COMMERCIAL VEHICLE
BATTERY SOLUTIONS



BATTERIES THAT MEAN **BUSINESS**

High-performance batteries to keep your business moving

Logistics is more important than ever, with customers expecting faster and more predictable deliveries. In this competitive environment, fleet owners are focusing on total cost of ownership. After all, when a truck is off the road, it leads to customer dissatisfaction, unused labor and capital, and potential fines and penalties.

Exide designed its battery range to reduce the risk of breakdowns and give customers a competitive advantage. You get battery options for any use case, market-leading performance, lower total cost of ownership.

TRUSTED BY LEADING COMMERCIAL VEHICLE MANUFACTURERS

Exide has been supplying lead-acid batteries to car and truck makers for more than 130 years. We design the most technically advanced products in the industry, and were the first to introduce High Vibration Resistant (HVR®) batteries for trucks back in 2008. Vehicle manufacturers trust the quality of our products and our commitment to excellence in manufacturing.

EQUIPMENT ORIGINAL MANUFACTURER

Exide works with leading commercial vehicle manufacturers, including:
Isuzu, Iveco, MAN, Nissan, Renault Volvo Trucks, Scania, Bobcat, Case, Claas, SAME Deutz-Fahr, Evobus, John Deere, Komatsu, New Holland, Wacker Neuson, and many others...





SELECT THE RIGHT EXIDE BATTERY FOR YOUR NEEDS

As a true expert in OE batteries, Exide helps you select the right battery. For fleet owners and installers alike, it is vital to make the right choice for the conditions of use. Three important criteria to consider in battery performance are: vibration resistance, cycling endurance and cranking power.

THREE MAIN FACTORS WHEN SELECTING THE RIGHT BATTERY

VIBRATION RESISTANCE

For trucks with rear-chassis battery installations (e.g. Euro 5/ Euro 6 trucks), robust and high vibration-resistant batteries are mandatory to avoid breakdowns. Vibration resistance is also required for any vehicle operating on bad roads or rough terrain.

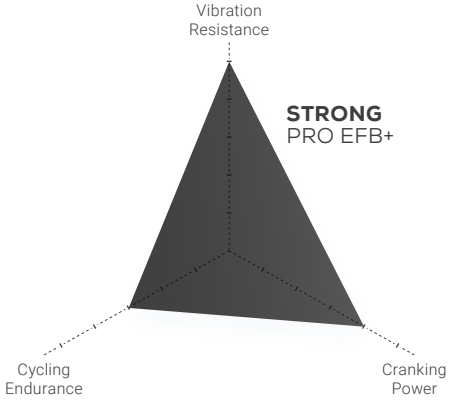
CYCLING ENDURANCE

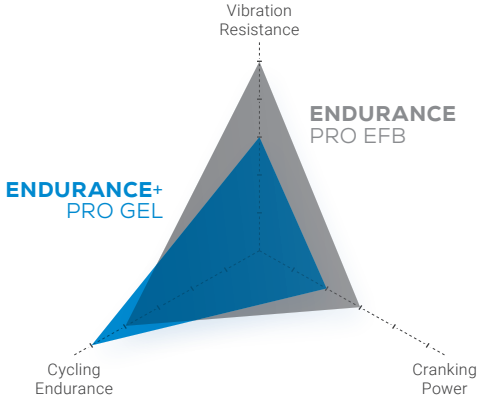
High cycling endurance is important in batteries for long-haul trucks with life on-board, commercial vehicles doing intensive urban deliveries, and any commercial vehicle with extensive energy requirements. This maximizes battery lifespan and ensures a safe battery start.

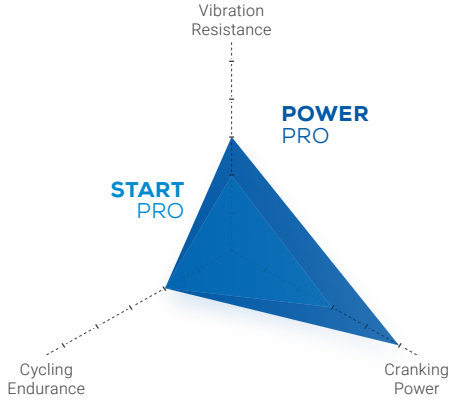
CRANKING POWER

High cranking power allows for engine starts in cold climates and is required from many agriculture and construction vehicles with reliable starting power requirements.

