



# BATTERY HANDLING SYSTEMS



## PRODUCT CATALOGUE

### PRO SERIES® BATTERY HANDLING SOLUTIONS

#### GET IN TOUCH

[www.enersys.com](http://www.enersys.com) | Tel: +41 44 215 74 10 | Fax: +41 44 215 74 11





B



inci  
ATTERY

R

B





# TABLE OF CONTENTS

	PAGE
ENERSYS® EXPERTISE	4
BATTERY BULL HYDRAULIC	5
BULL ELECTRIC	6
BBE FA	7
MINI AUTO CHANGER	8
BATTERY TUGGERS	9
BTM	10
MANUAL CHANGE CART	11
ROLLER TRANSFER CART	11
BATTERY ROLLER STANDS	12
MULTI-LEVEL RACKING SYSTEM	13
VENTILATION	14
GANTRY CRANE BATTERY	15
STATIONARY BATTERY RACKS	16
LIFTING BEAM	17
PARK AND CHARGE STANDS	18
ACCESSORIES	19-20



# | The Story So Far...

## ENERSYS® EXPERTISE

EnerSys has over 20 years of experience in Battery Handling

Over 2,000 installations in 25+ countries across EMEA

A Team of specialized engineers to manage your project

The largest service network of any BHS supplier in EMEA



### What we do....

- needs analysis
- system design
- broad product range
- mechanical and electrical installation
- project management
- operator training
- full turnkey solutions

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.

But that's not all. When it's time to change the battery on your machine, our intuitive designs reduce downtime by up to 50%.

We understand that space comes at a premium, which is why we created multi-level systems that save valuable floor space.

And when your business grows, your handling solution can grow with it, easily expanding to fit your increased need.

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.

Put your trust in our experienced design and installation teams, and join many other happy customers around the world.



## BATTERY BULL HYDRAULIC

The BBH Series Battery Bull has long been proven in many applications around the world. Utilizing its hydraulic drive and lift system for single and double tier configurations ensures that customers enjoy day-in and day-out battery changing performance in medium to large fleets.

Hosting a logical user-friendly control panel, the BBH allows the operator to deliver faster, more consistent and accurate battery changes that will keep your truck fleet productive.

The BBH utilizes a single or double roller bed configuration, coupled with its powerful electro magnet that has a draw bar pull of 816kgs. The BBH delivers the highest throughput in battery changing, while maintaining a small footprint to help save your costly warehouse space.

All BBH equipment employs tightly integrated safety systems that maximize the protection of your operator and minimize the likelihood of costly damage to your equipment.



