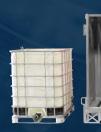




BHS offers battery handling equipment for operations of all sizes. Industry-focused engineering, high-quality materials, and Industrial Internet of Things (IIoT) integration give you the exceptional results you need to optimize production while keeping your staff safe.







BH51.com









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About BH5

The history of BHS, Inc. is one of innovation. In 1979, founder William M. Huber turned an idea into a company by providing more effective and efficient battery handling solutions. Today, BHS is a world-renowned supplier of battery handling systems and warehouse equipment and is the largest manufacturer of battery handling equipment in the world.

BHS offers design, engineering, sales, and support to customers around the globe from our 148,000 ft² (45110 m²) manufacturing facility in St. Louis, Missouri, USA. We are dedicated to integrating superior quality into every component while providing you with the best customer service in the industry.



Instant Up-Front Information

BHS1.com keeps you up-to-date with all of the latest material handling products and industry news. Our online resources include product brochures, videos, case studies, tech tips, and more. A dealer login allows you to review product specifications, options, pricing, and freight estimates while you order.

State-of-the-Art Technology

BHS utilizes the most advanced manufacturing practices and automated processes including state-of the-art laser technology, CNC machining, and robotic welders to deliver the quality and lead times that the industry demands.

Worldwide Support & 24-Hour Hotline

BHS offers a team of Certified Service and Installation Technicians to assist worldwide. Our 24-Hour Hotline (1.877.BHS.4YOU) provides around-the-clock support and technical assistance outside of regular business hours.

Sales Order Process

The BHS Sales Order Process is a multi-step process starting with an onsite evaluation to obtain the system requirement details based upon your application demands and budget.

Warranty

The BHS commitment to total customer service and support continues after the sale of all BHS products with a 13-month guarantee against defective parts and workmanship. BHS products have a reputation of quality and durability that our customers know to expect.

Mobile Showroom

The BHS Mobile Showroom (MSR) is a traveling showcase of electrical and warehouse equipment and accessories. The MSR allows you to obtain first-hand knowledge of equipment functionality in the comfort of your facility. The MSR is a perfect tool for our Corporate Trainers to run demonstrations all over the continental United States.

Excellent Training Programs

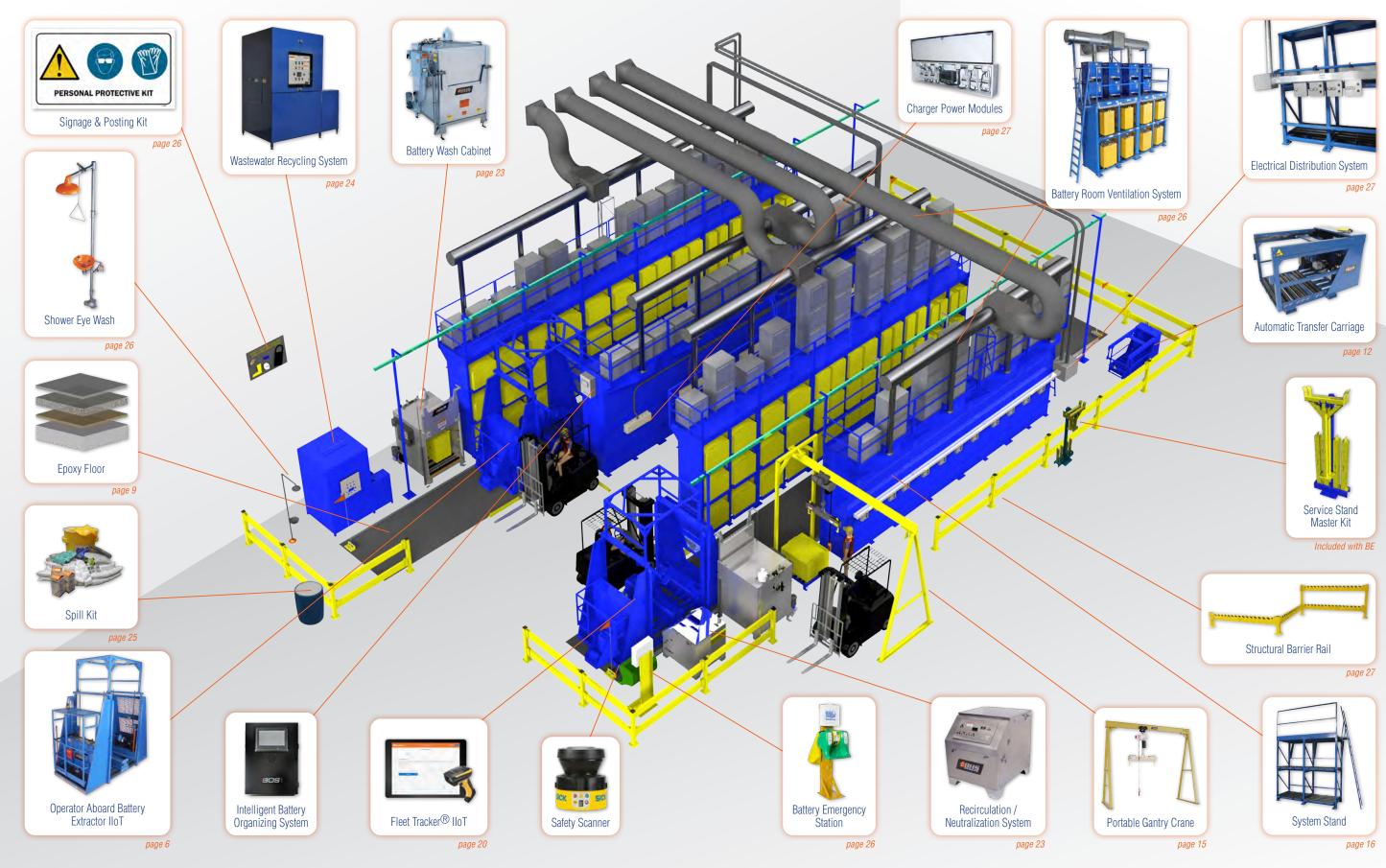
BHS provides multiple outlets for training. The BHS Sales Webinar is a webbased training for dealers to become more familiar with BHS products and services. The BHS Sales Academy is a complimentary 2-day clinic providing expertise in identifying appropriate applications for all BHS solutions.

Custom Equipment

Each manufacturing project is a collaboration between BHS' team of engineers, designers, and fabrication experts to deliver equipment that meets the specific needs of the client. Application, environment and safety are factors considered in providing your custom equipment.

Floor Inspection

BHS Field Technicians inspect the floors of all Operator Aboard Battery Extractor environments prior to installation in order to address any issues limiting the productivity of your Operator Aboard Battery Extractor System. BHS also offers floor grinding and epoxy when required.





Operator Aboard Battery Extractors

Not all forklift battery extraction applications demand the same handling solutions, equipment, or stacking requirements. That is why BHS offers a variety of extraction methods with several options available to customize the system for every facility. All units have features that make them the most versatile, reliable, and cost-effective battery extractors for Industry 4.0 applications. For maximum efficiency and space-savings, BEs are also available in multi-level systems. BHS representatives will help determine which model is best for your application by considering fleet size, room dimensions, battery and charger specifications, budget requirements, and various other factors.



