

The shortcut to success.

Battery solutions for commercial vehicles.

TUDOR[®]



Creating the future – the Exide way:



Innovation



Reliability



Sustainability



High Performance

exidegroup.com

**ENERGIZING
A NEW
WORLD**

EXIDE[®]
TECHNOLOGIES

You have big plans. We put your fleet on track.

Logistics must deliver faster and more reliably than ever. Fleet operators focus on Total Cost of Ownership – every breakdown creates downtime, unhappy customers, idle labor and penalties. Tudor batteries are engineered to reduce breakdown risk and give you a competitive advantage – with options for every use case, leading performance and lower TCO. As OE expert, Exide helps fleets and installers choose the correct battery for each application. Key performance criteria: vibration resistance, cycling endurance, cranking power and charge acceptance.

Selecting the right battery matters. Key performance factors:



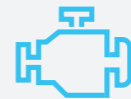
Vibration resistance

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



Cycling endurance

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

For engine starts in cold climates and particularly required by many agriculture and construction vehicles with reliable starting power needs. In commercial vehicles, strong cranking power is essential to handle large diesel engines and frequent start-stop cycles, ensuring dependable ignition even under heavy load conditions.



Charge acceptance

High charge acceptance is vital for trucks with smart alternators and energy management systems. It enables quick energy absorption, supports regenerative braking, and ensures reliable power for electronics, especially in vehicles with frequent starts and stops or with much on-board equipment.



Trusted by leading commercial vehicle manufacturers.

Exide has 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.

Truck brands:

EvoBus, Isuzu, Iveco, MAN, Mercedes-Benz Trucks, Nissan Trucks, Renault Trucks, Scania, Setra, Volvo Trucks, and many others ...

Agri & construction:

AGCO group, Bobcat, Case, Claas, John Deere, Komatsu, Kubota, Same Deutz-Fahr, Wacker-Neuson, and many others ...



Made to keep you on the road.

The new and streamlined battery range with a fresh label design for easier product identification.

Brand consistency
with a highly identifiable branding.

Clear color coding
by technology to simplify battery selection.



Compliance
with the latest European battery regulation.

Easy readability
presenting all essential information at a glance.



Performance	GEL PRO	EFB PRO	SHD PRO	HD PRO
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Range overview and features

Vibration resistance	■■■■■■*	■■■■■	■■■■	■■■■
Cycling endurance	■■■■■	■■■■	■■■■	■■■■
Cranking power	■■■■■	■■■■■	■■■■■	■■■■■
Charge acceptance	■■■■■	■■■■■	■■■■	■■■■
Maintenance	⊘	⊘	⊘	⊘

Battery recommendation

* TD2103T type

Type of vehicles	Application	GEL PRO	EFB PRO	SHD PRO	HD PRO
Long-haul modern trucks, standard trucks	Rear-chassis installation/ rough terrain, high vibrations	⊙ ^{1,2}	⊙		
Express delivery (lifters), city bus	Power-hungry equipment, deep cycling applications	⊙ ²			
Long-haul modern trucks	Overnight stop/ hotel function	⊙ ²	⊙		
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 requirements/ older vehicle				⊙ ³

1 Only xD2103T model, with HVR design

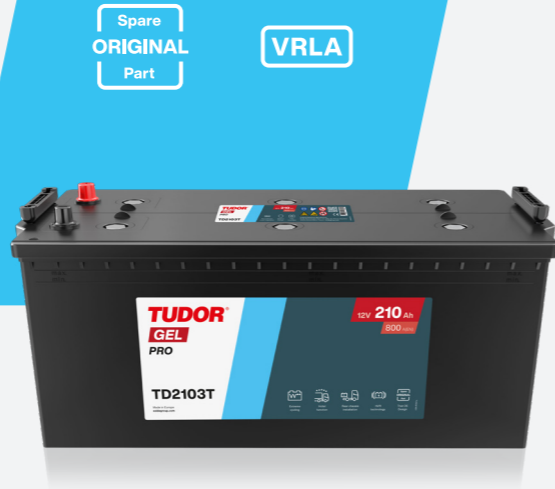
2 GEL PRO requires charging voltage limitation to max 14.4V. If not compatible, choose the EFB PRO

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

Tudor GEL PRO

Made for extreme cycling.

Exide Technologies is the inventor of Gel technology, the ultimate choice for the most demanding commercial vehicles applications. The electrolyte is fixed in a gel which leads to maximum cycle life. The new Tudor GEL PRO 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.



