

  
CHARGING  
SOLUTIONS

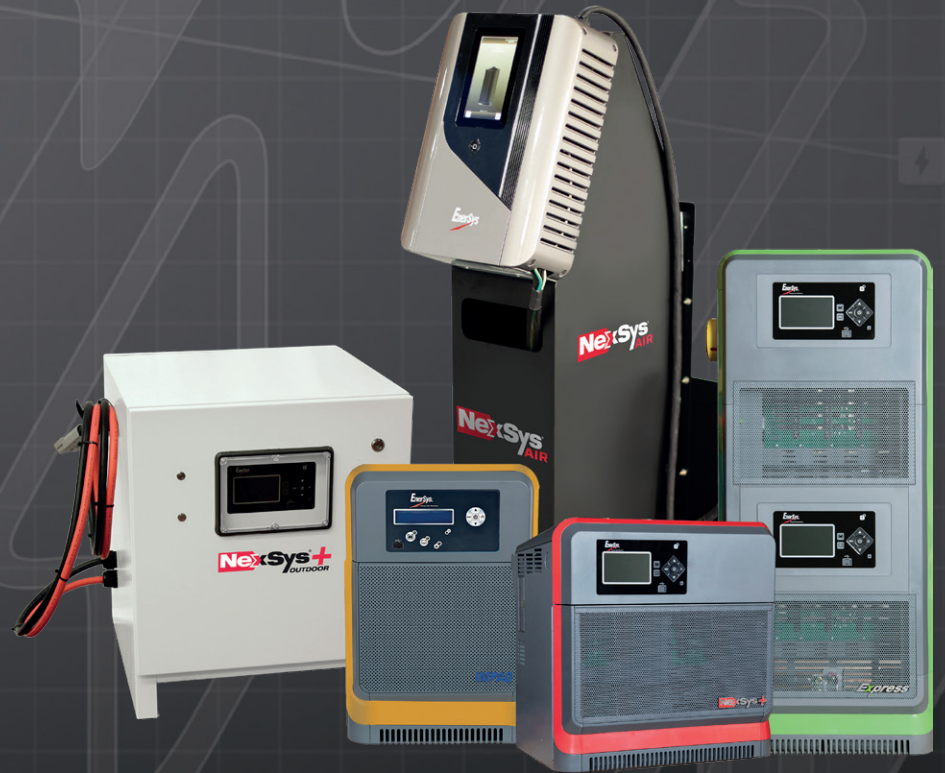
**IMPAQ**<sup>™</sup>

**Express**<sup>®</sup>

**NexSys**<sup>®</sup>+

**NexSys**<sup>®</sup>  
AIR

MOTIVE POWER BATTERY CHARGING REDEFINED



  
LISTED

**EnerSys**<sup>®</sup>  
Power/Full Solutions

# REDEFINING MOTIVE POWER CHARGING

As the global leader in stored energy solutions for industrial applications, EnerSys® has long been developing technologies to help material handlers maximize productivity and profitability.

Our battery charger portfolio does it with opportunity and fast charging options designed for a range of performance and charging profiles and optimized to meet customer requirements.



## OUR LATEST INNOVATION: SIMPLICITY

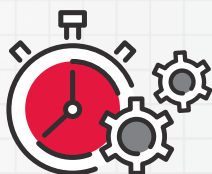
EnerSys® battery chargers are engineered to promote reliability and easier serviceability with flexible, modular designs that automatically maintain peak performance and efficient output – should one module develop a minor fault, the chargers will keep charging at reduced power to keep workflows moving. EnerSys® battery chargers also have some of the lowest component counts in the industry for better reliability.

**Our ultimate goal? Offering battery charging options that can help make your operation more productive and profitable.**



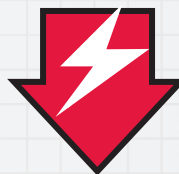
### **AUTOMATIC BYPASS OF FAULTED MODULE**

Continues charging process for uninterrupted operations



### **UP TO 94% EFFICIENCY**

For maximum performance and energy savings



### **<10W CONSUMPTION IN STAND-BY**

Complies with latest global efficiency standards



### **FLEXIBLE MODULAR DESIGN**

Maintains peak performance and output

# BEST-IN-CLASS HIGH-FREQUENCY CHARGING

CHARGING  
SOLUTIONS

## IMPAQ™

IMPAQ™ battery chargers feature the latest technology to maximize charging performance while maintaining peak efficiency.

