The powerhouse.

Boost your fleet and reduce your operating costs with Tensor.

Creating the future – the Exide Technologies way:

Innovation | Reliability | Sustainability | High Performance

TENSOR®

GNB INDUSTRIAL POWER

The world is changing.
That's why we are energizing a new world.

For Exide Technologies, now is the time to release new energies to move even further into the future. Our new claim **"Energizing a new world"** is designed to convey this aspiration. We want to bring change to life, face challenges together with our partners, and develop solutions for today and tomorrow. **Let's create the future – the Exide Technologies way:**

Innovation is the engine of technology leadership. That's why we are constantly evolving, remain self-critical, and continue to inspire our customers. We believe that great questions deserve great answers, which is what our innovative R&D is responsible for.

Reliability defines our business. This applies to our products as well as our innovative development work, services, and partnerships. We have a responsibility that doesn't stop with our products, but rather starts there.

Sustainability is an important part of our responsibility. That's why we rely on renewable energies and intelligent recycling concepts.

High performance is the standard we set for our products and services. We want all our solutions to be best in class. This gives our customers the certainty of being optimally equipped for any task.

Tensor is made for high-performance applications. We call it daily routine.

Move more goods faster – and leave conventional batteries behind. See all the benefits for yourself:

Setting new standards:
- Breaking the barrier: Electric drive for applications with extreme requirements dominated by internal combustion engines.
- Longer operating life, runtime and investment depreciation.

Reduced operating costs:
- Increased throughput and best-in-class total cost of ownership.

Eco-friendly energy:
- Excellent carbon footprint – sustainable and supported by government programs in most countries.

Tensor.
The business booster.

up to
+14 %
energy savings

more than
+50 %
operating hours

up to
+27 %
transshipment

The shift changes.
Tensor just keeps going.

No matter how complex your business is, we are the perfect partner: For us, problems are challenges that we like to take care of. That is why we are able to offer you innovative and reliable best-of-class solutions. Topics such as sustainability and environmental protection are becoming increasingly important for us, because we want to leave a liveable future for next generations. Our best high-performance battery, which combines all these features, is the Tensor – our solution for heavy-duty applications.

Flexible applications.

Fewer battery changes: Depending on the application, Tensor can reduce the number of battery changes or make them obsolete.

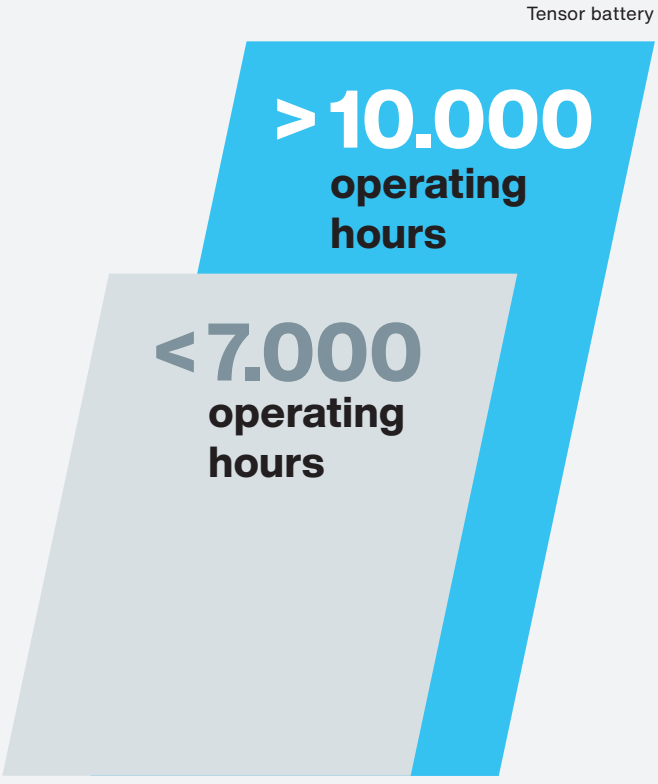
Two shifts, one battery:
No changing of batteries during shift required.

Every 5th battery can be omitted:
Thanks to data, collected from Motion+ Smart Tools.

Opportunity charging during breaks:
Offers longer working time without changing the battery.