THE PERFECT BATTERY FOR EVERY NEED









STRONG PRO EFB+ **PAGE 6**
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STARTPRO **PAGE 10**

RANGE OVERVIEW & FEATURES

	STRONG PRO EFB+	ENDURANCE PRO EFB	ENDURANCE+ PRO GEL	POWERPRO	POWERPRO AGRI & CONSTRUCTION	STARTPRO
VIBRATION RESISTANCE	■■■■■	■■■■■	■■■□□	■■■□□	■■■□□	■■□□□
CYCLING ENDURANCE	■■■□□	■■■■□	■■■■■	■■□□□	■■□□□	■■□□□
CRANKING POWER	■■■■□	■■■□□	■■□□□	■■■■■	■■■■■	■■■□□
CHARGE ACCEPTANCE	■■■■■	■■■□□	■■■■■	■■■□□	■■□□□	■■□□□
MAINTENANCE	Free	Low	Free	Free	Free	Low

BATTERY RECOMMENDATION BY VEHICLE TYPE & APPLICATION

TYPE OF VEHICLES	APPLICATION	STRONG PRO EFB+	ENDURANCE PRO EFB	ENDURANCE+ PRO GEL	POWERPRO	POWERPRO AGRI & CONSTRUCTION	STARTPRO
Long-haul modern trucks, standard trucks	REAR-CHASSIS INSTALLATION / ROUGH TERRAIN, HIGH VIBRATIONS	✓	✓ 1				
Express delivery (lifters), city bus	POWER-HUNGRY EQUIPMENT, DEEP CYCLING APPLICATIONS	✓		✓ 2			
Long-haul modern trucks	OVERNIGHT STOP / HOTEL FUNCTION	✓	✓ 1				
Standard trucks or vehicles with large/highly compressed engines	EXTREME CLIMATE AND/ OR HIGH CCA REQUIREMENTS				✓		
Tractors, construction machines	SPECIAL VEHICLES					✓ 3	
Standard trucks	STANDARD REQUIRMENTS / OLDER VEHICLE						✓ 3

NOTES

1
- Please top up the battery with distilled water if needed
- The charging system must be compatible with Sb/Ca alloy

If these conditions are not met, choose the **STRONG PRO EFB+**

2
ENDURANCE+ PRO GEL requires charging voltage limitation to max 14,4V. If not compatible, choose the **STRONG PRO EFB+**

3
Top up with distilled water when needed (depending on battery model)

STRONGPRO EFB+ NEW

carbon boost®

SPARE ORIGINAL PART

Exide's Strong battery is now "EFB+".

Exide's StrongPRO battery range is now stronger than ever. A new carbon-based formula of negative active mass enhances the rechargeability and charge acceptance of StrongPRO EFB+ battery. Additionally, the HVR® (high-vibration-resistant) technology enables StrongPRO EFB+ to pass the extreme vibration tests under the new European V4 standard (EN 50342-1:2015).

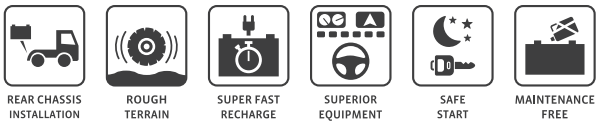
A more robust and more lasting battery means reduced total service cost for fleet owners and truck drivers, allowing less replacements over vehicle's service life and minimized risk of unexpected and premature battery failure.