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.



### RELIABILITY

- IMPAQ™ battery chargers deliver a better value in high frequency charging. They feature a standard flooded lead acid battery charge profile and include the proprietary standard charge profiles for NexSys® TPPL batteries.
- IMPAQ™ battery charger modules are automatically switched on and off to maintain peak efficiency and optimum charging performance at all times.

### SIMPLICITY

- IMPAQ™ battery chargers can be used with a wide range of battery capacities, allowing a potential reduction of chargers in your fleet. Fewer chargers means more space.
- IMPAQ™ battery chargers feature a intuitive LCD screen and bespoke programmable menu with LCD indicators for ease of use.
- Possible faults can be detected using the self-diagnostics feature so that replacement modules can be performed easily if required.

### EFFICIENCY

- IMPAQ™ battery chargers provide up to 94% efficiency for maximum performance and energy savings.
- With their flexible and modular design, IMPAQ™ battery chargers automatically maintain peak performance and efficient output.

# SAFELY FAST CHARGE ANYTIME

## *Express*<sup>®</sup>

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



CHARGING  
SOLUTIONS

## FAST & RELIABLE

- The IONIC™ charging profile consistently diagnoses the battery throughout the recharge and adjusts the charging profile to effectively charge the battery.
- The intelligent diagnostic sampling provides more rapid optimized charging of flooded cell batteries subject to very high demands.
- Innovative Active Temperature/Output Management technology ensures batteries receive optimal charging at every plug-in.
- Units are equipped with a Wi-iQ<sup>®</sup> battery monitoring device to provide battery voltage and capacity data.
- Express<sup>®</sup> battery chargers are California Energy Commission (CEC) compliant and UL certified.
- Dual-cable and parallel configurations also available for increased charging speed, based on your application.\*

\*Requires compatible battery configuration, please ask your EnerSys<sup>®</sup> representative for more details.

# PLUG-AND-PLAY PERFORMANCE

CHARGING SOLUTIONS



NexSys<sup>®</sup> + battery chargers have high charge rates that dramatically reduce recharge times and permit opportunity charging to increase productivity and boost fleet efficiency.

NexSys<sup>®</sup> + charger profiles continuously diagnose and optimize battery condition to maximize cost savings and battery life.



## SIMPLE & INTUITIVE

- NexSys<sup>®</sup> + chargers are programmable and include charging profiles for NexSys<sup>®</sup> TPPL batteries, NexSys<sup>®</sup> iON batteries and all flooded battery technologies – helping with mixed fleets.
- Features a 4.3" multi-color dashboard screen with an intuitive interface to provide enhanced diagnostics and feedback to the operator.

## SMART COMMUNICATION

- All NexSys<sup>®</sup> + chargers are Wi-iQ<sup>®</sup> battery monitoring device enabled to provide battery type, voltage and capacity data to the charger.
- The charger will automatically compensate for temperature when the Wi-iQ<sup>®</sup> battery monitoring device is configured correctly.
- Achieve 94% efficiency in recharge when used with NexSys<sup>®</sup> iON batteries.

## ROBUST DESIGN

- With high frequency (HF) modular technology, NexSys<sup>®</sup> + chargers continue the charging process by automatically bypassing module faults to ensure uninterrupted operations.
- Available with a rugged NEMA 3R / IP54 rated enclosure for outdoor equipment applications.\*
- Dual-cable and parallel configurations also available for increased charging speed, based on your application.\*\*

\* Requires optional NexSys<sup>®</sup> + Outdoor charger model with NEMA 3R / IP54 rated enclosure.

\*\* Indoor units only. Requires compatible battery configuration, please ask your EnerSys<sup>®</sup> representative for more details. Designed for typical weather conditions, not for submersion or areas prone to flooding.