Operator Aboard Battery Extractors now include IIoT technology, which combines industry-leading performance with advanced data collection and analysis. The BE-IIoT protects users and mission-critical assets with adaptive safety features. It also empowers managers with oversight reports and unparalleled control over access.

The BE-IIoT package is standard with BHS Operator Aboard Battery Extractors and includes software, hardware, and smart battery handling equipment that provide important safeguards, protecting users and mission-critical assets. Through a range of operational data-collection capabilities, BE-IIoT technology can extend the working life of your equipment. It also empowers managers with oversight reports and control over access. Internal sensors on the BE track an array of conditions that contribute to the machine's performance. Perhaps most importantly, BE-IIoT requires login from authorized users only. It tracks usage and productivity across every shift.



1. Operator Accountability

The Human-Machine Interface (HMI) touchscreen is mounted to the BE dashboard and communicates with BHS' Web Portal via the cloud (Web Portal access is free for the first 3-months). Only trained, authorized users are granted PIN-number logins required for operating the machine.

2. Asset Protection

Operators can complete a daily checklist to verify equipment is in perfect running condition. This ensures battery handling assets are fully maintained and operate at peak efficiency and safety.

3. Real Time Reports & Asset Management

Access reports about the asset, alerts, and operator activity through the BHS IIoT Web Portal on your device. Manage operator and Web Portal users, and customize email notifications to ensure visibility over critical events, unsafe use, and more.

Predictive Maintenance Sensors Monitor Machine Health



Geospatial Gyroscopes monitor tilt from side-to-side and front-to-back of the BE, sending notifications when factory set parameters are exceeded. This helps identify issues and prevent long term damage to the unit.



Oil Temperature is monitored for increases past a set limit which can identify hydraulic system component failure or maladjustment of relief valves, leading to system overheating and shortened oil life.



Oil Pressure is closely monitored to identify signs of a clogged filter, component failure, or maladjustment which could lead to component damage.



Proximity Sensor indicates when maintenance or tampering of dashboard may have occurred.



Foot Pedal Sensor provides real-time data of battery extractor usage.



See the next page for all available BE-lloT Models



BE-SS

Single Side Battery Extractor

The BHS Single Side Battery Extractor (BE-SS) features a heavy-duty structure with various available options to meet specific needs. The BE-SS is fully hydraulic, track-mounted, and floor-driven for added convenience. The vehicle's control console is located on the rear of the machine for unobstructed operation. The BE-SS also features eight load rollers and an 8" (203 mm) urethane drive wheel.



BE-SL

Single Level Battery Extractor

The BHS Single Level Battery Extractor (BE-SL) is the perfect solution for lower capacity applications with a battery fleet containing up to 99 batteries. The BE-SL makes removing and replacing discharged batteries faster and easier than ever.



BE-DS

Double Stack Battery Extractor

The BHS Double Stack Battery Extractor (BE-DS) is designed for applications with a battery fleet containing up to 149 batteries. As with all BHS Operator Aboard Battery Extractors, the BE-DS is a safe, cost-effective solution to battery handling requirements and saves vital floor space, increasing the capacity of a battery room.



BE-TS

Triple Stack Battery Extractor

The BHS Triple Stack Battery Extractor (BE-TS) offers a greater opportunity to optimize floor space for valuable warehousing functions. This Battery Extractor is ideal for a battery fleet containing up to 299 batteries. Like all BHS Operator Aboard Battery Extractors, the BE-TS is designed and built to expand as battery handling needs grow.



BE-QS

Quad Stack Battery Extractor

The BHS Quad Stack Battery Extractor (BE-QS) offers the best solution for large battery changing operations. The BE-QS provides optimum floor savings while providing the latest technological advancements in battery changing equipment. Quad Stack models are designed for fleets containing 300 or more batteries.



BE-TSN

MTC Direct Replacement Battery **Extractor**

BHS also offers the MTC Direct Replacement Battery Extractor (BE-MT) models: Single Level (BE-SLN), Double Stack (BE-DSN), and Triple Stack (BE-TSN). Each machine is designed and built for applications utilizing a 72" (1828 mm) aisle width.

Disclaimer: BHS is not affiliated with Materials Transportation Company (MTC), and MTC does not endorse or sponsor BHS or BHS products.



Battery Extractors For Non-Lift Truck Applications

BHS also provides custom battery extraction solutions for non-lift truck applications. BHS supplies a range of stationary, mobile, and operator aboard solutions for any battery-operated fleet, such as automatic guided vehicles, personnel carriers, and other specialized handling equipment.

FEATURES & BENEFITS

- BE-IIoT package offers real-time data and reporting, predictive maintenance notifications, operator login accountability, and asset protection (see next page for more details)*
- First 3 months of the BE-IIoT package included. After initial 3 months, additional subscription fees apply.*
- Heavy-duty construction for added reliability
- Low-maintenance design reduces preventative maintenance frequency
- No exposed components for added safety
- Durable powder coat finish resists both acid and scratches
- Manual control of hydraulics for easy operation
- Vacuum extraction reduces wear and tear on batteries
- Vacuum extractor arm adjustable for various reach requirements*
- Non-proprietary hydraulic and electrical components lower replacement part costs

Reference Literature PL-1100 for more information.

- Redesigned hydraulic system for increased flow capacities and consistent function speeds
- Quiet-running dual floor drive system provides positive traction on wet or dry surfaces*
- BHS exclusive Non-Inter-Flow (NIF) hydraulic manifold system stabilizes the lift cylinders to ensure a level roller bed during load transfers*
- Four lift cylinders, in combination with four-point equalization, assure smooth and level vertical movement of the roller bed when empty or loaded*
- Five hydraulic-powered rollers per compartment provide a brake for safe, easy battery transfer*
- Induction-type proximity switch disables floor drive to protect equipment when the extractor arm is outside the envelope of the compartment*