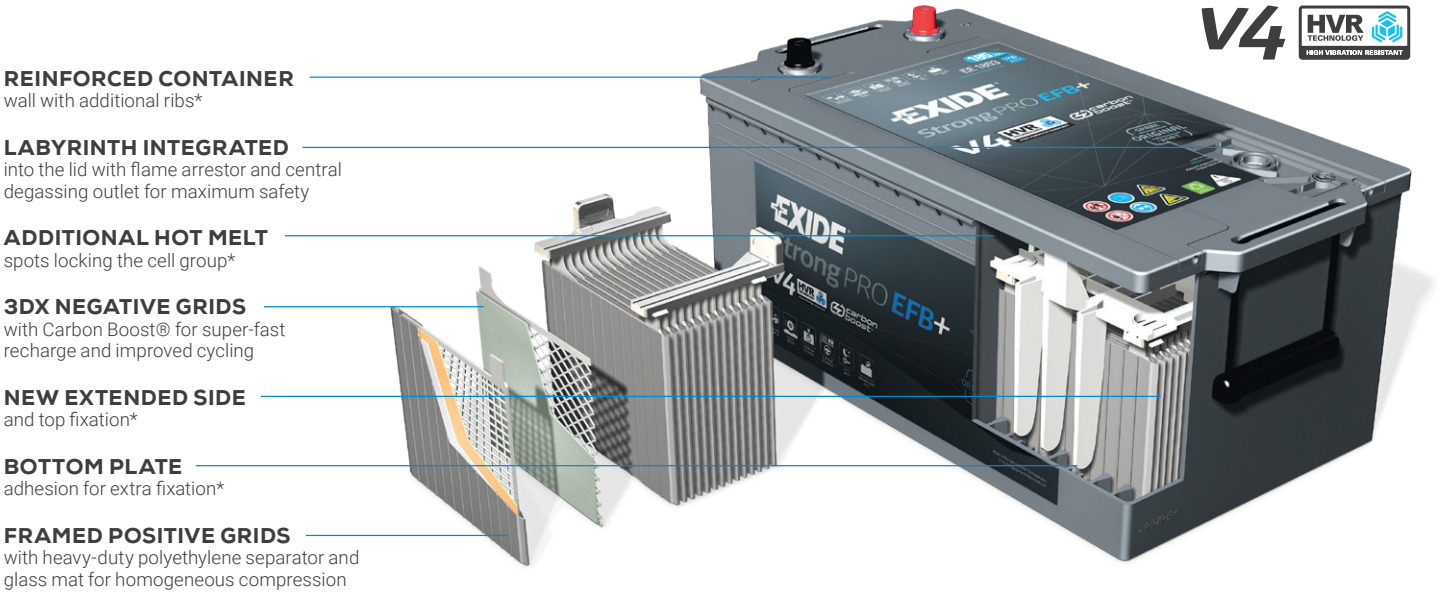
RECOMMENDED TYPE OF VEHICLES / USE CONDITIONS:

Long-haul modern/ standard trucks with rear chassis installations and/or «hotel functions», express delivery and city bus. Ideal for vehicle running on rough terrain, with power hungry equipment and deep cycling applications.

Benefits

- **Better rechargeability and charge acceptance than previous generation StrongPRO** NEW
- **Better control over gassing and stronger anti-stratification effect** NEW
- Extremely robust – with HVR® technology, meeting V4 requirements
- Up to 70% savings on TCO within 2 years period when compared with standard batteries
- Maximum starting reliability after overnight stay
- OE experience inside
- First class safety features
- Maintenance free - no topping up





*Latest generation of Exide's leading HVR® design, meeting V4 requirements (EN 50342-1:2015)

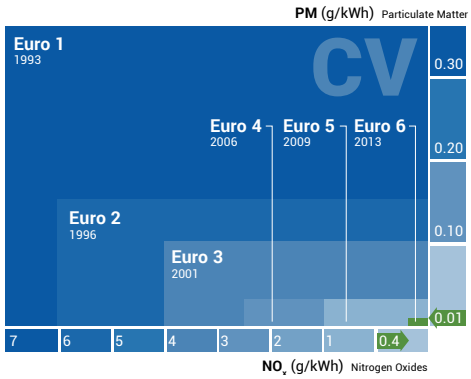
HVR® TECHNOLOGY

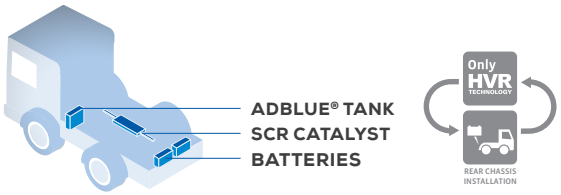
New features in the robust battery design

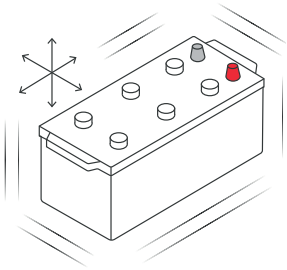
Several economic factors (higher fuel costs, higher road taxes, higher toll & parking charges, and higher charges to enter low emission zones) have led fleet owners to upgrade by purchasing new Euro 5 or Euro 6 vehicles, thus reducing particulate matter and NOx emissions.