*BBH operating with racking and ventilation system*



# BBE

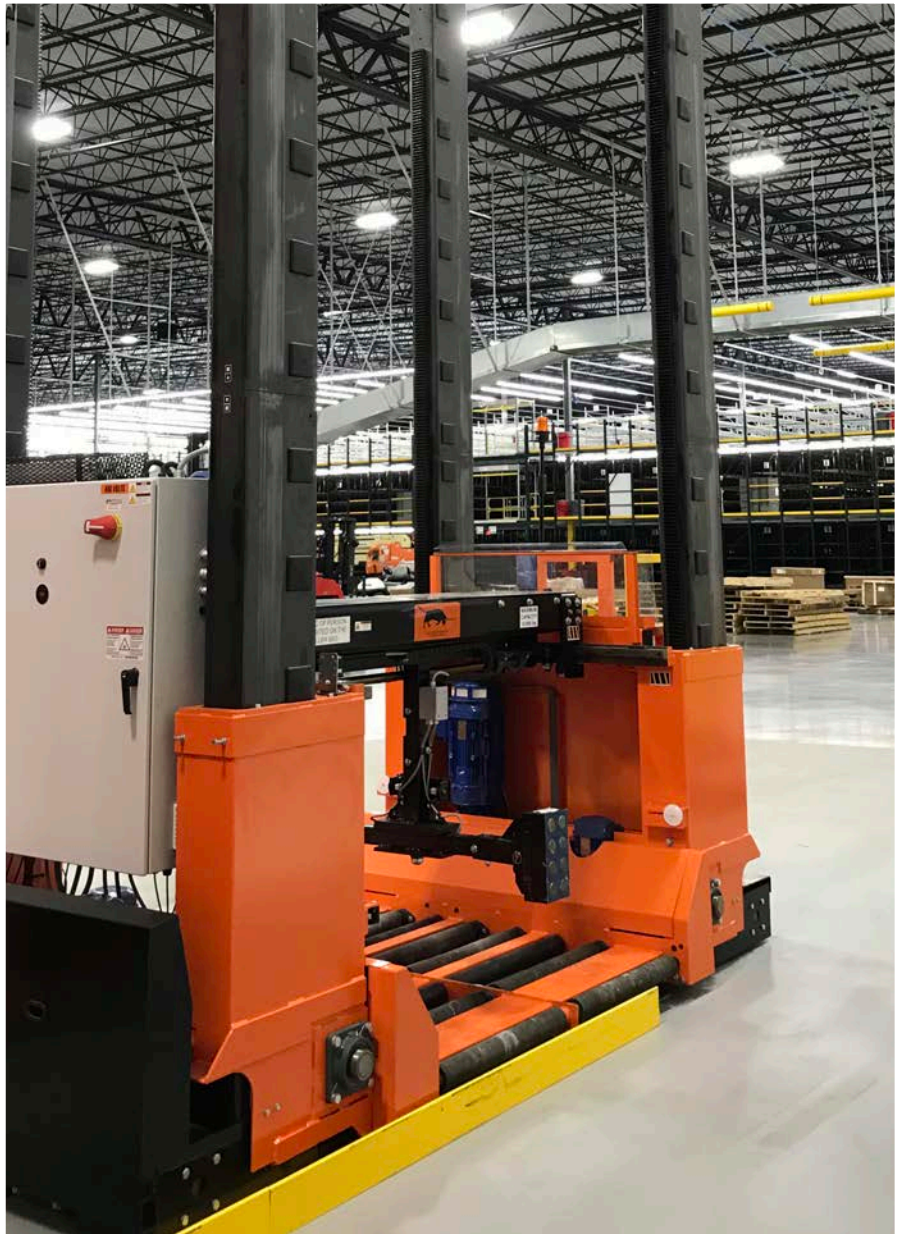
## BATTERY BULL ELECTRIC

The BBE Series man-aboard Battery Bull 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. The BBE is the industry's only fully electric system with no hydraulics, which ensures maximum up-time and minimum maintenance.

Powerful, compact and energy efficient PLC controlled Variable Frequency Drives (VFD) are coupled with electric gear boxes to provide simultaneous power to both the lift and drive functions. The BBE as one of the few options in high-volume fully electric transfer carts.

### Product Features

- On-board display panel for integration into battery fleet management systems
- Proximity safety sensors and remote light curtain solutions for added safety
- Custom sizes allow placement into existing systems or confined spaces