Reinforced polypropylene container

Exide patented VRLA valves

Plastic wedge fixed to the plategroup with glue resin for maximum vibration resistance

Special silica gel

Bottom hotmelt to stabilize the plategroup

Negative full-framed grid pasted with special negative active materials with Carbon Boost

High-quality GEL specific separator

Positive full-framed grid

Image shows the TD2103T type



Supports hotel function



2x lifetime compared to equivalent AGM and 10x lifetime compared to equivalent standard flooded batteries



High vibration resistant (HVR)* meeting V4* requirements



90% safe depth of discharge: perfect choice for all commercial vehicles



Valve-regulated technology for maximum safety



Safe and reliable engine start at any time



Reduces operating costs



Maintenance free – no topping up



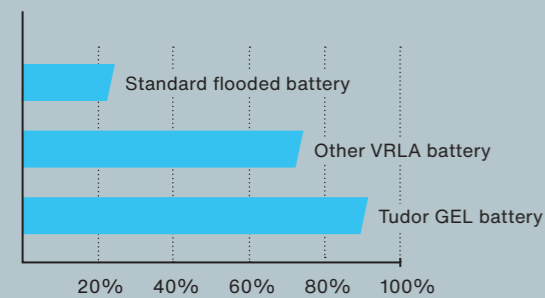
Extreme cycling



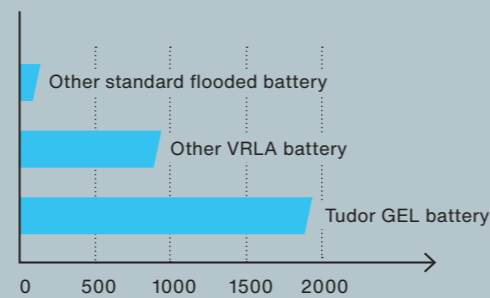
Rear-chassis installation*

* TD2103T type

Safe depth of discharge



Cycling capacity



Recommended type of vehicles/use conditions:



Express delivery trucks (with and without dual systems) and city bus with power-hungry equipment and deep cycling needs. Long-haul modern/standard trucks with rear-chassis installations* and/ or hotel functions.



Tudor EFB PRO

Innovating the indestructible battery.

Tudor's EFB PRO battery range is now stronger than ever. A unique carbon-based formula of negative active mass enhances the rechargeability and charge acceptance of the EFB PRO battery. Additionally, the HVR® (high-vibration-resistant) technology enables EFB PRO to pass the extreme vibration tests under the 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.



- Enhanced rechargeability and charge acceptance vs. previous technology generations
- 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
- Hotel function
- Rear chassis installation

Reinforced container
wall with additional ribs*

Labyrinth integrated
into the lid with flame arrestor and Tudor degassing outlet for maximum safety

Additional hot melt
application over the plategroup locking the cell group*

3DX negative grids
with Carbon Boost® for super-fast recharge and improved cycling

New extended side
and top fixation*

Bottom plate
adhesion for extra fixation*

Framed positive grids
with heavy-duty polyethylene separator and glass mat for homogeneous compression



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.

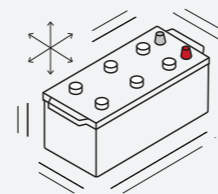
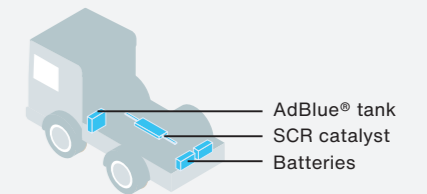
* HVR® design meeting V4 requirements (EN 50342-1:2015)



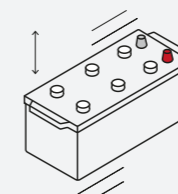
HVR® technology

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 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.



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.

The challenges. The best solution.

High vibrations at the rear of the vehicle significantly shorten the lifespan of standard batteries. Exide therefore worked with truck manufacturers to develop the HVR® battery - one of the first to meet the new V4* vibration test.

HVR® ensures longer battery life even when installed in the truck's rear chassis.

* EN50342-1

The Carbon Boost® Effect

Exide's smart electrochemical solution for longer battery life.

Early failures in commercial vehicles are often caused by deep discharges from frequent start-stop, overnight heating and lighting. This leads to sulphation and acid stratification.

Exide Carbon Boost® uses unique carbon additives to dissolve sulphates faster - enabling faster recharge and reducing sulphation and stratification by promoting controlled gassing and electrolyte mixing.

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.