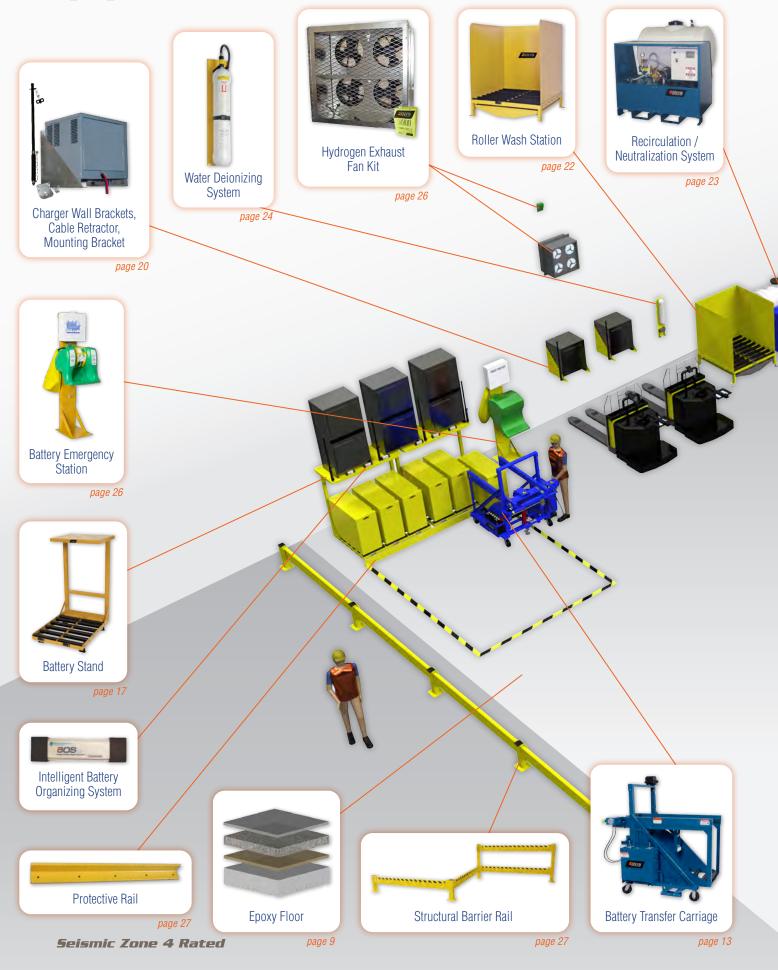
BHS Offers Full Service Installs On

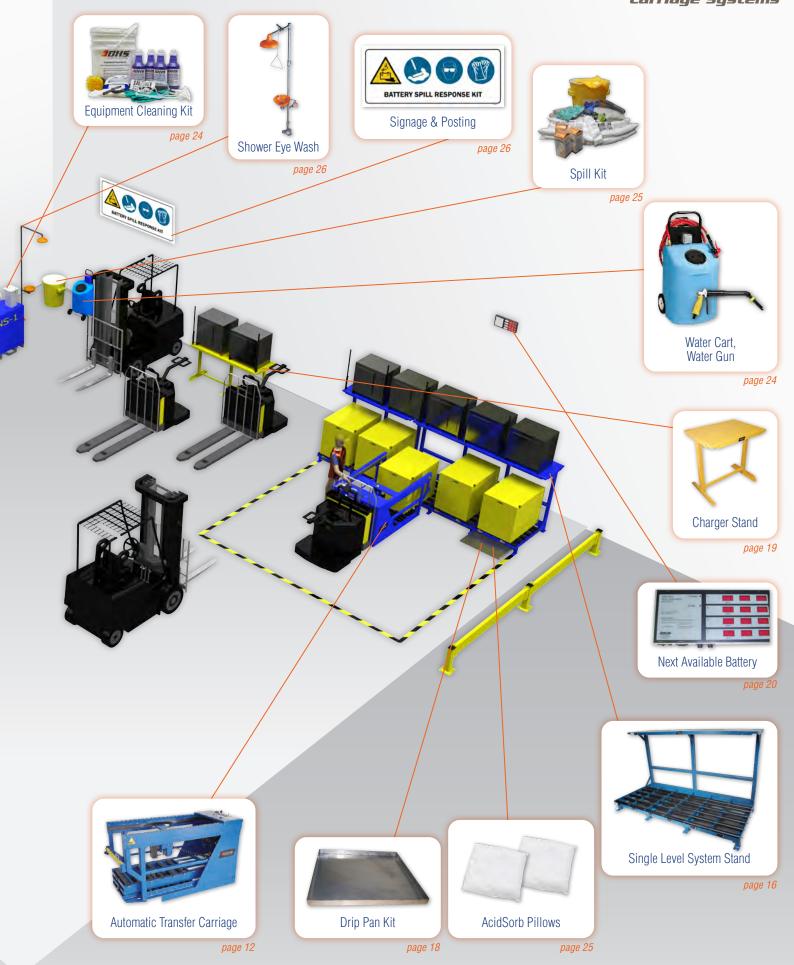
DURABLE EPOXY FLOORING

- Compressive Strength Up to 10,000 PSI
- Exceptionally Level
- Finished Flooring Includes Warranty
- Chemical, Abrasion, and Impact Resistant

^{*} Not available on BE-SS

Carriage Systems





Battery Carts & Carriages

BHS creates exceptional battery handling equipment for lift truck fleets of any size. Our comprehensive line of battery carts and carriages provides an ideal solution for operations that conduct between one and 50 forklift battery change-outs per day. BHS's collection is highly customizable, with a wide range of available options to meet your facility's exact battery handling needs.

Automatic Transfer Carriages

The BHS Automatic Transfer Carriage (ATC) converts an existing pallet truck into an efficient, portable battery changer. The ATC is available in a variety of models with many flexible options to satisfy unique battery handling requirements.

FEATURES & BENEFITS

- Lowers system cost by utilizing existing equipment
- Mounts easily to powered pallet truck—consult BHS for pallet truck specifications
- Powered by the pallet truck battery (12 or 24 V dc available)
- Simple, center-mounted controls for easy operation from left, right, or rear of the carriage
- Standard industrial components utilized in the design, allowing for locally available parts
- Large 2.4" (61 mm) diameter rollers standard
- Ten compartment rollers allow for better wear and load distribution
- Hydraulic-powered push-pull extraction
- Enclosed dashboard sides for added protection against accidental contact with moving parts during operation
- Battery Containment Bar encloses compartment to secure battery during transport
- Rubber Bumpers protect the industrial lift truck fleet during battery change-out
- Spark-proof, poly-sleeved rollers reduce corrosive build-up and extend product life (ATC-24 only)

Reference Literature PL-1500 for more information.



Mobile Battery Extractors

The Mobile Battery Extractor (MBE) is a self-contained extractor that enables battery change-outs anywhere in a facility. The versatile MBE handles a wide variety of applications and is recommended for up to 50 battery changes per day. Note: 16' (4.88 m) aisle clearance required.

FEATURES & BENEFITS

- 24 V dc powerhead eliminates need for a pallet truck
- Combination of compartment rollers and rear friction strips provides increased battery stability during transport
- Pendant control for ease of operation
- Hydraulic-powered with standard vacuum extraction (magnet extraction optional)
- Operator Shield separates operator from roller compartment
- Large 2.4" (61 mm) diameter rollers standard
- Low-maintenance design reduces operating costs
- Built-in battery and charger for convenience
- Standard industrial components allow for local parts availability
- Heavy-duty construction for added reliability
- Durable powder coat finish resists both acid and scratches
- Battery Containment Bar encloses compartment to secure battery during transport
- Lowest roller height of any powered BHS equipment reaching 3.5" (89 mm)
- 4,000 lb (1814 kg) and 5,000 lb (2268 kg) capacities are available
- Rubber Bumpers protect the industrial lift truck fleet during battery change-out

Reference Literature PL-1400 for more information.



Battery Transfer Carriages

The BHS Battery Transfer Carriage (BTC) is a portable battery changer utilizing large, phenolic casters for manual mobility. The BTC is available in five models with various combinations of manual and powered operations.



FEATURES & BENEFITS

- Provides a safe, easy, low-cost battery handling solution
- Versatile height adjustment allows battery extraction from most battery compartments
- Two swivel and two rigid 6" (152 mm) phenolic casters protect floors and provide low rolling resistance
- Many flexible options available to satisfy unique battery handling requirements
- Large 2.4" (61 mm) diameter rollers standard

Reference Literature PL-1700 for more information.

