

# The shortcut to success.

Battery solutions for  
commercial vehicles.



# You have great future plans? We put your projects on the right track.

High-performance batteries for extra business power.

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.

Deta 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.**

We have been supplying lead-acid batteries to car and truck makers for more than 135 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.

**We work with leading commercial vehicle manufacturers, including:**

AGCO group, Bobcat, Case, Claas, Evobus, Isuzu, Iveco, John Deere, Komatsu, Kubota, MAN, Mercedes Trucks, New Holland, Nissan, Renault Volvo Trucks, SAME Deutz-Fahr, Scania, Wacker Neuson, and many others...



# There are numerous challenges. And we have the right battery for each one.

As a true expert in OE batteries, we help you select the right Deta 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, robust and highly 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

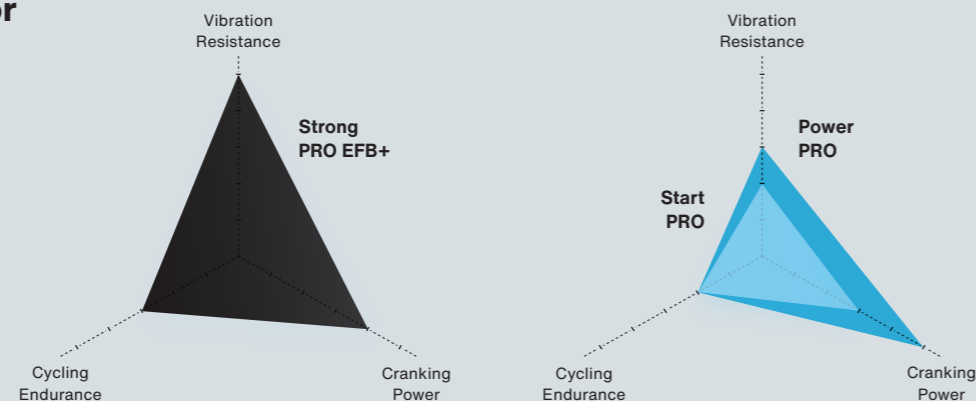
High cycling endurance is important in batteries for long-haul trucks with life on-board, commercial vehicles doing intensive urban deliveries, and any commercial vehicle with extensive energy requirements. This maximizes battery lifespan and ensures a safe battery start.



### Cranking power

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

## The perfect battery for every need.



## Range overview and features.



| Performance          | Strong PRO EFB+ | PowerPRO | StartPRO |
|----------------------|-----------------|----------|----------|
| Vibration resistance | ██████          | ██████   | ██████   |
| Cycling endurance    | ██████          | ██████   | ██████   |
| Cranking power       | ██████          | ██████   | ██████   |
| Charge acceptance    | ██████          | ██████   | ██████   |
| Maintenance          | ⊘               | ⊘        | ⊘        |

## Battery recommendation by vehicle type & application.

| Type of vehicles   | Application  | Strong PRO EFB+ | PowerPRO | StartPRO       |
|--|--|-----------------|----------|----------------|
| Long-haul modern trucks, standard trucks                         | Rear-chassis installation/rough terrain, high vibrations | ⊙               |          |                |
| Express delivery (lifters), city bus                             | Power-hungry equipment, deep cycling applications        | ⊙               |          |                |
| Long-haul modern trucks  | Overnight stop/hotel function                            | ⊙               |          |                |
| Standard trucks or vehicles with large/highly compressed engines | Extreme climate and/or high CCA requirements             |                 | ⊙        |                |
| Tractors, construction machines                                  | Special vehicles   |                 |          |                |
| Standard trucks  | Standard requirements/older vehicle                      |                 |          | ⊙ <sup>3</sup> |

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

**Especially  
when you  
go forward.**



**It is enormously  
important to  
have someone  
at your back.**



# StrongPRO EFB+

Strong, stronger, EFB+.

The Deta StrongPRO EFB+ battery range is now stronger than ever. A new carbon-based formula of negative active mass enhances the rechargeability and charge acceptance of the 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).