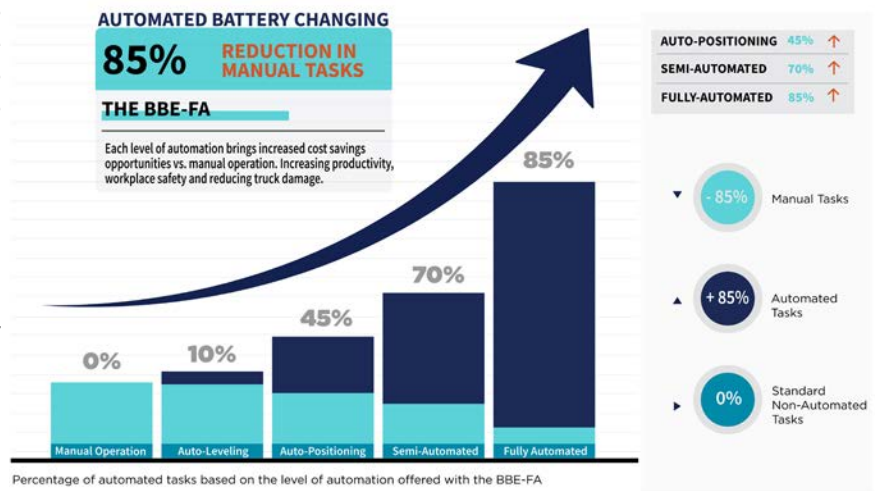
# BBE-FA

## BATTERY BULL ELECTRIC - FULLY AUTOMATED

The BBE-FA is a flexible and effective system to support battery change requirements for broad-scale automated applications. Employing the same high-efficiency, high performance and low-maintenance AC power core as the rest of our BBE range, the BBE-FA leverages advanced logic programming and sensor-based diagnostics to remove the need for a human operator. Our proven system meets and/or exceeds all of the toughest AGV industry standards and includes comprehensive self-diagnostic and logging capabilities to reduce downtime through servicing and unscheduled maintenance even further.

We have a flexible approach to suit the needs of our clients, we are also able to offer Semi-Auto Changer model. The Semi-Auto Changer can provide various levels of automation, including; Auto-Level, Auto Positioning, and Auto Battery retrieval and placement.

It has complete user compartment with operational control to allow for manual override of all functionalities.



## Product Features

- **Full Automation**

*The BBE-FA is a fully automated system that does not require an operator*

- **Programmable**

*Equipped with fully programmable logic-based AC power systems to provide precise control and responsiveness for faster changes*

- **Detailed Self-diagnostics**

*Logging functions and self-diagnostics allow significant decreases in both downtime and servicing, therefore maximizing machine productivity*

- **Control**

*Complete user compartment and controls allow for manual over-ride and operation if required*

- **No Hydraulics**

*Fully electric, the BBE-FA has no hydraulics ensuring no oil leaks, reducing servicing by up to 30%*

- **Powered Rollers**

*Powered lead rollers mean up to 25% faster changes with less wear and tear on key components when compared to comparable systems*

- **Electro-magnetic Extraction**

*Equipped with a powerful and reliable 817 kg electro-magnetic extraction system backed by a 10-year magnet warranty*



ABBE-FA machine single level



Automation control terminal for BBE-FA (including options)

# MAC

## MINI AUTO CHANGER

The automatic battery changer, the Mini Auto Changer (MAC) uses a fully integrated PLC control system that gives precise control and responsiveness for faster battery changes. The detailed self-diagnostic and logging function helps reduce down-time and service requirements, ultimately improving the production time.

The MAC uses acid proof powder-coat paint to ensure long life and durability of your equipment, thus protecting your investment and maximizing service life.

### Product Features

- Intelligent interface with AGV and charging systems
- Integrated safety systems and emergency override
- Low cost fully automated or semi-automated systems for small battery rooms (less than 15 batteries)
- Single level single roll out height applications
- Maximum efficiency within cart battery staging
- Ultra-low maintenance and service requirements





# BATTERY TUGGER

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 unrivaled in today's battery changing industry. All BTE models are engineered with a fully welded, unibody construction and finished in premium acid-proof powder coat paint. This work horse will be around long after everyone in the battery room has retired.

The BTE series is fitted with our reliable electromagnetic extraction system that is used extensively on all our man-aboard systems and capable of handling batteries up to 2,265kg. We also offer the EZ-Battery Tugger and Cobra Tugger, which offer electromagnetic extraction for batteries up to 1,045kg. Combined with a completely electric drive system, reliability is guaranteed with the Battery Tugger.

To ensure smooth and effortless extraction, we use a unique combination of lead rollers and UHMW slider strips. This configuration requires 50% less pull force, which ultimately extends the equipment life while maintaining the ability to secure the battery when travelling. We also offer a 10 year warranty on magnets.

## Product Options

- Battery guides to prevent smaller pallet truck batteries from tipping over
- Custom drop in attachments available for special roll off heights and sizes of battery
- Operator control panel with variable speed joystick to provide user friendly operation
- Custom widths, lengths and step models available (BTSE series)
- 10 Pole and 12 Pole magnet upgrades to handle extremely large batteries.