Many Euro 5/Euro 6 vehicles have a new chassis layout to integrate the Selective Catalytic Reduction (SCR) system and AdBlue tank, leading truck manufacturers to move batteries into the rear-chassis position.

EMISSION STANDARDS AS DEFINED BY EU DIRECTIVES

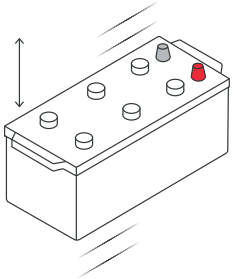






NEW THREE AXIS TEST

HVR technology allows Exide batteries to pass the strict V4* vibration test, which uses three-axis motion simulating real-life conditions.



SINGLE AXIS TEST

The V1-3 tests used single-axis vibration only.

New challenges, new solution

The lifespan of ordinary batteries is greatly reduced by higher vibrations at the rear of the chassis of the vehicle. In 2016 Exide worked with truck manufacturers to develop the new High Vibration Resistant (HVR®) battery in the market, one of the first to meet the new V4* vibration test.

HVR guarantees a longer battery lifespan even when installed in the rear chassis of a truck.

* EN50342-1

THE CARBON BOOST® EFFECT

Exide's smart electrochemical solution for longer battery life.

Early battery failures are common in commercial vehicles, caused by exposure to deep discharge conditions. Challenges to the battery include frequent starting and stopping for urban deliveries, and overnight heating and lighting for long-haul trucks. This strain leads to sulphation and acid stratification, damaging battery lifespan.

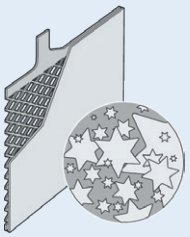
With Exide Carbon Boost™, unique carbon additives increase the speed at which sulphate particles dissolve. This leads to faster recharging, protection from sulphation and less stratification.

The carbon additives also promote controlled gassing during recharging, which keeps the electrolyte mixed and further reduces stratification.

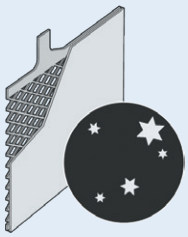
The benefits of Carbon Boost:

- Improved charge acceptance
- Faster recharging
- Reduced acid stratification
- Enhanced cycling endurance

Sulphation: Lead sulphate particles progressively cover the negative plates. This makes recharging less efficient, because energy is used to dissolve the lead sulphate.

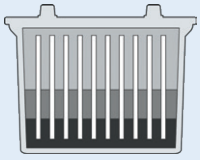


WITHOUT CARBON BOOST®
The plates are covered with sulfate

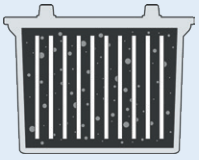


WITH CARBON BOOST®
Sulfate is reduced due to Carbon Boost technology

Acid stratification: Sulphate particles turn into sulphuric acid during charging. This is heavier than the electrolyte, so it sinks to the bottom, creating a range of negative effects, including reduced capacity.



WITHOUT CARBON BOOST®
Sulphuric acid sinks to the bottom of the cell



WITH CARBON BOOST®
Controlled gassing mixes the electrolyte and reduces stratification



ENDURANCEPRO EFB NEW

Exide's top cycling battery is now indestructible

Exide's EndurancePRO range evolves: the "made for severe cycling" battery range features the innovative HVR® (High Vibration Resistance) design, that assures an incomparable level of robustness and minimized risk of unexpected and premature battery failure. Not only it guarantees excellent cycling performances and reduced stratification: the new EndurancePRO EFB battery now exceed the highest requirements in the industry's reference vibration test (V4 level in EN50342-1 vibration test) and it is perfectly adapted to be installed into vehicles running on rough terrain.

All this means less risk of breakdowns, more starting reliability and longer lifespan.

RECOMMENDED TYPE OF VEHICLES / USE CONDITIONS:

Long-haul modern/ standard trucks with rear chassis installations and /or hotel functions. Ideal for vehicle running on rough terrain. It requires water topping.