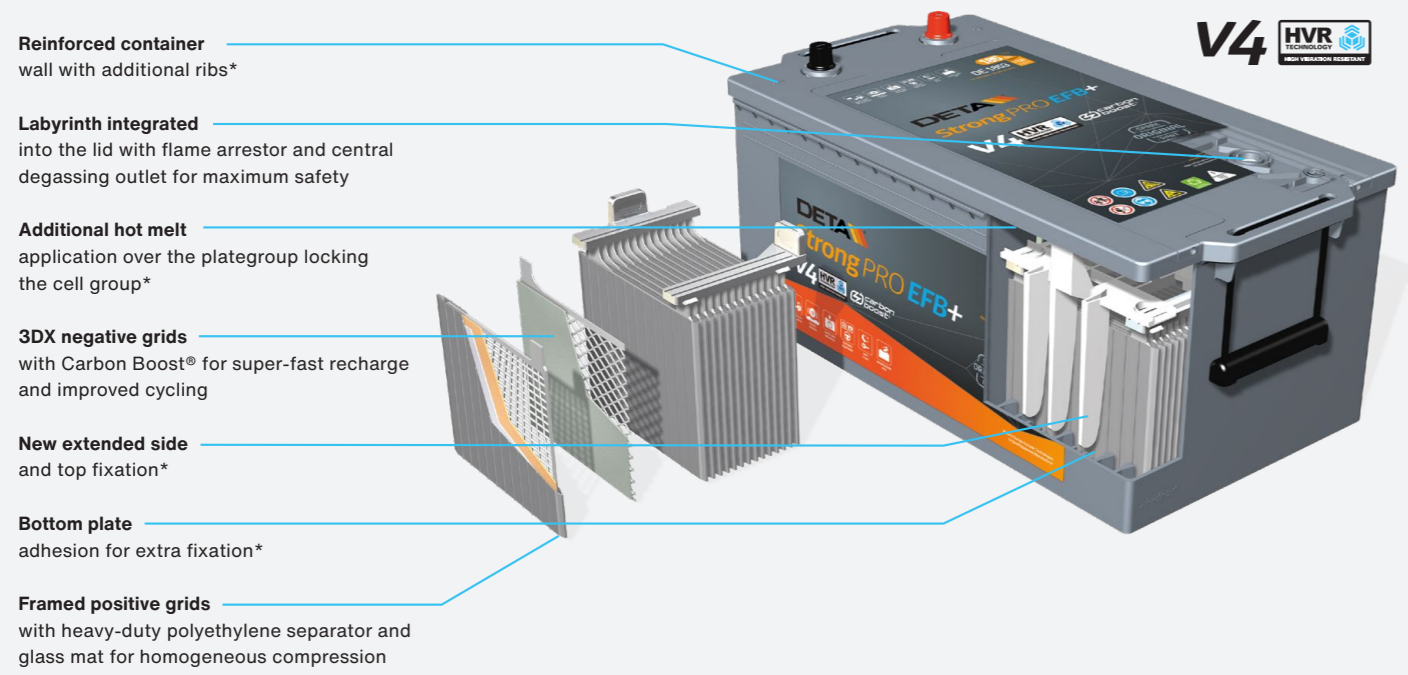
A more robust and more lasting battery means reduced total service cost for fleet owners and truck drivers, allowing less replacements over the vehicle's service life and minimized risk of unexpected and premature battery failure.

- Better rechargeability and charge acceptance than previous generation StrongPRO
- Better control over gassing and stronger anti-stratification effect
- 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



**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.

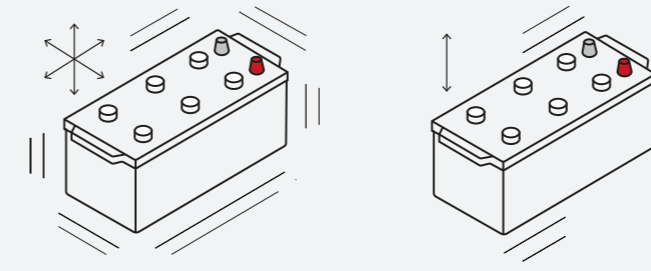
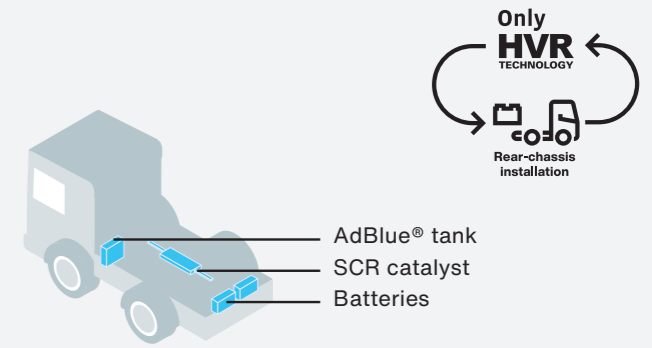


\*Latest generation of Deta's leading HVR® design, meeting V4 requirements (EN 50342-1:2015)

# 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 more economic and sustainable vehicles to reduce fuel consumption and emissions. These new trucks may 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.



**New three-axis test**  
HVR technology allows Deta 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. Deta 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

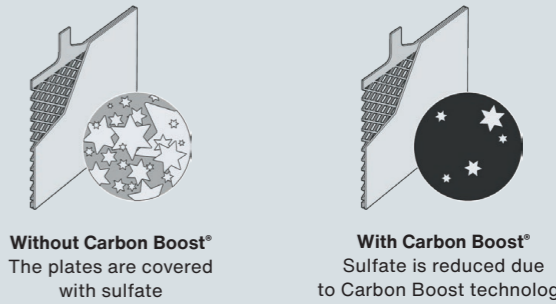
## Deta's smart electrochemical solution for longer battery life.