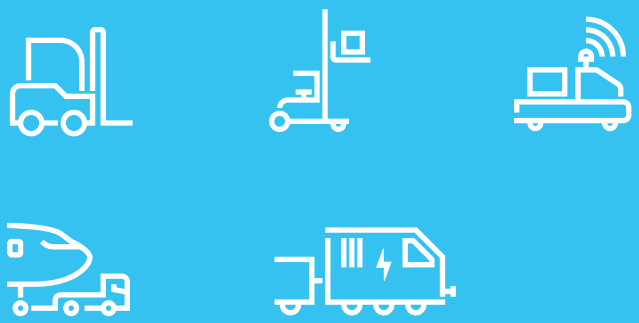
It's time for a new standard.

The Tensor battery is the best in its class. Forklifts run significantly more hours per charging cycle. Even for the same cyclic life the total operating hours will be much higher compared to standard batteries. Moreover, thanks to the lower average operating temperature of Tensor, the overall battery lifetime will be increased as well.



Often the strongest are not also the smartest.

Luckily Tensor tells you better.



The business is changing fast.
That is why Tensor recharges faster.

In just 4 hours, Tensor batteries can be fully recharged from 80% depth of discharge. This is possible due to its unique charge acceptance which leads in addition to lower operating temperatures and less energy loss.

Our fast charging solution.

The components of the fast-charging package are perfectly matched – so that the Tensor charges reliably, efficiently and powerfully.

Z-profile powerful fast charging regime

Developed for highest efficiency and performance chargers from Ⓔ/

Air Agitation preventing acid stratification

Temperature probe for temperature-controlled charging

Z-profile: the smart charging system.

The sophisticated Z-profile together with air agitation and temperature probe enable fast- and intermediate charging during available downtimes of Tensor batteries. The air agitation successfully prevents acid stratification and keeps the battery powerful and healthy.

Motion+ Fleet: Our upgrade for your uptime.

In combination with our Motion+ Fleet management system, your fleet will operate even more efficiently: The digital tool monitors battery and charging history as well as other important parameters. It is used to analyze and control energy consumption, thereby increasing battery life and sending automated alerts to logistics management.

Tensor.
Outperforms at lower temperatures.

Most batteries are stressed in the cold.
Tensor stays cool.

Batteries operated at low temperature areas are typically affected by capacity loss and performance degradation. Tensor batteries are completely different:

Extended running time at low temperatures.

At freezing temperatures, most batteries show a significant capacity loss. When batteries need to be changed or recharged more frequently, it reduces operating efficiency. Tensor batteries have significantly longer operating times and guarantee your business more productivity, perfect in cold storage or outdoor applications.

Tensor battery

+50 %
running time

standard lead battery

Outdoor applications.

Industrial trucks in outdoor applications are exposed to a wide range of temperatures: from high in summer to freezing in winter. Tensor batteries remain powerful even at low temperatures and minimize the effects caused by temperature fluctuations.

Tensor is well thought-out down to the tiniest detail.

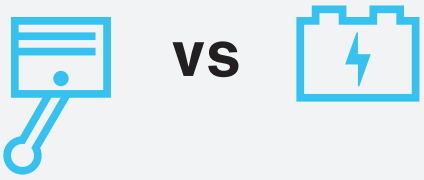
So you can focus on more important things.

We are taking on the challenges of today.
To embrace the future of tomorrow.

Tensor batteries are based on an innovative lead technology that overcomes the limitations of standard forklift batteries. This makes them ideal for modern forklift trucks (three-phase motors, energy recovery systems) and heavy-duty applications. It features strong and robust performances in all demanding environments.

Heavy-duty applications.

More and more battery-powered heavy-duty forklifts are entering the market and replace internal combustion forklifts. Tensor delivers the power and performance required for these demanding tasks.



Reduce emissions.

By using electric forklift trucks, companies reduce carbon dioxide, nitrogen oxide and soot emissions. Tensor simplifies the switch by offering the performance typically associated with internal combustion engines. This enables to improve conditions for employees, achieve environmental targets and reduce noise pollution. Best of all, electric forklifts save money and are even subsidized by the government, depending on the country.

Environmentally friendly battery.

For any business that want to minimize environmental impact, now there is Tensor: it is fully recyclable and has a longer life than conventional traction batteries. In addition, the charging and discharging processes are tuned for maximum efficiency, so you save significantly on energy costs.

Tensor.
Reduces operating costs.