Benefits

- **Extremely robust – Now with HVR® technology, meeting V4 requirements** NEW
- **Perfect for deep cycling applications :** 2x more cycle life compared to standard truck battery (advanced SHD technology with glass matt layers pasted on active mass) allowing excellent cycling performance (up to 200 cycles at 50% DoD)
- Improved durability
- OE experience inside

V4 HVR TECHNOLOGY HIGH VIBRATION RESISTANT

SPARE ORIGINAL PART

SUPERIOR CYCLING | SUPERIOR EQUIPMENT | SAFE START | URBAN DELIVERY | LOW MAINTENANCE | GLASS MAT SHD TECHNOLOGY



ENDURANCE+PRO GEL

Out-performing state-of-the-art technology

Exide Technologies is the inventor of Gel technology, the ultimate choice for the most demanding commercial vehicles applications.

Instead of being in liquid form, the electrolyte is fixed in a gel. This leads to unmatchable cycle life. The new Exide Endurance+PRO GEL battery is highly robust, with best-in-class deep cycle properties. It allows unmatched safe depth of discharge of 90%, which improves Total Cost of Ownership (TCO) and minimizes the risk of breakdowns.

RECOMMENDED TYPE OF VEHICLES / USE CONDITIONS:

Express delivery trucks and city bus with power hungry equipment and deep cycling needs.

Benefits

- **Impressive energy throughput over the battery lifetime:** safe DoD of 90%, vs 50% of standard flooded batteries, and 5 times more cycles than a comparable standard flooded battery
- Withstands deep discharges for maximum reliability
- Valve regulated: maximum safety and highly vibration resistant
- Very low self discharge
- Maintenance free
- Designed for OE applications

EQUIPMENT ORIGINAL MANUFACTURER

ORIGINAL GEL · EXTREME CYCLING · SAFE START · URBAN DELIVERY · MAINTENANCE FREE · HIGH ENERGY DENSITY · URLA

MORE INFORMATION

The new Endurance+PRO GEL battery is the most effective and efficient option compared to any other VRLA battery. In fact, it cycles more and has 90% safe DoD (compared to 75% of any other VRLA battery), which means more energy available over time, leading to a minimized TCO.

POWERPRO

Impressive power at every start



RECOMMENDED TYPE OF VEHICLES / USE CONDITIONS:

Standard trucks or vehicles with large/highly compressed engine working in extreme climate and/or high CCA requirements.

Benefits

- Superior cranking power (more plates and active material to maximize grid surface)
- Robust and reliable design with hot melt fixation of plate groups
- Maintenance free - no topping up
- OE experience inside

SUPERIOR POWER · COLD TEMPERATURE · MAINTENANCE FREE · HDX TECHNOLOGY

POWERPRO AGRI & CONSTRUCTION

Choose the original part



RECOMMENDED TYPE OF VEHICLES / USE CONDITIONS:

Tractors and construction machines (agriculture, forestry and construction machinery)

Benefits

- Superior cranking power (more plates and active material to maximize grid surface)
- Robust design with hot melt fixation of plate groups
- Wide range including special types
- True OE design and construction (original part)
- Maintenance Free - no topping up

TRUE OE AGRI FIT · TRUE OE CONSTRUCTION FIT · SUPERIOR POWER · MAINTENANCE FREE

SPARE ORIGINAL PART

STARTPRO

Reliable starting power for standard use



RECOMMENDED TYPE OF VEHICLES / USE CONDITIONS:

Strandard truck without specific vibration, cycling or cranking needs.

Benefits

- Ideal for trucks without special requirements in terms of vibration resistance, cycling or cranking power
- Robust and reliable design with hot melt fixation of plate groups
- Complete range covering almost 100% of vehicle parc, including special types
- Low maintenance - may need water topping up

LOW MAINTENANCE · HD TECHNOLOGY

TYPE LIST



STRONGPRO EFB+

CODE	Performance		Dimensions			Technical Characteristics		
	Capacity Ah	CCA A (en)	L (Mm)	H (Mm)	W (Mm)	Polarity	Hold down	Box
EE1403	140	800	513	223	189	ETN 3	B0	D04
EE1853	185	1100	513	223	223	ETN 3	B0	D05
EE2353	235	1200	518	240	279	ETN 3	B0	D06