# HANDS-FREE CHARGING THAT DRIVES PRODUCTIVITY

CHARGING SOLUTIONS



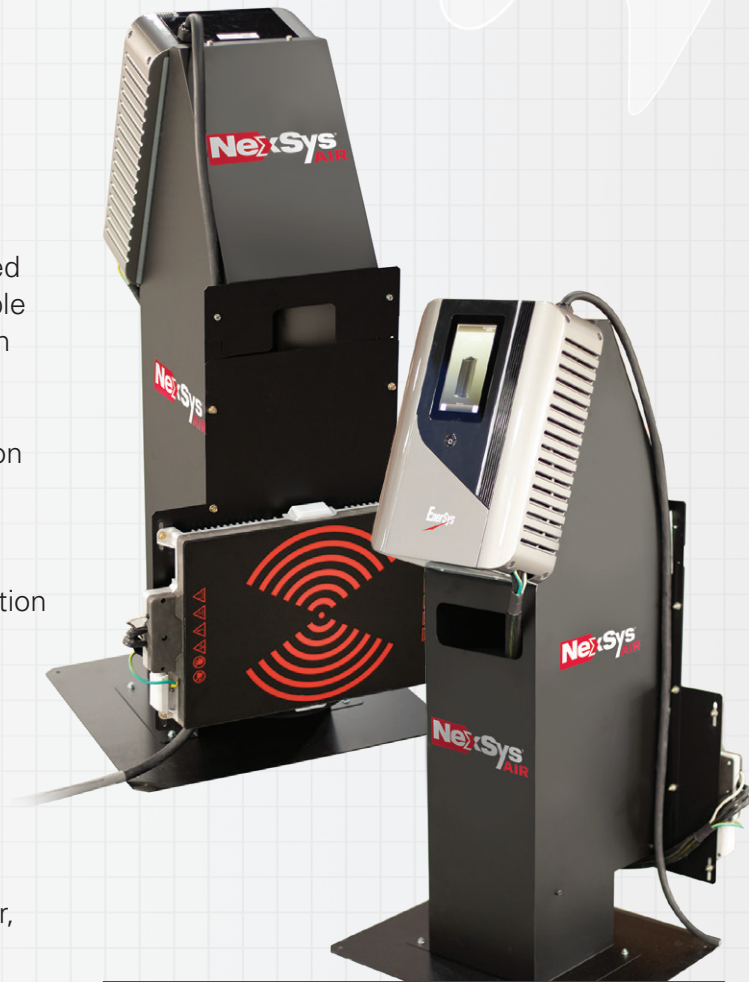
NexSys<sup>®</sup> AIR wireless chargers deliver the convenience of hands-free charging across a wide range of automated guided vehicle (AGV) applications. Able to charge multiple battery technologies, NexSys<sup>®</sup> AIR wireless chargers can help boost safety, reliability and productivity.

- Fully automated charging with no manual intervention
- Compatible with all EnerSys<sup>®</sup> battery technologies
- Eliminates physical wear from mechanical contacts
- Safety features include foreign and live object detection

## CHARGING SIMPLICITY AND FLEXIBILITY

NexSys<sup>®</sup> AIR wireless chargers can charge flooded lead acid, NexSys<sup>®</sup> TPPL and NexSys<sup>®</sup> iON batteries. Along with eliminating cables, plugs, and related wear-and-tear, NexSys<sup>®</sup> AIR wireless chargers can eliminate AGV wait times for manual plug-ins.

NexSys<sup>®</sup> AIR wireless chargers are also designed to handle a wide range of vehicle types and sizes, offering exceptional integration flexibility. Equipment charging pads can be mounted in a variety of locations with either vertical or horizontal pad orientations.



## CHARGE DURING:

- Intervals between runs
- Operating breaks or stoppages
- Any free time



INTUITIVE  
TOUCHSCREEN  
CONTROLS

EASILY  
INTEGRATED  
CHARGING PAD



## COMPATIBLE WITH:



# CHARGER FEATURES AND CONFIGURATIONS

As this comparison chart outlines, the EnerSys® motive power charger portfolio offers options for a range of performance and charging profiles. For additional help in selecting the best charger for your operation, please contact your EnerSys Sales Representative.

