



WHY USE ZERORPM LITHIUM?

HOW DO WE COMPARE TO OTHER TECHNOLOGIES?

ENGINES CAN'T POLLUTE AT



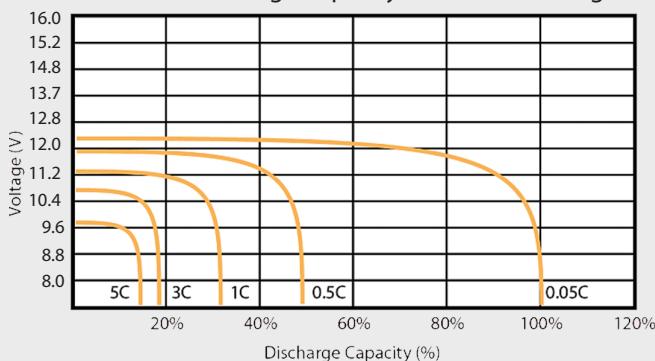
Traditional deep-cycle lead-acid batteries are being replaced with Lithium-Iron battery systems in multiple vehicle applications. ZeroRPM products provide exceptional energy, dependability, and safety by using Lithium-Iron batteries and our patented controls technology. Uncompromising stability and energy density make Lithium-Iron technology a clear outperformer compared to other battery technologies such as flooded lead-acid and absorbent glass mat (AGM). The chart below compares the three most common battery types:

| Comparison Chart | Flooded Lead-acid | AGM | Lithium-Iron |
|---|-------------------|-----|--------------|
| Safety The Lithium-Iron battery chemistry (LiFeMnPO_4) used by ZeroRPM is considered one of the most inherently safe of all lithium-ion batteries. In addition to being chemically safer, ZeroRPM batteries offer electromechanical protection by automatically disconnecting if a cell voltage or temperature exceeds specified operating limits. Each battery has a valve to prevent an explosion in case of puncture. | | | |
| Weight Per kilowatt, Lithium-Iron batteries have about 1/3 the weight of lead-acid and AGM batteries. It takes three lead-acid batteries to equal the usable energy of one Lithium-Iron battery. | | | |
| Charge Time One of the most valuable properties of Lithium-Iron technology is its ability to charge much faster than other battery technologies. This equates to more time saving fuel and improving operator safety and comfort and less time charging. | | | |
| Energy Capacity Lithium-Iron batteries offer nearly double the usable energy capacity of other battery technologies as they have a deeper depth of discharge (DOD). AGM and flooded lead-acid batteries offer 50% DOD, whereas lithium-iron offers 80% DOD. | | | |
| Battery Life Cycle Lithium-Iron technology is capable of extraordinarily long life. As such, ZeroRPM batteries have a much greater service life than those based on other technologies. Depending on factors such as temperature and discharge rate, they can last well over 2,000 cycles. | | | |
| Upfront Cost Although Lithium-Iron technology has a higher upfront cost than other battery technologies, this is outweighed by its significantly lower lifetime cost. | | | |
| Lifetime Cost Lithium-Iron batteries' exceptional capacity and service life make them much more cost-effective in the long term than batteries based on other technologies, offsetting their higher upfront cost. | | | |

DISCHARGE PERFORMANCE

Likely the most valuable trait of Lithium-Iron batteries is their ability to maintain excellent voltage and discharge stability when under heavy loads. In contrast, as seen below, lead-acid batteries suffer as higher loads are applied.

Lead-acid Discharge Capacity vs Terminal Voltage



Lithium Discharge Capacity vs Terminal Voltage