ENDURANCEPRO EFB

EX1803	180	1000	513	223	223	ETN 3	B0	D05
EX2253	225	1150	518	240	279	ETN 3	B0	D06



ENDURANCE+PRO GEL

ED2103	210	1050	518	240	279	ETN 3	B0	D06



POWERPRO

EF1202	120	870	349	235	175	ETN 0	B1	D02
EF1420	142	850	349	290	175	ETN 0	B0	D03
EF1421	142	850	349	290	175	ETN 1	B0	D03
EF1453	145	900	513	223	189	ETN 3	B0	D04
EF1853	185	1150	513	223	223	ETN 3	B0	D05
EF2353	235	1300	518	240	279	ETN 3	B0	D06



POWERPRO
AGRI&CONSTRUCTION

EJ050C	50	800	260	206	173	ETN 1	B7	G34
EJ110B	110	950	330	240	173	ETN 9	B0	G31
EJ1102	110	900	349	235	175	ETN 0	B1	D02
EJ1100	110	900	349	235	175	ETN 0	B0	D02
EJ1000	100	850	353	190	175	ETN 0	B13	L05
EJ165A	165	850	354	285	241	ETN 6	B0	D67
EJ1805	180	1000	510	225	218	ETN 3	B3	D09
EJ1523	152	1130	513	223	189	ETN 3	B0	D04
EJ1723	172	1390	513	223	223	ETN 3	B0	D05
EJ1355	135	1000	514	210	175	ETN 3	B3	DB8
EJ2353	235	1450	518	240	279	ETN 3	B0	D06



STARTPRO

EG110B	110	1000	330	240	173	ETN 9	B0	G31
EG1100	110	750	349	235	175	ETN 0	B0	D02
EG1101	110	750	349	235	175	ETN 1	B0	D02
EG1102	110	750	349	235	175	ETN 0	B1	D02
EG1250	125	760	349	290	175	ETN 0	B0	D03
EG1251	125	760	349	290	175	ETN 1	B0	D03
EG145A	145	1000	360	240	253	ETN 6	B0	F21
EG1008	100	680	413	220	175	ETN 0	B3	D01
EG1109	110	800	413	220	175	ETN 1	B3	D01
EG1402	140	900	508	205	175	ETN 0	B1	ATM
EG1206	120	680	510	225	175	ETN 4	B3	D08
EG1406	140	800	510	225	175	ETN 4	B3	D08
EG1806	180	1000	510	225	218	ETN 4	B3	D09
EG1203	120	680	513	223	189	ETN 3	B0	D04
EG1403	140	800	513	223	189	ETN 3	B0	D04
EG1553	155	900	513	223	223	ETN 3	B0	D05
EG1803	180	1000	513	223	223	ETN 3	B0	D05
EG1355	135	1000	514	210	175	ETN 3	B3	DB8
EG1353	135	1000	514	210	218	ETN 3	B0	DB9
EG1705	170	950	514	210	218	ETN 3	B3	DB9
EG2153	215	1200	518	240	279	ETN 3	B0	D06
EG2154	215	1200	518	240	279	ETN 4	B0	D06

MORE INFORMATION

Exide has the most comprehensive fitment list on the market. The list is constantly updated to include the latest vehicles, so you will always find the right battery for your vehicle. Contact your local Exide sales representative to request a paper copy or visit www.exide.com to view our online catalogue.

You can also download the FREE Exide Battery Finder app to access fitment information on the go.