Battery Tugger



EZ-Battery Tugger



Step Tugger



Cobra Tugger

# BTM

## BATTERY TUGGER MANUAL

The BTM series has been specifically designed to remove batteries from lift trucks for servicing and preventative maintenance, or to change out batteries when necessary.

The unit uses precision steel roller bearings in the oversized front load wheels to reduce static load resistance. This technology allows virtually anyone to push a 1,551 kg battery with little effort.

Its single pin steering mechanism makes the BTM operate like a hand pallet truck, and the compact unit offers convenient waist-high lifting and lowering using hand controls. It also includes an integrated hand pump jack that allows you to raise the roller bed to meet the height of most lift trucks.

The gear reduction mechanical drive aids in pushing and pulling the batteries in and out of the lift truck as the operator manually cranks the handle, similar to a boat winch. The winch utilizes an anti-backlash for added safety if the crank handle slips.

The battery compartment is available in two convenient sizes of 609mm or 914mm.

- Hand crank activated positive braking system (optional)  
*No chain latching required when loading a battery into a lift truck. When the brake is engaged, there is no possible pushback.*
- 3-Point pallet truck design with solid wheels  
*Extremely easy to turn and move while fully loaded*
- Single point push/pull travel  
*Allows for tight turning and easy maneuverability*
- Hand pallet truck lift mechanism
- Convenient waist-high lifting and lowering using hand controls
- Stand-alone compact unit  
*Does not require a fork truck*
- Ratchet crank handle  
*Protects the operator from injury if crank handle slips*
- Battery safety stop  
*Prevents the battery from accidental rollout during transportation*



*Optional hand crank activated positive braking system with no pushback when the brake is engaged*



*Convenient waist-high lifting and lowering using hand controls*



*BTM with carriage in raised position*

# MCC

## MANUAL CHANGE CART

For infrequent battery changing or service requirements, a manual extractor remains a low cost, yet effective solution. Engineered to allow safe, effective and effortless manual battery changes, the MCC sits in guide channels. The operator benefits from integrated battery stops, foot braking and the option of loading and unloading from both sides of the system.

### Product Features

- 1,587kgs capacity
- Single or dual roller beds
- Manual hydraulic lift
- Foot activated braking system



# RTC

## ROLLER TRANSFER CART

The RTC, designed to service or move lighter batteries from place to place, is available in various heights and roller configurations to suit any application.

### Product Features

- Heavy duty welded construction
- Optional Floor locks for added safety and convenience
- Phenolic casters provide lower rolling resistance
- Durable roller design
- Floor brake can be added at optional cost to prevent the unit from moving during battery changes





# BATTERY ROLLER STANDS

The increased use of roll-out designs in lift trucks has greatly improved change efficiency and speed. To keep pace, your operations need a simple, robust and dependable battery roller stand that can handle the load day-in and day-out for years to come.

All models are precisely engineered and constructed with a fully welded oversized frame, oversized rollers and bearings, plus integrated safety and bump stops to maximize efficiency without compromising safety.

## Product Features

- 100mm fully welded structural frame
- 363kgs capacity charger shelf (optional)
- Rubber backstops
- Battery safety stops
- 25mm diameter adjustable legs
- Polyethylene covered rollers
- Acid proof powder coat paint
- 10 year warranty on rollers
- Adjustable legs +/- 25mm



*Triple Roller Stand & Charger Shelf Installation*

## Product Options

- Fully welded standard/bolt-on charger shelf
- Ventilation kits for direct gas extraction
- Polyethylene drip trays
- Cable management systems
- Customized sizes and colours available



*Double Roller Stand with Optional Charger Shelf*



*Single Roller Stand*

# **MULTI-LEVEL RACKING SYSTEM**

The Battery Racking System is the foundation for all well engineered battery changing rooms. Our Racking System is the best-in-class and has proven itself to stand the test of time. The racks are fully welded and baked with an acid proof powder coating to ensure maximum durability.

All Racking Systems come with an integrated battery safety stop and optional removable drip trays, constructed from lightweight and flexible polyethylene. This design ensures the drip trays will not deteriorate. We also provide universal mounting plates which are designed to accommodate most styles of battery connectors.