- High 3,000 lb (1360 kg) load capacity rating (based on 40" [1016 mm] long battery—capacity reduced if longer than 40")
- Floor locks prevent unwanted movement of the unit when not in use
- Power enclosure standard on all electric models allowing easy service and maintenance (excludes BTC-MPP)
- Spark-proof, poly-sleeved rollers reduce corrosive build-up and extend product life (BTC-18 and BTC-24 only)

Walkie Transfer Carriages

The BHS Walkie Transfer Carriage (WTC) is a non-powered battery changer designed for smaller battery fleets. The WTC mounts to the user's existing pallet truck to change batteries in side-extraction applications. The WTC comes in three models and offers a dependable and versatile battery changing system at an affordable cost.

FEATURES & BENEFITS

- Heavy-duty construction for added reliability
- Mounts easily to powered pallet truck—consult BHS for pallet truck specifications
- Simple design made for easy maintenance
- Large 2.4" (61 mm) diameter rollers standard
- Hook and chain extraction
- Hand wheel for positive control of the extractor arm
- Spark-proof, poly-sleeved rollers reduce corrosive build-up and extend product life (WTC-24 only)
- Battery Containment Bar encloses compartment to secure battery during transport
- Rubber Bumpers protect the industrial lift truck fleet during battery change-out
- Extractor Arm Latch automatically locks extractor arm in place when retracted

Reference Literature PL-1600 for more information.



Dual Transfer Carriage

The BHS Dual Transfer Carriage (DTC) converts an existing pallet truck into an efficient, portable battery changer. The DTC is equipped with three battery compartments which allow two battery change-outs anywhere in your facility.

FEATURES & BENEFITS

- Three 16" (406 mm) wide battery compartments
- Hydraulic-powered with multi-axis extractor arm
- Magnet extraction ideal for use with narrow batteries
- Combination of lead rollers and friction strips provides increased battery stability during transport
- Lowers system cost by utilizing existing equipment
- Mounts easily to powered pallet truck with 60" (1524 mm) or longer forks
- Pendant control for ease of operation
- Load and unload batteries to stands on either side of the unit
- Durable powder coat finish resists both acid and scratches
- 6,000 lb (2721 kg) load capacity based on 8,000 lb (3628 kg) host truck
- Pivoting magnet allows magnet to be attached to either side of the battery for extracting and replacing from either side of the unit
- Dual SB-175 gray connector harness plugs into the pallet truck and battery, powering the DTC and pallet truck simultaneously

Reference Literature PL-5000 for more information.



The BHS Bridge Trolley (BT) allows for single-person changing operations in lighter battery applications.

Coupled with the standard guide track, the BT is easily pushed by hand for smooth and efficient battery change-outs.

FEATURES & BENEFITS

- Compact design for areas with limited space
- Rack and pinion bed leveling ensures compartments remain level during battery transfer
- Large 6" (152 mm) phenolic casters protect floors and provide low rolling resistance
- Floor locks prevent unwanted movement of the unit when not in use
- Large 2.4" (61 mm) diameter rollers standard
- Spark-proof, poly-sleeved rollers reduce corrosive build-up and extend product life
- Battery Containment Bars enclose compartments to secure batteries during transport
- Designed for pallet truck and light picker applications that are equipped with roller beds
- Two independently controlled roller compartments
- Angle Guide Track (SGT-A) provides alignment and guidance of the trolley (sold separately)
- Steel End Stops (TRK-ES) prevent unit from running off the guide track (sold separately)
- 1,100 lb (499 kg) load capacity per compartment

Reference Literature PL-1800 for more information.

Since Phili

DTC

BT

Roller Transfer Carts

The BHS Roller Transfer Cart (RTC) is a simple but heavy-duty battery changing cart that allows staff to quickly change out a forklift battery.

FEATURES & BENEFITS

- 5" to 13" (127 mm to 330 mm) roller heights available
 Note: Units with roller heights below 10" (254 mm) use outboard-mounted casters and roller heights 10" (254 mm) up to 11" (279 mm) use 5" (127 mm) casters
- Heavy-duty construction for added reliability
- Floor locks prevent unwanted movement of the unit when not in use
- Two rigid and two swivel 6" 152 mm) phenolic casters protect floors and provide low rolling resistance
- Large 2.4" (61 mm) diameter rollers standard
- Spark-proof, poly-sleeved rollers reduce corrosive build-up and extend product life
- 3,000 lb (1360 kg) load capacity

Reference Literature PL-1900 for more information.



Traveling Battery Transporters

FEATURES & BENEFITS

- Allows for one-person changing operations in most applications
- Removable push bars for added convenience
- Large 2.4" (61 mm) diameter rollers standard with 2,400 lb (1088 kg) load capacity
- Spark-proof, poly-sleeved rollers reduce corrosive build-up and extend product life
- Phenolic casters protect floors and provide low rolling resistance
- Track-mounted design; Single Guidance Track (SGT-C3) and Steel End Stops (TRK-ES) are sold separately

Reference Literature PL-1900 for more information.

Hardwood Transfer Carts

FEATURES & BENEFITS

- Recycled, polyethylene decking is acid resistant, nonconductive, and environmentally friendly
- Heavy-duty construction for added reliability
- Floor locks prevent unwanted movement of the unit when not in use
- Two rigid and two swivel 6" (152 mm) phenolic casters protect floors and provide low rolling resistance
- 3,000 lb (1360 kg) load capacity

Reference Literature PL-1900 for more information.





Portable Gantry Cranes

Portable Gantry Cranes from BHS provide safe and easy vertical extraction for most standard lift truck batteries. They are significantly more cost-effective than bridge cranes, and their modular design allows for easy system expansion.

Non-Power Drive Gantry Cranes

Change forklift batteries in vertical-extraction fleets with a Non-Power Drive Gantry Crane (PGC) from BHS. These powder-coated, all-steel gantry cranes are available with 2-ton or 3-ton capacities to match virtually any battery fleet.

FEATURES & BENEFITS

- Modular design allows for easy system expansion
- A variety of beam spans and capacities are available for specific applications
- 8" (203 mm) swivel casters are standard to allow for easy mobility of the entire gantry crane
- High 10' (3 m) under-beam clearance is standard on all units
- Cable Festoon Kit keeps cables secure during operation of manual trolley

Reference Literature PL-2700 for more information.

Power Drive Gantry Cranes

Power Drive Gantry Cranes from BHS are available in 2-ton and 3-ton models and can be tailored to suit overhead battery extraction forklift fleets. These powered gantry cranes provide smooth transitions thanks to variable frequency drive technology, allowing for safe and productive use in various applications.

FEATURES & BENEFITS

- The latest variable frequency drive technology provides smooth acceleration/deceleration of the gantry
- Modular design allows for easy system expansion
- A variety of beam spans and capacities are available for specific applications
- High 10' 5" (3.2 m) under-beam clearance is standard on all units
- Cable Festoon Kit keeps cables secure during operation of motorized trolley
- Multiple wheel and track options are available

Reference Literature PL-2700 for more information.