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 Deta 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.

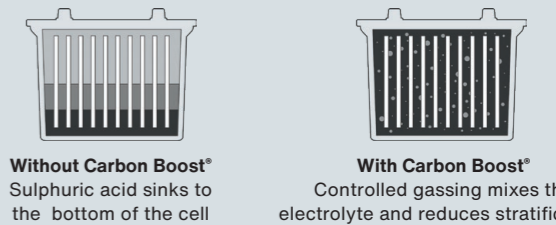
### The benefits of Carbon Boost:

- 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.









**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.



## PowerPRO

Impressive power at every start



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







### Recommended type of vehicles / use conditions:

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

## StartPRO

Reliable starting power for standard use



-  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



### Recommended type of vehicles / use conditions:

Standard truck without specific vibration, cycling or cranking needs.



## Deta commercial vehicle batteries type list



| Code | Performance |            | Dimensions |        |        | Technical characteristics |           |     |
|------|-------------|------------|------------|--------|--------|---------------------------|-----------|-----|
|      | Capacity Ah | CCA A (EN) | L (mm)     | H (mm) | W (mm) | Polarity                  | Hold down | Box |

### StrongPRO EFB+

|        |     |      |     |     |     |       |    |     |
|--------|-----|------|-----|-----|-----|-------|----|-----|
| DE1853 | 185 | 1100 | 513 | 223 | 223 | ETN 3 | B0 | D05 |
| DE2353 | 235 | 1200 | 518 | 240 | 279 | ETN 3 | B0 | D06 |

### PowerPRO

|        |     |      |     |     |     |       |    |     |
|--------|-----|------|-----|-----|-----|-------|----|-----|
| DF1202 | 120 | 870  | 349 | 235 | 175 | ETN 0 | B1 | D02 |
| DF1250 | 125 | 850  | 349 | 290 | 175 | ETN 0 | B0 | D03 |
| DF1853 | 185 | 1150 | 513 | 223 | 223 | ETN 3 | B0 | D05 |
| DF2353 | 235 | 1300 | 518 | 240 | 279 | ETN 3 | B0 | D06 |

### StartPRO

|        |     |      |     |     |     |       |    |     |
|--------|-----|------|-----|-----|-----|-------|----|-----|
| DG105B | 105 | 950  | 330 | 240 | 173 | ETN 9 | B0 | G31 |
| DG1102 | 110 | 750  | 349 | 235 | 175 | ETN 0 | B1 | D02 |
| DG110B | 110 | 1000 | 330 | 240 | 173 | ETN 9 | B0 | G31 |
| DG1353 | 135 | 1000 | 514 | 210 | 218 | ETN 3 | B0 | DB9 |
| DG1403 | 140 | 800  | 513 | 223 | 189 | ETN 3 | B0 | D04 |
| DG1406 | 140 | 800  | 510 | 225 | 175 | ETN 4 | B3 | D08 |
| DG1553 | 155 | 900  | 513 | 223 | 223 | ETN 3 | B0 | D05 |
| DG1803 | 180 | 1000 | 513 | 223 | 223 | ETN 3 | B0 | D05 |
| DG1806 | 180 | 1000 | 510 | 225 | 218 | ETN 4 | B3 | D09 |
| DG2253 | 225 | 1200 | 518 | 240 | 279 | ETN 3 | B0 | D06 |
| DG2254 | 225 | 1200 | 518 | 240 | 279 | ETN 4 | B0 | D06 |

# Progress knows no borders.

## Like our dedication for a sustainable future.

Mericas® battery solutions are designed and manufactured in Europe. Transforming the future of energy storage and driving the electrification from all our locations around the world.



|  |   |   |   |  |
|--|---|---|---|--|
| All manufacturing plants<br><b>ISO 9001</b><br>certified | All automotive plants<br><b>IATF 16949</b><br>certified | All manufacturing plants<br><b>ISO 14001</b><br>certified | All manufacturing plants<br><b>ISO 50001</b><br>certified | Most manufacturing plants<br><b>ISO 45001</b><br>certified |
|--|---|---|---|--|

Manufacturer: by /**MERICAS**

Exide Technologies, SLU  
Carretera A-2, km 41,800  
19200 Azuqueca de Henares  
Guadalajara, Spain

Exide Technologies Lda  
Avenida Dr. Carlos Leal, No. 4  
2600-729 Castanheira do Ribatejo  
Vila Franca de Xira, Portugal

Exide Technologies S.A.  
Gdyńska 31/33  
61-016 Poznań  
Poland

Exide Technologies GmbH  
Im Thiergarten  
63654 Büdingen  
Germany

Phone:  
+34 902 501 300  
+34 949 360 019

Exide Technologies s.r.l.  
Via Dante Alighieri 100/106  
Romano di Lombardia (BG)  
Italy

Exide Technologies SAS  
5-7, Allée des Pierres Mayettes  
92636 Gennevilliers  
France