Design & Features	IMPAQ™	Express™	NexSys+™	NexSys AIR™
High charging efficiency (94% or greater)	●	●	●	●
Intuitive controls and digital displays	●	●	●	●
Multi-voltage, high-frequency design	●	●	●	●
Single- or dual-cable charging <sup>[1]</sup>		●	●	
Parallel configuration compatible <sup>[1]</sup>		●	●	
Automatic minor fault bypass for continuous operation	●	●	●	●
Automatic temperature adjustment (via Wi-iQ® battery device)		●	●	●

Ideal Applications <sup>1</sup>	IMPAQ™	Express™	NexSys+™	NexSys AIR™
Material handling - light to moderate use <sup>[2]</sup>	●		●	
Material handling - moderate to heavy use <sup>[2]</sup>	●	●	●	
Automated equipment & AGVs <sup>[3]</sup>			●	●
Cold storage and refrigerated facilities	●	●	●	●
Floor care and ground support equipment (manual)	●		●	
Outdoor equipment and facilities <sup>[4]</sup>			●	
Other equipment (scissor lifts, mining equipment, etc.)	●		●	

Battery Compatibility	IMPAQ™	Express™	NexSys+™	NexSys AIR™
Conventional flooded lead - standard charging <sup>[5]</sup>	●		●	●
Conventional flooded lead-acid - opportunity charging <sup>[5]</sup>	●	●	●	●
Conventional flooded lead-acid - fast charging		●		
Valve-regulated lead-acid (sealed)	●		●	
Absorbed Glass Mat (AGM) & Gel	●		●	
NexSys™ TPPL	●		●	●
NexSys™ iON			●	●

Battery Charging Profiles	IMPAQ™	Express™	NexSys+™	NexSys AIR™
Conventional flooded lead-acid battery profile	●		●	●
Express™ fast charge profile (proprietary)		●		
Opportunity charging profile	●	●	●	●
Cold storage profile	●	●	●	●
Desulfation charging	●	●	●	
Auto equalization charging	●	●	●	●
IONIC™ charging profile with auto diagnostics		●	●	
NexSys™ TPPL - Bloc charging profile			●	●
NexSys™ TPPL - standard charging profile	●		●	●
NexSys™ TPPL - fast charging profile			●	●
NexSys™ iON - lithium-ion charging profile			●	●

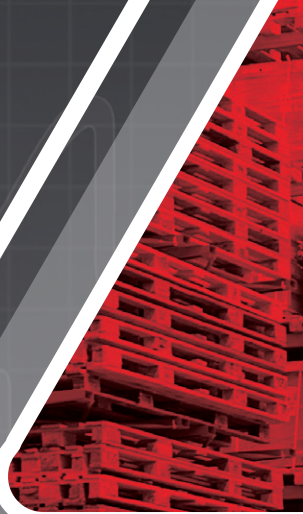
[1] Indoor units only. Requires compatible battery configuration, please ask your EnerSys® representative for more details.

[2] Ideal applications for guidance only, performance varies based upon application, ask your EnerSys® representative for more information.

[3] Use based upon approval and integration of system on automated equipment, ask your EnerSys® representative for more information.

[4] Requires optional NexSys+™ Outdoor charger model with NEMA 3R / IP54 rated enclosure. Designed for typical weather conditions, not for submersion or areas prone to flooding.

[5] Compatibility may be subject to installation restrictions.



#### **SERVICE AND SUPPORT**

Our battery support services range from system design, installation and certification to testing, maintenance and repair.



Our comprehensive recycling support program accepts lead acid batteries of all sizes, from all manufacturers.



#### **BATTERY MONITORING**

Our advanced tools and technologies deliver actionable intelligence to optimize battery maintenance and operation.

Visit us at [www.enersys.com](http://www.enersys.com)



**EnerSys World Headquarters**  
2366 Bernville Road  
Reading, PA 19605, USA  
Tel: +1-610-208-1991 /  
+1-800-538-3627

**EnerSys EMEA**  
EH Europe GmbH  
Baarerstrasse 18  
6300 Zug, Switzerland

**EnerSys Asia**  
152 Beach Road  
#11-08 Gateway East Building  
Singapore 189721  
Tel: +65 6416 4800