Shown with Electric Hoist & Motorized Trolley, Battery Lifting Beam, Hardwood Battery Stations, and Hardwood Wash Station

Battery Lifting Devices

BHS offers a variety of durable Battery Lifting Devices that efficiently handle industrial batteries in all vertical extraction applications. Whether using an overhead bridge crane or lift truck, BHS Battery Lifting Devices offer the perfect solution to provide balance and support while handling lead-acid batteries.

Battery Lifting Devices

Forklift Battery Lifting Beams and Fork Attachments are integral parts of any vertical-extraction application. To learn more about which model works for you, call our sales team at 1.800.BHS.9500.

Reference Literature PL-2900 for more information.











Fork Attachment (FA-2.5)

BLB Staging Stand (CS-BLB)

Battery Lifting Beam (BLB)

Battery Lifting Beam-Four Point (BLB-4PT)

Hnist Kits

BHS offers two ton and three ton capacity electric chain hoists with either a ball trolley or motorized trolley. BHS Hoist Kits are designed for use with BHS Gantry Cranes.







Electric Hoist & Manual Ball Trolley Kit (2A-1)

Battery & Charger Storage

Save valuable space while protecting fleet investments with BHS Battery Stands and Charger Stands. Custom designs and a wide range of optional features provide dependable storage for forklift batteries and chargers of every style.

System Stands

Heavy-duty, steel-constructed Forklift Battery Stands complement an Operator Aboard Battery Extractor. The complete line of Forklift Battery Stands is available in Single Level, Double Stack, Triple Stack and Quad Stack models to accommodate system requirements.

FEATURES & BENEFITS

- Spark-proof, poly-sleeved rollers reduce corrosive build-up and extend product life
- Models available in various compartment widths to accommodate batteries from 12" to 48" (305 mm to 1219 mm)
- 40" (1016 mm) standard compartment depth
- Hitch pin-secured roller axles for ease of maintenance
- Rearward-pitched battery slots to assist in battery retention
- Welded system feet
- Six rollers per compartment
- Charger connector mounting holes

Reference Literature PL-2000 for more information.

- Foot pad dimensions for DS, TS, and QS models: 0.75" x 6" x 8" (19 mm x 152 mm x 203 mm); for SL models: 0.25" x 3" x 5" (6 mm x 76 mm x 127 mm)
- Charger cable routing holes help protect cables from damage (DS, TS, & QS models only)
- Charger anchoring slots for securing most makes of
- Auxiliary backstops for DS, TS, and QS models provide compartment depths from 27.5" to 40" (699 mm to 1016 mm); for SL models: reduce compartment depth to 34" (864 mm)



BS-TS

Battery Roller Stands

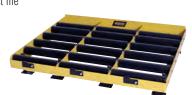
The BHS Battery Roller Stands (BS) provide convenient storage for industrial lift truck batteries. Constructed with heavy-duty steel, the BS is available in various widths and compartment sizes to meet specific requirements.

Note: Roller height required when ordering.

FEATURES & BENEFITS

- Charger shelves come slotted, allowing for optional 6" (152 mm) shelf extension between stands
- Spark-proof, poly-sleeved rollers reduce corrosive build-up and extend product life
- Standard roller height available from 4.5" to 10" (114 mm to 254 mm)
- ± 0.5" (± 13 mm) adjustable legs for added convenience
- Charger shelf comes standard
- CR-1 cable retractor mounting holes

Reference Literature PL-2000 for more information.





BS18-3-1

Adjustable Height Battery Stand

The Adjustable Height Battery Stand (BS-OF) provides a safe and durable storage location for forklift batteries. Constructed with heavy-duty steel, the BS-OF is conveniently built to store up to two batteries. The threaded rod feet are positioned on the outside of the frame, allowing the roller height to be adjusted from 4.5" to 10" (114 mm to 254 mm). The auxiliary backstop (adjustable in six positions or can be removed) provides compartment depths from 18" to 49.5" (457 mm to 1257 mm). The BS-OF is the perfect solution for battery storage maintenance needs.



BS18-2-0F

FEATURES & BENEFITS

- Two battery compartments
- Spark-proof, poly-sleeved rollers reduce corrosive build-up and extend product life
- Hitch pin-secured roller axles for ease of maintenance
- Seven rollers per compartment

Reference Literature PL-2000 for more information.

- Threaded rod outboard feet with adjustable roller height from 4.5" to 10" (102 mm to 330 mm)
- Adjustable backstop provides compartment depths from 18" to 49.5" (457 mm to 1257 mm)
- "-R" models include battery compartment dividers for additional vertical safety



Lift trucks designed without battery roller beds, requiring non-traditional battery exchange with a pallet truck are the perfect application for the Fork Access Battery Stand (BSFA). The BSFA stores a single battery, accepting a variety of battery sizes, and is available in models compatible with either standard 18" or 27" (457 mm or 686 mm) pallet trucks. BSFA models provide an option in charger storage (charger shelf, vertical-mount, or neither).

Reference Literature PL-2000 for more information.



BSFA-526

Traveling Battery Stands

The BHS Traveling Battery Stand (TBS) is track-mounted with the capacity to hold both a charged battery and a discharged battery during battery change-out. The TBS also provides a location for the discharged battery to recharge. Note: Roller height required when ordering.

FEATURES & BENEFITS

- ± 0.5" (± 13 mm) adjustable legs for added convenience
- Spark-proof, poly-sleeved rollers reduce corrosive build-up and extend product life
- Efficient one-person changing system
- Easy-grip push handles
- Available with two (2TBS) or three (3TBS) compartments
- 6" (152 mm) minimum roller height (only 6" height is non-adjustable, anchored to floor)
- 3,600 lb (1633 kg) total capacity

Reference Literature PL-2000 for more information.



TBS

Battery Service Stands

The BHS Battery Service Stand (BSS) is constructed with heavy-duty steel and provides a convenient place to temporarily store an industrial battery during lift truck service. The BSS is also ideal for storing a Drop-In Roller while not in use. Note: Roller height required when ordering.

FEATURES & BENEFITS

- ± 0.5" (± 13 mm) adjustable legs for added convenience
- Spark-proof, poly-sleeved rollers reduce corrosive build-up and extend product life
- Standard roller height available from 4.5" to 10" (114 mm to 254 mm)
- 40" (1016 mm) standard roller bed depth

Reference Literature PL-2000 for more information.





BSS-15

Hardwood Battery Stations

The BHS Hardwood Battery Station (HBS) is ideal for overhead extraction applications as the battery compartment is equipped with plastic decking to secure the battery as it is placed on the stand. Note: Drip Pan Kits are available specific to HBS.

FEATURES & BENEFITS

- Charger shelf standard on all models
- Recycled, polyethylene decking is acid resistant, nonconductive, and environmentally friendly
- 12" (305 mm) standard height from floor to top of plastic decking
- CR-1 Cable Retractor mounting holes and SB connector mounting holes
- Charger shelves come slotted, allowing for optional 6" (152 mm) shelf extension between stands
- Charger anchoring slots for securing most makes of chargers
- Dust rail constructed at tapered angle in center of stand preventing accumulation of debris

Reference Literature PL-2800 for more information.