# VENTILATION

Proper ventilation is crucial to the health and safety of your battery room. We are the only manufacturer to provide a unique at-the-source extraction system that is fully integrated into the battery rack support structure. The entire battery rack support structure is completely enclosed, with only the front being exposed. This enclosure now becomes a fume hood around all batteries.

With the exhaust vents situated directly behind the batteries, the system constantly pulls cool air over the battery removing all harmful gases, while simultaneously cooling the batteries and ensuring longevity of your assets.





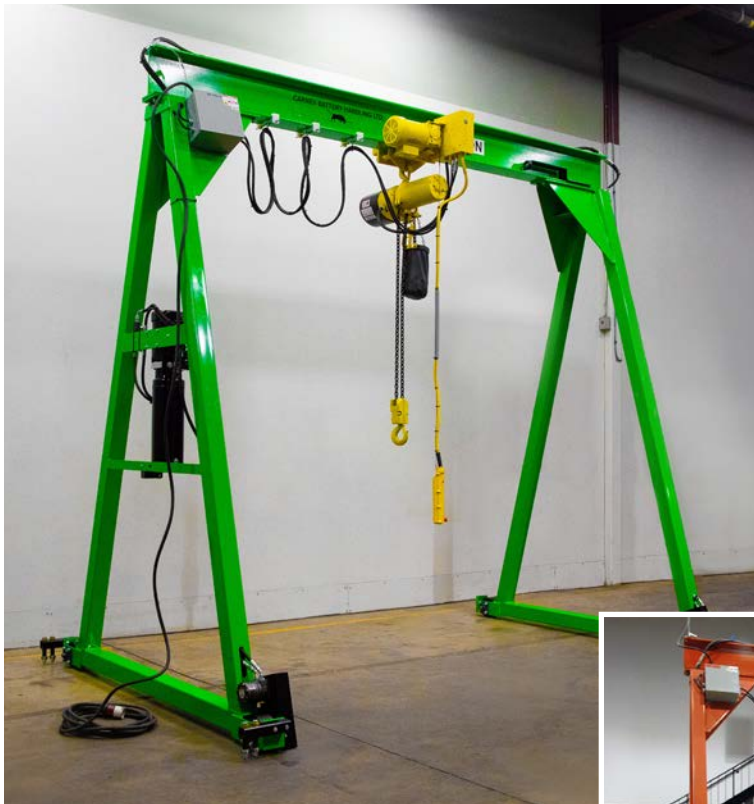
# GANTRY CRANE

Even with the increased use of the roll-out battery extraction, there remains a need for safe, reliable and effective lift-out gantry systems to support legacy and specialized equipment.

Our range of gantry cranes are available in both fixed and mobile configuration with manual and hydraulic drive. Our unique hydraulic drive system uses positive traction on both sides to reduce twisting and frame stress. This only requires a floor guide on one side, which allows for better workspace utilization.

## Product Features

- Rugged all-welded steel construction finished in acid proof powder coating
- Up to 2,722kgs lift capacity
- Full range of sizes from 5.5m span and 3m clearance
- Available in fixed or mobile configurations
- Mobile cranes can be manually powered or hydraulically driven
- Hydraulic Gantry Cranes (HGC) systems provide positive traction to both sides of the crane
- Meets or exceeds OSHA regulations
- We can offer a high degree of customisation to our crane systems to meet the customer's exact requirements



# SBR

## STATIONARY BATTERY RACK

Battery lift-out applications demand specialized solutions for safe and efficient handling of your batteries. The SBR range of racks have been engineered with a focus on safety, reliability and durability without compromising on their day-to-day usability. Based on our years of experience, the SBR models have been uniquely designed with left to right rail alignment, meaning there are no minimum battery widths or risk of a battery falling through if placed incorrectly.