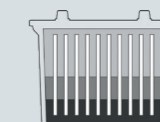


Without Carbon Boost®
The plates are covered with sulfate



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

Tudor SHD PRO





Impressive power at every start

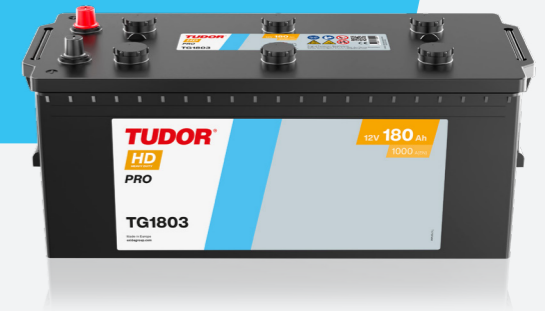
-  Superior cranking power (more plates and active material to maximize grid surface)
-  Robust and reliable design with hot melt fixation of plate groups
-  Superior starting power
-  Designed for extreme climates
-  OE experience inside
-  Maintenance free – no topping up
-  OE true construction fit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



Tudor HD PRO

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 top plates
-  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 trucks or vehicles with large/highly compressed engine working in extreme climate and/or high CCA requirements + tractors and construction machines (agriculture, forestry, and construction machinery)*

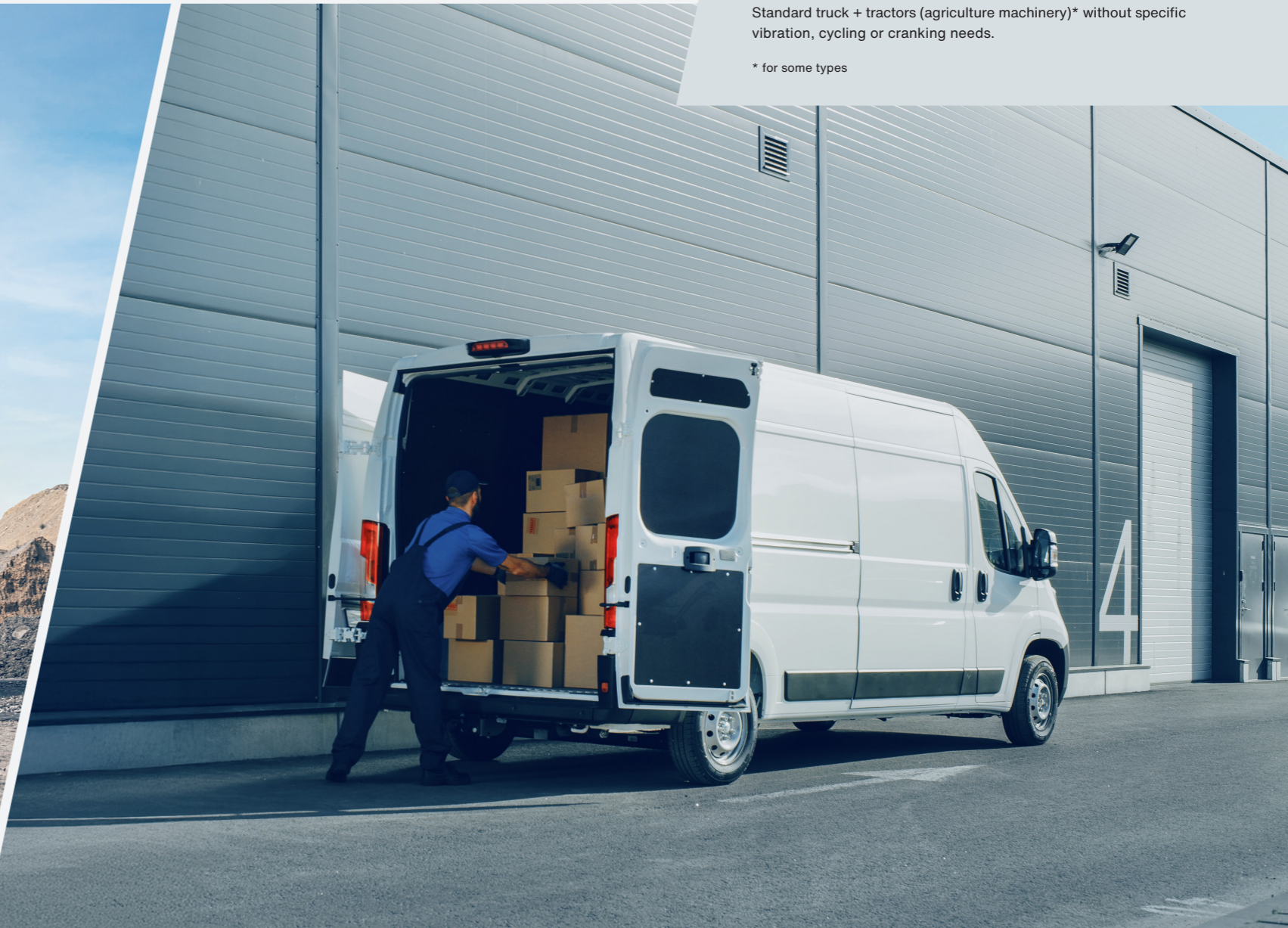
* for some types

Recommended type of vehicles/use conditions:



Standard truck + tractors (agriculture machinery)* without specific vibration, cycling or cranking needs.