HBS-96

Drip Pans

BHS Drip Pans help contain spills, protect the floor, and maintain a safe environment in the battery room. Drip Pans are available for System Stands and Hardwood Battery Stations.



Drip Pan Kits (DK)



HBS Drip Pan Kit (DP-SS)

Charger Stands & Multi-Tier Charger Stands

FEATURES & BENEFITS

- Heavy-duty construction for added reliability
- Charger anchoring slots for securing most makes of chargers
- CR-1 Cable Retractor mounting holes
- 800 lb (363 kg) to 1,200 lb (544 kg) capacity per shelf
- Single shelf models include fluid corners on the charger shelf increase product longevity
- Single Shelf design features slotted charger shelves, allowing for optional 6" (152 mm) shelf extension between stands as well as SB connector mounting holes

Reference Literature PL-2100 for more information.





Charger Stand Kits

Charger Stands are available in three models: CS-VHK-1 is designed to mount one wall-mount charger, CS-VHK-2 is designed to mount two wall-mount chargers (either back-to-back or side-by-side), and the Quad Charger Stand Kit (CS-VHK-4) is designed to mount four wall-mount chargers.

FEATURES & BENEFITS

- Heavy-duty construction for added reliability
- Stand anchors securely to the floor
- Fully adjustable at any level

Reference Literature PL-2100 for more information.



CS-VHK-2-M CS-VHK-4
Shown with chargers in Shown in back-to-back side-by-side configuration configuration

Vertical Charger Stands

Vertical Charger Stands (CS-VMP) are available in three models, providing a safe, convenient location for vertical mount chargers.

FEATURES & BENEFITS

- Heavy-duty construction for added reliability
- Designed and built specifically for vertical-mount chargers
- Available mounting for up to three chargers
- Optional arm allows charger cables to be routed over a battery stored on a BSXX-1 battery stand, and provides a convenient location for SB mount and connection
- Frees up valuable floor space

Reference Literature PL-2100 for more information.

Vertical Charger Mount

The Vertical Charger Mount (VCM) is mounted to a charger stand or racking to accommodate chargers that are typically mounted to walls.

FEATURES & BENEFITS

- Heavy-duty construction for added reliability
- Charger mounting holes for securing most makes of chargers
- Frees up valuable floor space

Reference Literature PL-2100 for more information.

CS-VMP-2

CS-VMP-2 shown with optional Arm and Battery Stand



Charger Wall Bracket

The Charger Wall Bracket (CWB) is sturdy, easy-to-install, and an economical solution for mounting battery chargers.

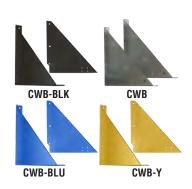
FEATURES & BENEFITS

- Helps prevent charger damage
- Frees up valuable floor space
- Supports up to 400 lb (181 kg) when mounted on a wall with sufficient bearing strength
- 24.13" (613 mm) deep x 24.13" (613 mm) tall
- Made of galvanized steel to prevent corrosion. Also available with yellow (CWB-Y), black (CWB-BLK), or blue (CWB-BLU) powder-coat

Reference Literature PL-2100 for more information.



CWB mounted with charger



High Frequency Charger Wall Bracket

The CWB-V1-KD charger wall bracket offers a sturdy and economical solution for wall-mounting high-frequency forklift battery chargers. The "knock down flat" design allows for efficient shipping. Assembly hardware is included in addition to a Cable Retractor Mounting Bracket (Cable Retractor sold separately).

FEATURES & BENEFITS

- Helps prevent charger damage and frees up valuable floor space
- 22" (559 mm) deep x 24.0625" (611 mm) tall
- 6.5" (419 mm) storage width
- Made of galvanized steel (CWB) to prevent corrosion. Also available with black powder-coat (CWB-V1-KD-BLK).
- 400 lb (180 kg) capacity when mounted on a wall of sufficient strength

Reference Literature PL-2100 for more information.



CWB-V1-KD can also mount to CS-VHK series stands

Cable Management

When battery cables are unsecured, battery rooms can quickly become hazardous. BHS offers a variety of reliable products which carefully secure cables in place to eliminate clutter and prevent damage.

Reference Literature PL-2100 for more information.



CR-MT made from galvanized material to prevent corrosion. Also available with vellow (CR-MT-Y), black (CR-MT-BLK), or blue (CR-MT-BLU) powder-coat.



Cable Retractor Mounting Bracket (CR-MT)



Magnetic Cable Mount (CR-M)



Heavy Duty Cable Retractor (80912001)



CWB-V1-KD

Cable Retractor (CR-1) 7 LB. CAPACITY



Cable Retractor (CR-1-50) 7 LB. CAPACITY



Cable Retractor, Extra Service Capacity (CR-ESC) 17 LB. CAPACITY

Battery Fleet Management

Simplify your forklift battery fleet management strategy. BHS offers several management tools to provide advanced solutions for fleet inventory and monitoring. These systems help to prolong the life of forklift batteries, reduce maintenance costs, save time, and increase productivity. providing a quick return on investment in various applications.

FleetTracker®

The BHS Fleet Tracker® IIoT (FLT-IIOT) is a battery fleet management system utilized by corporate managers, battery room supervisors, and Operator Aboard Battery Extractor operators. Fleet Tracker® uses the latest technology to provide a detailed look into an organization's battery inventory to help managers reduce maintenance costs, improve profitability, and increase productivity.

See the next page for more information on this efficiency boosting solution.

Reference Literature PL-2600 for more information.



FLT-IIOT

Next Available Battery

The BHS NAB-2000 is an advanced, fully-adaptive monitoring and display system for use with industrial lead-acid battery chargers. The system may be connected to charging systems ranging in size from 10 to 500 chargers.

Reference Literature PL-3700 for more information.



NAB-2000



Fleet Tracker® Streamlines & Monitors Battery Room Operations

Lead-acid forklift batteries are the most reliable source of motive power in the industry, but they require strict management to operate at peak efficiency. Without a battery rotation plan in place, you can expect inefficiencies such as overused batteries with poor run-times, more frequent battery exchange, underused batteries costing ongoing storage and maintenance fees, and battery over-purchasing to name a few. **Poor battery room practices ultimately affect the productivity of the entire forklift fleet.**

Fleet Tracker is an advanced solution configured to your battery room to streamline the battery change-out process, ensuring accurate battery picking and improved workflow. Fleet Tracker also tracks operational performance and battery maintenance tasks such as battery watering, equalizing, and washing. Battery room operators are equipped with a touchscreen tablet with a lightweight barcode scanner and barcoded assets to efficiently complete tasks as prompted.



Comprehensive Data Collection for Advanced Fleet Management

The Fleet Tracker system collects critical information about the processes and assets in the battery room that can be viewed through BHS' IIoT Web Portal where facility and corporate managers can view real-time data and reports. Fleet Tracker gives battery room supervisors valuable performance analytics so they can make informed decisions about equipment, personnel responsibilities, and policies. Additionally this visibility over battery room practices helps identify failing equipment and forecast future needs.

In addition to detailed reports, IIoT Web Portal users have access to Fleet Tracker's Facility Dashboard which conveniently provides a snapshot of key battery and system health information such as the items below.















