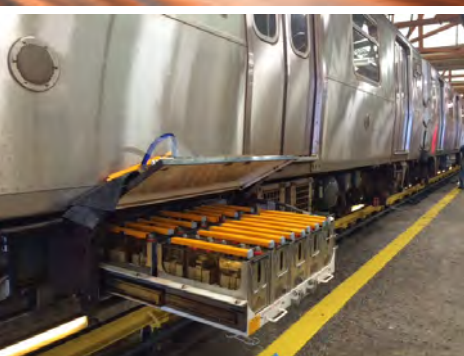


Batteries for **Railway Applications** Products & Services



Certifications





Who we are

Established in 1977, HBL is an Indian company at the forefront of technology, specializing in the development, manufacturing, and marketing of batteries, electronics, and various engineering products

Listed on Indian stock exchanges NSE/BSE, HBL adeptly maneuvered through a dynamic market environment, achieving a robust performance with a turnover of USD 335 million in FY 2026

The company operates five vertically integrated manufacturing units spanning approximately 225,000 square meters

HBL is accredited by the National Accreditation Board for Testing and Calibration Laboratories (NABL)

Credentials

- ⊙ World's second largest Nickel-Cadmium battery manufacturer
- ⊙ Leading manufacturer of wide range of batteries specifically designed for Railways
- ⊙ Leading manufacturer of aircraft batteries - civil and defence
- ⊙ Only Indian company with Pure Lead - Thin Plate (PLT) battery technology
- ⊙ We have a long list of customer specific and OEM approvals
- ⊙ Approved supplier batteries for submarines, torpedoes and other defence applications
- ⊙ Developed batteries, electronics, and charging systems for electric vehicles – Commercial use
- ⊙ Offered the first ever Train Collision Avoidance System (TCAS) for Indian Railways - "Kavach"
- ⊙ Developed Train Management System (TMS) for the Indian Railways
- ⊙ Developed batteries, electronics, Motor and charging systems for electric vehicles – Commercial use

HBL Strengths and USP's

- ⊙ Widest Product Range to address all railway projects – especially at OEM's.
- ⊙ Engineering depth and ability to scale that engineering
- ⊙ Willingness to design a special battery where it makes sense [We can retrofit existing battery boxes and match specifications]
- ⊙ Battery Box design and manufacture in compliance to EN 15085-2 Welding Standard
- ⊙ Willingness to partner with local businesses to service the customer
- ⊙ We are now able to offer Li-Ion batteries specifically designed for Rail applications with extremely long cycle life.



Our Key Markets



Railways



Aviation



Defence



Battery Energy Storage Systems (BESS)



Telecom



Oil & Gas



Data Centres



Industrial UPS / Inverter

Product Offerings for Rail Applications

Railway onboard applications

Unmatched Technology and Expertise

At HBL, we proudly manufacture the world's widest range of Nickel-Cadmium (Ni-Cd) batteries, incorporating cutting-edge technologies such as Pocket Plate, Sintered Plate, Hybrid, and Fibre Plate designs. Our facility is recognized globally for its excellence in Ni-Cd battery production, ensuring reliability and performance that meet the highest standards.

Leveraging our extensive rail industry experience, HBL offers rugged and reliable Ni-Cd batteries specifically designed for metros and mainline passenger coach fleets. Our batteries are engineered for safety and durability, providing:

- **Low Maintenance:**
Enjoy hassle-free operation with minimal upkeep.
- **Long Lifespan:**
Count on extended service life to reduce overall costs.
- **Seamless Retrofitting:**
Easily integrate HBL batteries into most rail cars for enhanced efficiency.
- **Cost-Effective Solutions:**
Perfect for rail OEMs seeking affordable options for new trains.
- **Proven Performance in Challenging Environments:**
HBL batteries are trusted in the most demanding applications



Our Poly Ether Sulfone (PES) cased cells feature a novel golden transparent plastic that is flame retardant and minimizes toxic smoke emissions during external fire events. This innovative design not only enhances safety but also allows for easy visual inspection of electrolyte levels and internal battery condition, ensuring peace of mind for operators.

Whether for retrofitting existing rail systems or equipping new fleets, HBL's Ni-Cd batteries provide unparalleled reliability and performance. Trust in our expertise to deliver the best solutions for your transportation needs.