Other batteries have limits. Limits that Tensor confidently leaves behind.

Tensor offers outstanding performance in a wide variety of applications – with impressive power, high energy content and low operating temperature. But the Tensor battery is not only strong, but also smart. In short: With Tensor, you are optimally equipped for every challenge.

Our best high-performance battery convinces with the elimination of idle times and the ability to respond to seasonal increases when used optimally. Leasing or rental models are also an option for responding optimally to short-term peaks in seasonal business. If you have any questions, please do not hesitate to contact us.

High-rack facilities / Narrow aisle

Cold storage / Outdoor applications

Forklift attachments / Additional electrical consumers

Heavy-duty applications / Heavy trucks

24/7 applications

Seasonal business / Activity peaks

Tensor is strong and smart.

So are the numbers that prove it.

Of course, Tensor is no less convincing on paper than it is in its versatile applications. Because behind the hard core are also hard-core numbers that stand up to anything.

Available TENSOR cells:

Standard	Cell Dimensions[1]		Tensor				
EPzS cell type	Height h1[2] [mm] Height h2[3] [mm]	Length (l) [mm]	TCSM cell type	Cell weight[4] [kg]	Nominal capacity [Ah]	Energy content[5] [Wh]	Transshipment plus[6]
3 EPzS 270	463 / 493	65	585 TCSM	17.3	300	585	+20%
4 EPzS 360	463 / 493	83	730 TCSM	22.0	375	730	+13%
5 EPzS 450	463 / 493	101	1025 TCSM	27.0	525	1025	+27%
6 EPzS 540	463 / 493	119	1170 TCSM	31.0	600	1170	+20%
7 EPzS 630	463 / 493	137	1315 TCSM	36.1	675	1315	+16%
8 EPzS 720	463 / 493	155	1610 TCSM	41.0	825	1610	+24%
9 EPzS 810	463 / 493	173	1755 TCSM	45.6	900	1755	+20%
10 EPzS 900	463 / 493	191	2050 TCSM	50.3	1050	2050	+27%
3 EPzS 375	573 / 603	65	760 TCSM	20.1	390	760	+13%
4 EPzS 500	573 / 603	83	975 TCSM	25.0	500	975	+9%
5 EPzS 625	573 / 603	101	1285 TCSM	33.1	660	1285	+15%
6 EPzS 750	573 / 603	119	1520 TCSM	38.0	780	1520	+13%
7 EPzS 875	573 / 603	137	1715 TCSM	44.5	880	1715	+9%
8 EPzS 1000	573 / 603	155	2030 TCSM	50.7	1040	2030	+14%
9 EPzS 1125	573 / 603	173	2195 TCSM	56.9	1125	2195	+9%
10 EPzS 1250	573 / 603	191	2570 TCSM	63.0	1320	2570	+15%
3 EPzS 465	713 / 743	65	955 TCSM	25.5	495	955	+16%
4 EPzS 620	713 / 743	83	1235 TCSM	31.7	640	1235	+12%
5 EPzS 775	713 / 743	101	1620 TCSM	41.7	840	1620	+18%
6 EPzS 930	713 / 743	119	1910 TCSM	48.6	990	1910	+16%
7 EPzS 1085	713 / 743	137	2190 TCSM	53.6	1135	2190	+13%
8 EPzS 1240	713 / 743	155	2545 TCSM	63.6	1320	2545	+16%
9 EPzS 1395	713 / 743	173	2835 TCSM	71.3	1475	2835	+15%
10 EPzS 1550	713 / 743	191	3240 TCSM	79.9	1680	3240	+18%

[1] width (w) 198mm
[2] over cell lid
[3] total hight incl. connector and screw
[4] filled and charged // tolerance +/-5%
[5] average discharge voltage 1.95 Vpc
[6] according to the GNB driving profile

Energy that goes beyond.

- Transportation plant
- Industrial plant
- R&D facility
- Recycling
- Global HQ
- Principle sales offices
  + sales offices and distribution centers across the world

All manufacturing plants **ISO 9001** certified

All automotive plants **IATF 16949** certified

All manufacturing plants **ISO 14001** certified

All manufacturing plants **ISO 50001** certified

Most manufacturing plants **ISO 45001** certified

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ENERGIZING A NEW WORLD

EXIDE® TECHNOLOGIES

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