AVAILABLE BATTERIES PER POOL AVERAGE Battery Change-Out Time BATTERIES DUE FOR WASH BATTERIES DUE FOR WATER BATTERIES DUE FOR EQUALIZATION BATTERIES OUT FOR REPAIR

TRUCKS OUT FOR REPAIR

Forklift Battery Maintenance

Forklift batteries are complex, valuable assets. It pays to take good care of them. Regular maintenance extends battery lifespans while improving performance. The benefits of proper battery maintenance include lower costs, higher operational efficiency, and a more successful material handling operation overall.

Roller Wash Stations

The BHS Roller Wash Station (RWS) helps keep battery wash water and overspray contained. The RWS comes standard with poly-sleeved rollers for corrosion resistance. The RWS is ideal for use with the BHS Recirculation / Neutralization System (RNS) and is also available in stainless steel.

FEATURES & BENEFITS

- 11.75" (298 mm) roller height standard, 48" (1219 mm) side panels, and 4,000 lb (1814 kg) load capacity
- Spark-proof, poly-sleeved rollers reduce corrosive build-up and extend product life
- Drain tray is removable for easy cleaning and has 1" (25 mm) NPT coupling
- Designed as stand-alone or for use with Recirculation / Neutralization System (RNS)

Reference Literature PL-2400 for more information.



Hardwood Wash Stations

The BHS Hardwood Wash Station (HWS) helps keep battery wash water and overspray contained. The HWS is ideal for use with the BHS Recirculation / Neutralization System and is also available in stainless steel.

FEATURES & BENEFITS

- 12" (305 mm) deck height standard, 48" (1219 mm) side panels, and 4,000 lb (1814 kg) load capacity
- Recycled, polyethylene decking is acid resistant, nonconductive, and environmentally friendly
- Drain tray is removable for easy cleaning and has 1" (25 mm) NPT coupling
- Designed as stand-alone or for use with Recirculation / Neutralization System (RNS)
- Custom-built models available to meet specifications

Reference Literature PL-2400 for more information.



Mobile Wash Stations

The Mobile Wash Station (MWS) provides a cost-effective solution for cleaning electrolyte and other residue from lift truck batteries. Extend the life of batteries and reduce electrical problems in forklifts by using this essential maintenance equipment regularly. MWS models contain fork pockets for easily transporting the wash station to where workers need it (not to be used while battery is on MWS). Dual anchor points allow the station to be secured during transport or permanently secured inside a facility.

The MWS-47 models have stainless steel frames and utilize a combination of poly lead rollers and front-to-back friction strips to simplify loading and unloading in vertical- or side-extraction applications. The splash curtain helps contain overspray and runoff. When full mobility is needed, for example when servicing multiple locations, BHS offers models that include two water tanks, one for clean water and one for used wash water. Model MWS-47-SS-KIT includes two 330 gallon mobile water tanks, and model MWS-47-WT-SS is completely self-contained, with two 120 gallon water tanks integrated onto the frame. The water tanks allow you to wash forklift batteries on-site, regardless of water source or availability of drains, and haul away dirty wash water for EPA-compliant disposal.

The MWS-72 is designed for use with Gantry Crane systems or other vertical-extraction applications. Choose between the MWS-72, which has a powder-coated steel frame, and the MWS-72-SS, which is made of stainless steel. It features wide, non-skid steps and a 15" walkway around the recycled, polyethylene wash deck for operator access to the battery.

Reference Literature PL-2400 for more information.



Battery Wash Cabinets

The BHS Battery Wash Cabinet (BWC) cleans harmful contaminants from a battery's surface, which extends the life of the battery and reduces electrical problems in lift trucks. The BWC is available in four models and is constructed with stainless steel for durability. The BWC models offer adjustable wash options and water nozzles providing efficient cleaning for various battery types.

FEATURES & BENEFITS

- Adjustable wash times for efficient cleaning
- Stainless steel construction offers rugged durability
- Low operating cost combined with labor-saving cleaning process saves time and money
- Adjustable legs to accommodate uneven floors (excludes BWC-1-M-DD)
- Heavy duty door for industrial applications
- Adjustable water nozzles to accommodate various battery sizes
- Separate air/water delivery manifolds for optimum efficiency (excludes BWC-1 and BWC-1-M-DD)
- Contact factory for other voltages and frequencies

Reference Literature PL-2400 for more information.





BWC-1-M-DD





BWC-1-M-DD-120-KIT



Recirculation / Neutralization Systems

The BHS Recirculation / Neutralization System (RNS) controls, filters, and recirculates water used for cleaning industrial batteries. The RNS comes standard with a spray wand, 10' (3 m) hose, and a 12 V dc sump pump with float switch. The BHS Battery Wash Cabinet (BWC), coupled with the RNS, creates a closed loop system that contains and controls the water used for cleaning industrial batteries.

FEATURES & BENEFITS

- Removable front panels for convenient maintenance
- Fewest number of components in the industry lowers operating costs
- · Works with manual or automatic BHS Battery Wash Cabinets
- Auto shut-off and indicator light for filter service

- Closed loop system (when coupled with a BWC) eliminates water supply and floor drains Filters down to 5 microns; easy filter replacement
- Rotary gear pump features stainless steel internal parts for extended component life

Reference Literature PL-2400 for more information.







RNS-4-SS

RNS-1

Wastewater Recycling Systems

The BHS Wastewater Recycling System (WRS) is an automated, single structure, recycling system, providing on-site wastewater management. The WRS treats, filters and processes industrial wastewater to remove hazardous contaminants and particulates. ensuring that the recycled water is clean.

FEATURES & BENEFITS

- Reclaims wastewater at a rate of two gallons per minute
- Automatic pH adjustment control neutralizes water for removal of hazardous materials
- Specially formulated reactive separating agent used in flocculation process removes soils, hydrocarbons, metals, etc. from wastewater
- Sludge generated is non-hazardous, non-leachable, and certified landfill friendly for standard trash disposal
- Wash water effluent micron filtered both before & after treatment
- Produces clean, reusable water
 - * Standard on WRS-1 or optional on WRS-2-KIT

Visual and audible alarms for operator notification on low supply of paper, flocculent, or caustic

- Alarm activation disables WRS, preventing untreated water from going down the drain
- Ozone purification removes bacteria for odor control and extended water life*
- Independently lab tested and approved to safely process wastewater while meeting EPA and NJDEP regulations
- WRS-2-KIT includes wastewater transfer pump

WRS-2-KIT



WRS-1

Reference Literature PL-4200 for more information.

Battery Watering Devices

BHS offers a complete line of battery watering devices to match the watering system to the fleet size and requirements. Whether watering forklift batteries by hand or with an automated system, BHS equipment helps staff efficiently deliver water with control and accuracy to help get the most out of your battery life span.

Reference Literature PL-1300 for more information.



10 Gallon Watering Cart DC Powered (WC-HYDRO-DC-KIT)



10 Gallon Watering Cart AC Powered (WC-HYDRO-10-KIT)



20 Gallon Watering Cart AC Powered

(WC-HYDRO-20-KIT)





26 Gallon BE Mounted Water Cart (BE-WC-SS)





Battery Watering & Filling System Tank (FST-330)

Equipment Cleaning Kit

The Equipment Cleaning Kit (ECK-4) contains all of the necessary materials to clean and neutralize battery acid build-up and residue from batteries and battery handling equipment. The ECK-4 is easy to transport and allows technicians to clean and neutralize equipment while on the go.