Quality – HBL has an unwavering focus and commitment to quality and customer satisfaction. All HBL rail battery factories are certified to ISO9001, ISO14001 and ISO 45001. HBL Ni-Cd batteries are designed and type tested according to IEC60623:2017. HBL is certified as per ISO 22163-2023 (IRIS Rev.04)

Compliant Standards:

- ⦿ Exceeds the medium "M" type requirements of IEC 60623 for KFM, KRM & KRMC models
- ⦿ Exceeds the medium "H" type requirements of IEC 60623 for KFH, KRX & KRXC models
- ⦿ Exceeds the medium "X" type requirements of IEC 60623 for KFX
- ⦿ Meets the requirement of UIC 854R
- ⦿ EN 45545-2 / NFPA 130
- ⦿ EN 61373
- ⦿ EN 50272
- ⦿ EN 60077

Quality:

- ISO 9001
- IRIS
- Welding – EN 15085 - 2

Environment:

- Fully recyclable
- ISO 14001

Health & Safety :

- ISO 45001

Lithium Ion Batteries

Engineered to deliver high reliability, safety and performance for modern rail applications. Designed to support critical auxiliary power supplies (APS), HVAC units, passenger information displays, and emergency backup networks, these systems deliver exceptional energy density and operational efficiency within a compact footprint.

HBL's Lithium Iron Phosphate (LiFePO₄) battery systems are offered in compliance to stringent industry standards including EN 50155, EN 50657 and EN 45545-2 fire safety. Designed to withstand rigorous rail environments, lithium battery modules incorporate intelligent Battery Management Systems (BMS) that provide real-time diagnostics and protection against extreme thermal fluctuations, shock, and vibration. Their high charge acceptance, stable voltage profiles, and extended cycle life significantly reduce maintenance overhead and total life cycle costs, making them an essential asset for sustainable, high-availability rail transport.



HBL In-House Fabrication Shop

At HBL, our in-house fabrication shop designed to meet the highest industry standards. Our advanced facilities and skilled workforce enable us to deliver high-quality products tailored to meet the specific needs of Battery enclosures. Available in mild steel (MS) and stainless steel (SS), our battery boxes are designed for various onboard applications, ensuring safety, durability, and performance. Our welding processes are certified to EN-15085-2 CL1 standards, utilizing MIG, MAG, and TIG techniques to ensure strong, reliable joints that stand the test of time.

- **Uncompromising Quality:** We adhere to strict quality control measures, ensuring that every product meets and exceeds industry standards.
- **Custom Engineering Solutions:** Our team collaborates with clients to develop tailored solutions that precisely fit their unique requirements.
- **Expertise You Can Trust:** Our experienced professionals are dedicated to delivering exceptional craftsmanship from concept to completion.



Railway Stationary & Trackside applications

Nickel Cadmium Pocket Plate Batteries

HBL's Nickel Cadmium Pocket Plate battery designs are based on the superior pocket plate technology. A fully integrated modern factory, supported by strong process management and quality controls makes HBL one of the best Nickel Cadmium battery production facilities in the world.

HBL's block batteries are offered in multiple voltage choices and in wide capacity range. NCPP block battery range is designed to comply with IS 10918 & IEC 60623.



Lead acid 2V VRLA

Lead acid is one of the most durable & dependable battery technologies available in the market today.

The HBL's Valve Regulated Lead Acid (VRLA) batteries are designed using Absorbent Glass Mat (AGM) separators that render the batteries spill-proof. The sealed construction ensures that the battery does not leak and is safe in any position.

With a long life expectancy, lead acid batteries are cost-effective and meet advanced safety standards. The Triumph HP series are UL listed and seismically qualified by State of California independent structural engineers.

The battery requires no topping up and has been designed to meet the requirements of a wide range of applications. Triumph HP saves space and maintenance – horizontally mounted in secure racks – the terminals are easily accessible for voltage checks, while allowing the rack to be placed without requiring rear or side access. Cells are 2V – allowing easy interchange of a single cell rather than 12V monoblocs.

Trackside: HBL offer VRLA pure lead monoblocs, and single cells optimised for railway use and designed to be installed with minimum effort.



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