dedicated to laboratory testing. Each laboratory includes the equipment needed for product and process control as well as research and development. A full staff of highly trained and educated employees from various technical disciplines work in its fully functional labs.

East Penn has a strong commitment to its customers to be closely involved with any new or alternative battery technology. This proactive approach enables the company to stay on the forefront of new developments or emerging technologies to help its customers remain on top of an ever-changing market.

Quality control is also centralized and East Penn monitors and maintains standardization, compliance, consistency, and

control of all of the quality policies and principles. A dedicated and extensive Six Sigma program ensures that the highest efficiencies are being met and continuous improvement is ongoing. Quality Control at East Penn is managed on a Statistical Process Control (SPC) basis with sampling data being examined with respect to standard deviation and range analysis where applicable. Meetings are held regularly in each plant for employees to share ideas, learn new training parameters, and discuss quality programs. East Penn's quality systems are certified to ISO 9001:2008 and ISO/TS16949:2009 standards. All manufacturing, design, and distribution quality systems for the entire 520-acre site are certified.

QUALITY SYSTEM
CERTIFIED
ISO 9001
ISO/TS 16949
ENVIRONMENTAL
SYSTEM CERTIFIED
ISO 14001



CENTRAL SERVICES



KELLER TECHNICAL CENTER



AUTOMOTIVE BATTERY PLANT A-3

QUALITY SYSTEM
CERTIFIED
ISO 9001
ISO/TS 16949
ENVIRONMENTAL
SYSTEM CERTIFIED
ISO 14001



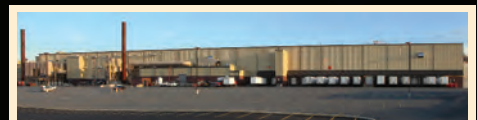
SMLTER AND REFINERY



DISTRIBUTION CENTER



SPECIALTY BATTERY PLANT S-1



AUTOMOTIVE BATTERY PLANT A-4



CABLE AND WIRE PLANT



INDUSTRIAL BATTERY PLANT



INJECTION MOLDING /
FLEET MAINTENANCE



CORYDON, IOWA
BATTERY PLANT A-5



OXIDE / RAIL SIDING

World's Largest and Most Modern Single-Site Battery Manufacturing Facility

Since 1946, East Penn has been producing high quality batteries and battery accessories for the automotive, commercial, marine, industrial, stationary, and specialty markets.

Facilities at its 520-acre manufacturing complex at Lyon Station, PA include four automotive battery plants, an industrial battery plant, a specialty battery plant, a state-of-the-art oxide facility, an innovative recycling infrastructure, and dozens of vertically integrated capabilities and other support facilities. An additional manufacturing facility in Corydon, IA helps accommodate widespread growth. East Penn owns and operates a wire, cable, and battery accessory plant and a multiple facility distribution center just miles away from its Lyon Station complex.

New high-tech facilities and computer monitoring and control systems have made the company an industry leader in advanced battery manufacturing.

East Penn's quality manufacturing is recognized worldwide and has met the global requirements of ISO 9001 and ISO/TS 16949 certification standards. East Penn is also a leader in innovative recycling and has met global environmental requirements of ISO 14001 certification standards.

Staffed with a long-term management team, East Penn is an independent company committed to the future and dedicated to producing high-class products and service to assure complete satisfaction, above and beyond the industry standard, to our partners and customers worldwide.



e-mail: epmmotive@eastpenn-deka.com www.eastpenn-deka.com

East Penn Manufacturing Co. Lyon Station, PA 19536-0147 Phone: 610-682-6361 Fax: 610-682-4781 Sales Hotline: 610-682-3260

E.P.M. Form No. 0708 Rev. 2/18 © 2018 by EPM Printed in U.S.A.

All data subject to change without notice. No part of this document may be copied or reproduced, electronically or mechanically, without written permission from the company.