Reference Literature PL-3200 for more information.



Battery Room Saftety & Accessories

Accessories from BHS simplify battery handling, support crucial maintenance tasks, and provide compliance with federal safety regulations.

Battery Spill Kits

Battery Spill Kits are compact, easy-to-use, and fast-acting. Battery Spill Kits make it simple to safely contain, neutralize, and absorb hazardous acid spills and help to meet safety requirements. Additional models are available containing AcidSorb pillows and socks.

Reference Literature PL-3000 for more information.







Spill Kit-20 Gallon Drum (SK-20)



Spill Kit-55 Gallon Drum (SK-55)



Spill Kit Cabinet (SK-CAB)



Spill Kit Wall Mount (SK-WM-1)

Acidsorb

AcidSorb is a granular sorbent that neutralizes and absorbs spilled battery acid (electrolyte) quickly and safely.* AcidSorb provides a visible color change to indicate complete neutralization, is environmentally friendly, and easy to use.

Reference Literature PL-1300 for more information.



AcidSorb ½ Gallon Carton (AS-2)



AcidSorb 5 Gallon Pail (AS-20)



AcidSorb 20 Gallon Drum (AS-80)



AcidSorb 55 Gallon Drum (AS-220)

Acidsorb Pillows

The AcidSorb Pillow (ASP) is designed for placement in battery storage stand drip pans or drain trays to absorb and neutralize acidic drips and boil-over from lead acid batteries.* AcidSorb Pillows provide a visible color change to indicate complete neutralization.

Reference Literature PL-1300 for more information.



ASP

Acidsafe Liquid

AcidSafe Liquid is a heavy-duty de-greaser that neutralizes acid residue and boil-over while cleaning battery terminals and cases. The purple liquid changes color to an orange or yellow when in contact with acids. As it neutralizes, the liquid turns back to purple, indicating a safe, neutral pH range.

Reference Literature PL-1300 for more information.



AcidSafe Liquid 1 Quart Spray Bottle (ASL-QT)



Gallon Bottle (ASL-1)



AcidSafe Liquid 5 Gallon Dispenser Cube (ASL-5)



AcidSafe Liquid 55
Gallon Drum (ASL-55)

^{*} AcidSorb is not for use on hydrofluoric acid (HF) or compounds containing HF. Personnel should be trained and qualified to clean up hazardous materials. Dispose of in accordance with regulations of local governing bodies.

Eye & Safety Stations

Personnel safety is important when working with industrial batteries. BHS offers a range of products to assist in keeping employees safe and in maintaining compliance with safety regulations.

Reference Literature PL-3100 for more information.







Portable Eye Wash (PEW-700)



Personal Protective Kit (PK-1200)



Shower Eye Wash (SEW-500)



Pedestal Mounted Eye Wash (MEW-300)



Battery Emergency Station (BES-1)

Signage & Posting Kits

Improve safety, notify personnel of hidden dangers, and prevent accidents in the workplace with the BHS Signage and Posting Kit (SP-1), which contains nine signs for display in the battery room. SP-1 also helps to clearly identify the location of emergency equipment for quick response. This kit is also available in Spanish.

Reference Literature PL-4300 for more information.



SP-1

Safety Alarms & Response

BHS Safety Alarms & Response equipment is available to assist in monitoring and protecting the battery room.

Reference Literature PL-4400 for more information.



Hydrogen Gas Detector (HGD)



Carbon Monoxide & Smoke Detector (CO-S-D)



Hydrogen Exhaust Fan Kit (HEF-KIT)



Fire Extinguisher & Cabinet (FE-20)

Battery Room Ventilation System

Lead-acid batteries release hydrogen gas during the charging process. Proper ventilation in the battery room is necessary to ensure potentially dangerous gases are diffused. The BHS Battery Room Ventilation System (BRVS) is designed to detect hydrogen gas at low levels and dissipate the gas to prevent accumulation by incorporating the Ventilation Stands, Hydrogen Gas Detector (HGD), Hydrogen Exhaust Fan (HEF), and exhaust duct work into one complete system.

FEATURES & BENEFITS

- Increases battery room safety by monitoring hydrogen levels
- Improves battery room air quality by exhausting gases produced during battery charge
- Exhaust damper on each stand ensures even airflow throughout the entire system
- Spiral steel exhaust pipe for added durability (PVC or other material available upon request)
- Pipes are mounted to the stands, eliminating both the need to attach to rafters and issues caused by high ceilings
- Custom designs available to fit all battery changing requirements
- A complete BRVS aids in compliance with the following standards: NEC 480.9 Ventilation of Battery Rooms, NEC 501.125. (B), 501.105 (1-3), NFPA 2 Hydrogen Technology Code



Reference Literature PL-3900 for more information.

Structural Barriers

BHS Structural Barriers are highly visible safety essentials used to prevent unwanted vehicle and pedestrian access and to protect people, walkways, buildings, and equipment against harm or damage.

Reference Literature PL-3300 for more information.



Compartment Roller Trays

BHS Compartment Roller Trays and Slide Strips are engineered to assist in converting a forklift battery compartment from overhead extraction to side extraction. BHS offers a wide range of models for every application.

Reference Literature PL-2300 for more information.



Charger Remote Display

The Charger Remote Display (CRD-2000) is designed for use in industrial lead-acid battery charging applications. The CRD-2000 provides a remote display of the progress of a charging cycle, for convenient monitoring when the charger's front panel is not visible.

Reference Literature PL-3500 for more information.



CRD-2000

Charger Power Modules

Simplify your battery charger installation with BHS Charger Power Modules (PP). Charger Power Modules are designed to be wired directly from the main power distribution panel through a single 480 V / 3 ph connection. Chargers can then be easily connected and disconnected via twist lock plugs (never connect or disconnect plug receptacle if charger is under load). The power modules can be specified for 4, 6, or 8 chargers per panel and can be mounted directly to BHS Battery System Stands and Charger Stands.

Reference Literature PL-4500 for more information.



PP

Electrical Distribution System

The BHS Electrical Distribution System (EDS) provides flexible power distribution to all 480 V / 3 ph components in an Operator Aboard Battery Extractor System including the Battery Extractor, chargers, and Battery Wash Equipment. The EDS is a stand-mounted, high-density system that is customized using track busway that can be tapped at any location with a simple turn-n-lock connection.

FEATURES & BENEFITS

- Easily accommodates modification or expansion
- Maintenance-free design saves space
- Eliminates power interruptions
- Track Busway consists of four conductors allowing for a maximum capacity of 800 A / 600 V ac or dc
- Circuit Breaker Units tap off power from Track Busway with unique turn-n-lock, "compression fit" connection
- Standard short-circuit capacity for 50 kA
- Circuit breaker units available with standard NEMA L16-20 or L16-30 receptacles
- Aluminum housing provides 100% grounding path, dedicated conductor for ground is also available



EDS

Reference Literature PL-4500 for more information.



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