

GEM® Batteries & Charging

Easy to charge and maintain EVs with range to meet the job's demands

GEM is purpose-built for low-speed vehicle (LSV) applications, from the power entering the vehicle while charging, to the way it turns power into performance, to how it maintains itself when it is not in operation at all. This highly intentional LSV design results in a uniquely safe, efficient, and easy to own solution for fleet operators. GEM owners will experience features like public charge station compatibility, LSV specific acceleration curves designed to quickly get up to speed into traffic, one-pedal driving that puts power back into the vehicle like a modern EV, smart battery protection while charging, deeply integrated diagnostics, get home mode to warn the operator when the power is too low, and a set of category-leading battery and charging options that includes the industry's latest Li-Ion technology. GEM's battery and charging philosophy and options enable you to go electric with ease and help you redefine your fleet.

0	110v	125 mi	4 hr	7 yr	PUBLIC
Battery Maintenance	Charging Compatibility	Range on e2 with Li-Ion	Fast Charging on Li-Ion	Warranty on Li-Ion	Charging Station Compatible

Choose the Battery & Charging Solution that's Right For You

From our proven AGM solutions to the latest Li-Ion and fast-charging technology, we'll help you find a GEM EV battery and charger option that best suits your environment, charging infrastructure and budget. All GEM vehicles come with maintenance-free batteries for ease of ownership. And all GEM models can charge on a standard 110v outlet or public charging station, nearly eliminating charging infrastructure barriers. Simply choose between AGM, Li-Ion and our extended range options and get to work in a GEM.



BATTERY & CHARGING OPTIONS	AGM with 1 kW Charger	Distance AGM with 1 kW Charger	8 kWh Li-Ion with 2.2 kW Fast Charger	16 kWh Li-Ion with 4.4 kW Fast Charger
Battery Maintenance	Maintenance Free	Maintenance Free	Maintenance Free	Maintenance Free
Battery Life Cycles	600	600	2000	2000
Operating Temp.	5 to 122° F	5 to 122° F	-20 to 140° F	-20 to 140° F
Battery Warranty	2 years (8k miles)	2 years (8k miles)	7 years (30k miles)*	7 years (30k miles)*
Charge Time	7 hours	12 hours	4 hours	4 hours
Opportunity Charging	Not Available	Not Available	Standard	Standard
Charge Cable (see images to right)	Standard	Standard	Webasto EVSE Smart Cable	Webasto EVSE Smart Cable
Charge Cable Plug	10/120v household 3-prong	110/120v household 3-prong	110/120v household 3-prong & 220/240v heavy duty 4-prong	110/120v household 3-prong & 220/240v heavy duty 4-prong

GEM CHARGE CONNECTIONS

STANDARD CABLE for AGM GEMs



WEBASTO EVSE SMART CABLE for Li-Ion GEMs



110/120v and 220/240v Plugs Included

PUBLIC CHARGING for ALL GEMs



No GEM Charge Cable Needed to Connect

BATTERY RANGE*	AGM with 1 kW Charger	Distance AGM with 1 kW Charger	8 kWh Li-Ion with 2.2 kW Fast Charger	16 kWh Li-Ion with 4.4 kW Fast Charger
e2	28 to 35 mi	50 to 62 mi	44 to 63 mi	88 to 125 mi
e4	24 to 33 mi	44 to 58 mi	41 to 58 mi	83 to 117 mi
e6	N/A	34 to 41 mi	30 to 43 mi	61 to 86 mi
eL XD	N/A	34 to 41 mi	30 to 43 mi	61 to 86 mi

*Range based on typical, average use. GEM model, driving style, payload, temperature, grade and terrain will impact range. Charge time compared to standard charger. Vehicle model and charger will impact charge time. **Full four-year warranty with prorated 5th, 6th, and 7th years.

The Li-Ion Advantage

Longer Life, Longer Warranty, Longer Range, Faster Charging, and More Cost-efficient

GEM's Li-Ion solution is purpose-built for low speed commercial and government applications. Designed with the industry's latest technology, the Li-Ion solution is fully integrated into the GEM for safety, longevity, serviceability, cost-efficiency, and operation in a variety of climates and fleet applications.