Google Play

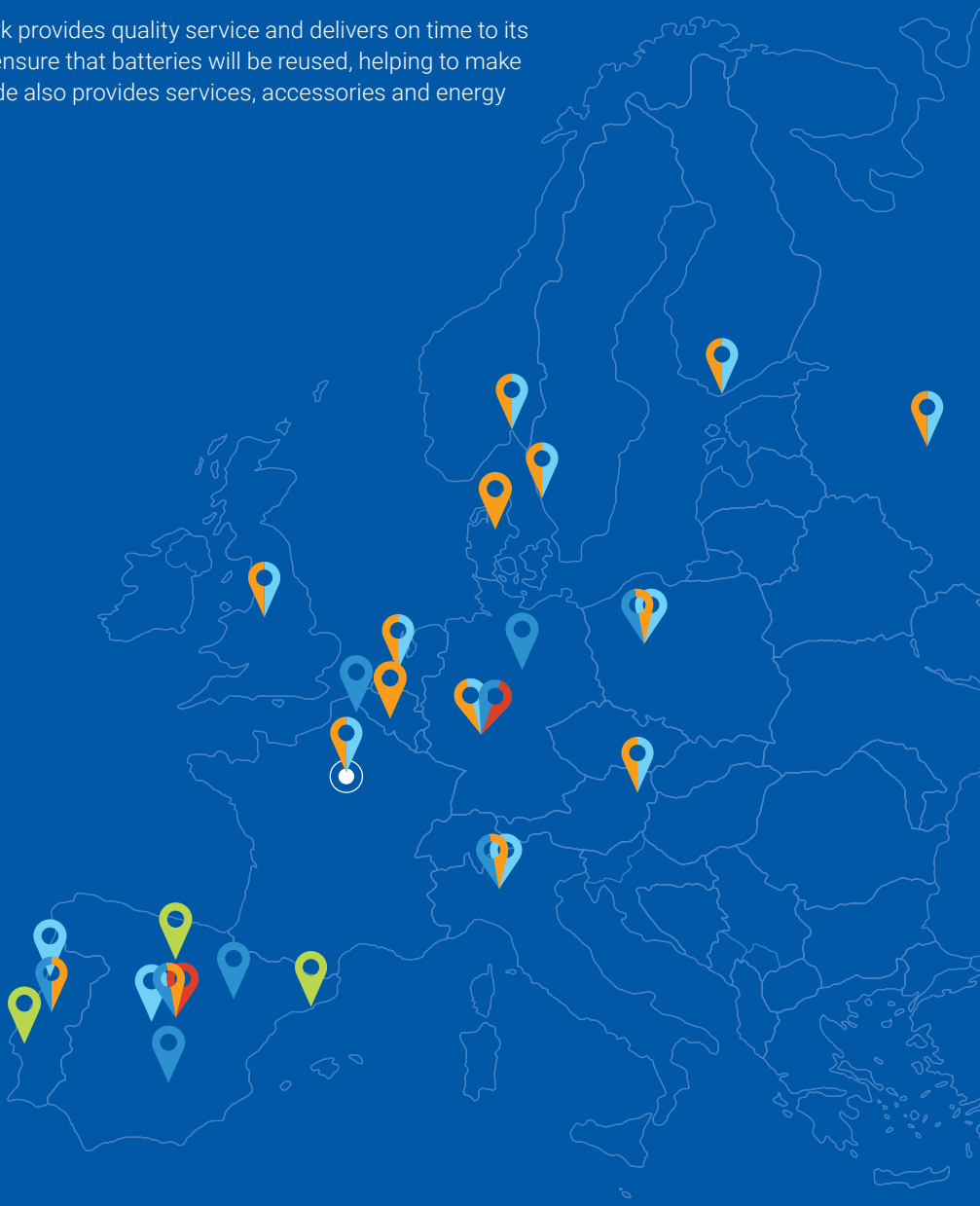
App Store

Exide Technologies, with operations in more than 80 countries and more than 130 years of experience, is one of the world's largest producers and recyclers of lead-acid batteries. The company develops state-of-the-art energy storage solutions for the automotive and industrial market. Leading car, truck and lift truck manufacturers trust in Exide Technologies as an original equipment supplier. Exide also serves the aftermarket through a portfolio of successful and well-known brands.

Exide Transportation manufactures batteries for light and commercial vehicles, as well as agricultural and marine leisure applications. Industrial markets – under the division **GNB Industrial Power** – include efficient energy storage solutions for motive power applications such as lift trucks, cleaning machines and other commercial electrical vehicles, and network power applications such as telecommunications systems, renewables, and uninterruptible power supply (UPS).

Exide's engineers have always been at the forefront of bringing important innovations to the industry. Exide's IATF 16949 certified manufacturing facilities ensure that customers receive products that are produced with maximum efficiency and fulfill the highest quality standards, while minimizing impact on the environment.

Exide's extensive sales and distribution network provides quality service and delivers on time to its customers. Its world-class recycling facilities ensure that batteries will be reused, helping to make a positive contribution to the environment. Exide also provides services, accessories and energy consulting to its clients.



- EMEA headquarters
- Manufacturing plants
- Recycling plants
- Distribution centers
- Main sales offices
- R&D centres

Manufacturing plants ISO 9001 and ISO 14001 certified

Automotive plants IATF 16949 certified

EMEA HEADQUARTERS

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EXIDE TECHNOLOGIES | POWERING THE WORLD **FORWARD**

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