### Product Features

- Left to right rail alignment
- Fully sealed steel-core rail design
- Available in standard and custom widths
- Matched bolt-on charger shelves
- Integrated ventilation options



*SBR with Optional Ventilation*

# BATTERY LIFTING BEAM

## BATTERY BUDDY

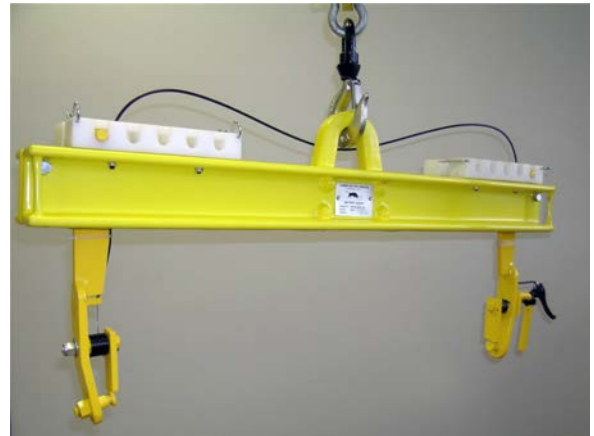
Despite the increased use of roll-out battery extraction in modern trucks, there is still a requirement for a safe, efficient and reliable way to move batteries around your plant and into trucks that still require lifting to change the batteries.

Under these circumstances, the question becomes “What price do you put on safety in your operation”? If safety and productivity are important to your operation, the Battery Buddy is your ideal solution. Assembled from the highest-grade structural aluminum, the Battery Buddy is impervious to acid and will not fatigue or potentially weaken like other beams.

Rated at a lift capacity of 2,722kgs and certified for the very largest batteries, the Battery Buddy has been independently tested for destruction and achieved a failure point consistently in excess of 13,610kgs which is more than 5 times its rated capacity.

## Product Features

- 2 and 4 point pickup using safety chains
- FA-3T forklift attachment and hook extension system
- Custom sizes and configurations available
- Optional extension handle



*BBYS-2-44-SS2 Model*



*BBYS-2-44-SH Model*



*BBYS-2-44-SS2 Model*



*Shown with Optional extension handle*



# PARK AND CHARGE STANDS

## High Frequency Charger Stands

- High Frequency Charger Stand with 2 Shelves positioned both at the front (FF) or on the opposite sides (BB) available
- Custom widths up to 2.4m and 760mm deep to support all common chargers
- All welded construction
- Finished in acid proof powder coating
- Custom height available



High frequency charger stand



(FM-CS-HF-ECL-II-S2-BB) with capacity of 150 lbs per shelf



FM-CS-HF-ECL-II-S2-FF



Custom Charger Stand design

## Floor Mount Charger Shelf (FM-CS)

- Standard depth 760mm
- Standard height 1060mm
- Custom widths up to 2.4m and 760mm deep to support all common chargers Maximum 1.2m span between uprights
- All welded construction
- Finished in acid proof powder coating



FM-CS-28-60



FM-CS Floor Mount Charger Shelf

# ACCESSORIES

## BATTERY ROOM SAFETY EQUIPMENT

The battery room contains hazardous material and your staff must be properly protected and informed of all dangers. EnerSys® has a complete line of PPE, Spill Kits, and safety signage.

### Available Kits

- CBS-4329 – 5 Gallon Spill Kit
- CBS-3056 Spill Kit Bag
- CBS-3055 Battery Handling PPE Kit



# ACCESSORIES

## EYE WASH

Most local health and safety regulations require an eye wash station in close proximity to your battery room. We offer a complete line of eye wash stations to ensure employee safety and compliance with today's safety regulations.



## CABLE RETRACTOR

It is important to keep your charger cables and plugs organized and uncluttered. We offer various products that can keep cables secured, eliminating hazards in the battery charging area.



*Magnetic Cable Guide*



*CBS-221  
Pogo Stick/Cable Retractor*



# PROVEN PERFORMANCE ACROSS GLOBAL INDUSTRIES



## GET IN TOUCH

[www.enersys.com](http://www.enersys.com) | Tel: +41 44 215 74 10 | Fax: +41 44 215 74 11

© 2021 EnerSys. All rights reserved.  
All trademarks and logos are the property of  
or licensed to EnerSys and its affiliates unless  
otherwise noted.  
Subject to revisions without prior notice. E.&O.E.

EN\_PC\_A4\_R010