3.5x Battery Life	35% Wider Operating Temp Range	2x The Range with 16 kWh Pack	3x Faster Charging	36% More Efficient to Charge
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Save over \$15,000

GEM EVs are engineered to minimize maintenance and operational costs at just \$0.03 a mile to operate. But GEM's Li-Ion options amplify those efficiencies, **saving more than \$15,000 over the vehicle's life!** If you assume a seven year lifespan of a GEM e4 and five charge cycles a week, here is a total cost of ownership comparison of Distance AGM vs. a 8 kWh Li-Ion pack:

	Distance AGM	8 kWh Li-Ion
Acquisition Cost	\$1,580	\$4,990
Battery Replacement 1	\$5,849	-
Battery Replacement 2	\$5,849	-
Battery Replacement 3	\$5,849	-
Electricity Cost	\$2,485	\$3,360
Total	\$22,487	\$7,475

The Only Purpose-Built Li-Ion Solution for LSVs

Li-Ion GEM's Li-Ion system is fully integrated into the vehicle with the mission to provide GEM's Li-Ion system the longest lasting, lowest cost of ownership and most reliable solution possible. That results in several advantages, including:

⚡ Long Life & Long Warranty



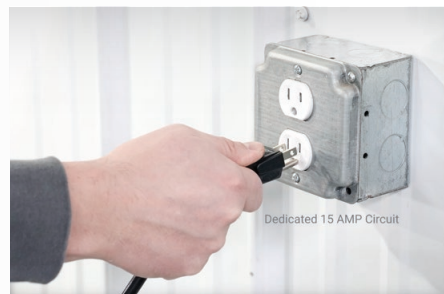
GEM's Li-Ion system lasts 3.5X more than AGM thanks to the LiFePO₄ technology. That longevity is coupled with a seven-year, 2,500 charge cycle warranty for GEM owners. This allows you buy with peace of mind knowing that the factory stands behind your Li-Ion GEM, and will keep it running for years after you purchase it.

⚡ Fast Charge & More Cost Efficient



GEM's Li-Ion solutions comes with fast chargers that fully charge in full in just four hours no matter the pack size. And on top of that, GEM Li-Ion vehicles can be opportunity charged without harming the battery life, meaning you can plug in for a partial charge throughout the day to get a little extra charge to extend your range.

⚡ Efficient Charging



The Li-Ion GEM is ultra-efficient charging – converting 95% of power into charge for the vehicle. A typical lead acid system converts only 70% of power while charging. Li-Ion GEM owners can save hundreds of dollars in electricity annually, and reduce your impact on the environment by pulling 36% less power from the grid compared to lead acid systems.

⚡ All-Weather Capable



Li-Ion vehicles can operate in 35% more weather than AGMs. It is engineered for thermal resiliency in extreme weather with an insulated battery pack that is also heated, which allows for operations in temperatures ranging from -20 to 140 degrees.

The Most Reliable Li-Ion Technology **LiFePO₄**

GEM's Li-Ion vehicles are designed with the industry's latest Li-Ion technology in LiFePO₄. This is a safe, long-lasting and lightweight chemistry that stands for Lithium Iron Phosphate. There are several advantages to this chemistry, including:

SAFETY

Known for safety features and resistance to thermal runaway. It is made with iron, phosphate, and graphite, which are less toxic to the environment than cobalt.

LIFESPAN

Experiences a longer lifespan than traditional Li-Ion batteries. Even after thousands of charge cycles, LiFePO₄ technology still functions on 70%+ capacity.

CHARGING

Enables rapid charging via higher charge rates and charges 95% more efficiently than lead acid.

WEIGHT

Lighter than most other Li-Ion batteries, enabling a more efficient and higher payload vehicle.

*Range based on typical, average use. GEM model, driving style, payload, temperature, grade and terrain will impact range. Charge time compared to standard charger. Vehicle model and charger will impact charge time. **Full four-year warranty with prorated 5th, 6th, and 7th years. GEM LSVs comply with NHTSA Low-Speed Vehicles standards and can be operated on streets posted 35 mph or less in most of the United States. Check local laws regarding street use and vehicle equipment requirements. Drivers must be at least 16 years old with a valid driver's license. Driver and passengers should always wear seat belts. Never engage in stunt driving, and avoid excessive speeds and sharp turns. Never drink and drive. All pricing, specifications, claims, and information contained in this brochure are based on information available at the time of publication and are subject to change without notice. Waev® assumes no responsibility for any inaccuracies, opinions, or omissions in those publications or changes in pricing or specifications. Unless otherwise noted, all trademarks are the property of Waev Inc. ©2025 Waev Inc.

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