

Solar Storage Container Solutions

Power tool lithium battery working current



Overview

To help define exactly how lithium-ion batteries work, PTR independently interviewed two men we truly respect in the industry: Paul Fry from Milwaukee Electric Tool Corp and Jason Feldner from Bosc.

Why do cordless power tools use Li-ion batteries?

When cordless power tool brands switched to Li-ion battery technologies, they spec'ed and advertised batteries according to two fundamental characteristics - voltage and charge capacity, with units of volts and amp-hours, respectively. Voltage is a widely-understood concept, and amp-hours less so.

Are power tool batteries cross-compatible?

For all these safety and compliance considerations, batteries are not cross-compatible (unless specified by the power tool manufacturer). When buying aftermarket batteries for power tools, it is important to consult with the power tool owner's manual and purchase only the batteries recommended by the manufacturer.

What chemistry is used in power tool batteries?

The Power Tool Institute is the leading organization for power tool safety resources, information and education. Li-Ion Batteries . For many years, the chemistry used in power tool batteries was commonly nickel metal hydride (Ni-MH) and nickel cadmium (Ni-Cd).

How much current does a cordless tool draw?

Cordless tools powered by 18V lithium-ion batteries can have very high peak current draws of 30-50+ amps but much lower average draw during use. The amperage rating on corded tools indicates the maximum sustained current the tool can handle without overheating, not necessarily the actual current drawn during use.

What are the benefits of lithium ion technology?

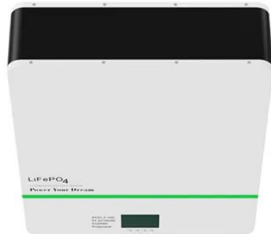
The benefits of this newer Li-Ion technology have allowed higher-demand tools

and applications to be battery powered, and provide significantly more work-per-charge. This extended capability, combined with the portability of battery tools, has resulted in a dramatic increase in their use.

How has lithium-ion technology changed?

Jason: Lithium-ion technology has changed with regards to the role the battery cells play in the system. There are three components to a lithium battery pack: the battery cells, the electronics, and of course, the tool. For lithium-ion to function well, electronics are essential. They control the battery and the movement of energy.

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