* for some types



A role model for the circular economy.

Exide Technologies operates three recycling facilities in Europe. 99 %* of automotive lead-acid batteries are recycled in Europe. 100 % of a lead-acid battery can be recycled.

100 %

of a lead battery can be recycled

3

Exide recycling facilities in Europe

99 %

of all automotive lead batteries are recycled in Europe*



Learn more about our commitment to sustainability.

* Source: Eurobat Report 2021

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

For Exide, now is the time to release new energies to move even more into the future. Our new alignment **“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 way:**



Innovation is the engine of technology leadership. That's why we are constantly evolving, remaining self-critical, and continue to inspire our customers.



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



Reliability defines our business. This applies to our products as well as our innovative development, services, and partnerships. Our responsibility does not end with our products, but starts right there.



High Performance is the standard we set for our products and services. All our solutions are best of class. This means our customers are optimally equipped for any task.

Commercial Vehicle batteries type list.



Exide Code	Performance		Dimensions			Technical characteristics			
	Capacity Ah	CCA A (en)	L (mm)	H (mm)	W (mm)	Polarity	Hold down	Container	Box & lid color

GEL PRO

TD2103T	210	800	518	240	274	Pol.3	-	D06	Black
TD2103	210	1030	518	240	274	Pol.3	-	D06	Black

EFB PRO

TE1403	140	800	513	223	189	Pol.3	-	D04	Black*
TE1853	185	1100	513	223	223	Pol.3	-	D05	Black*
TE2353	235	1200	518	240	274	Pol.3	-	D06	Black*

SHD PRO

TF1202	120	870	349	235	175	Pol.0	B1	D02	Black*
TF1250	125	850	349	285	175	Pol.0	-	D03	Black*
TF1251	125	850	349	285	175	Pol.1	-	D03	Black*
TF1453	145	900	513	223	189	Pol.3	-	D04	Black*
TF1523	152	1130	513	223	189	Pol.3	-	D04	Black
TF1723	172	1390	513	223	223	Pol.3	-	D05	Black
TF1853	185	1150	513	223	223	Pol.3	-	D05	Black*
TF2353	235	1300	518	240	274	Pol.3	-	D06	Black*
TF2353+	235	1450	518	240	274	Pol.3	-	D06	Black

HD PRO

TG1100	110	750	349	235	175	Pol.0	-	D02	Black
TG1101	110	750	349	235	175	Pol.1	-	D02	Black
TG1102	110	750	349	235	175	Pol.0	B1	D02	Black
TG110B	110	950	330	240	173	Pol.9	-	G31	Black
TG1203	120	680	513	223	189	Pol.3	-	D04	Black
TG1206	120	680	510	225	175	Pol.4	B3	D08	Black
TG1250	125	760	349	285	175	Pol.0	-	D03	Black
TG1353	135	1000	514	210	218	Pol.3	-	DB9	Black
TG1355	135	1000	514	210	175	Pol.3	B3	DB8	Black
TG1402	140	900	508	205	175	Pol.0	B1	ATM	Black
TG1403	140	800	513	223	189	Pol.3	-	D04	Black
TG1406	140	800	510	225	175	Pol.4	B3	D08	Black
TG145A	145	1000	360	240	253	Pol.6	-	F21	Black
TG1553	155	900	513	223	223	Pol.3	-	D05	Black
TG1803	180	1000	513	223	223	Pol.3	-	D05	Black
TG1806	180	1000	510	225	218	Pol.4	B3	D09	Black
TG2253	225	1200	518	240	274	Pol.3	-	D06	Black
TG2254	225	1200	518	240	274	Pol.4	-	D06	Black

* Lid/box color change from grey to black

Smart tools & accessories:

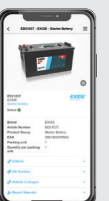
Exide Charger WSC720

Exide WSC720 is designed to meet the growing needs of garages. It comes with the latest technology, including a temperature sensor to optimize charging performance and specific charging curves for AGM, GEL, and conventional. This ensures an excellent charge each time. WSC720 is suitable for batteries from 40–500 Ah, and is ideal for the challenges of a modern garage.



Battery Finder

Best-in-class fitment information for all types of commercial vehicles. Find the right battery online at exidegroup.com or on-the-go with our Exide Battery Finder app.



Energy that goes beyond.



- Automotive plant
- Industrial plant
- R&D facility
- Recycling
- Global HQ
- Principal sales offices
+ sales offices and distribution centers worldwide



<p>All manufacturing plants ISO 9001 certified</p>	<p>All automotive plants IATF 16949 certified</p>	<p>All manufacturing plants ISO 14001 certified</p>	<p>All manufacturing plants ISO 50001 certified</p>	<p>Most manufacturing plants ISO 45001 certified</p>
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