

Charge It!!!



Power tools must have batteries that endure vibration and shock, and be able to perform in extreme temperatures.

A major issue with cordless power tools is the weight of the battery, and the fatigue that it produces. One of the focuses of power tool battery development is reducing the weight and size.

At this time most power tools are equipped with NiCd batteries. Li-ion batteries are improving and some power tool manufactures are developing these batteries to be used in power tools.

Battery Memory?

A battery with a memory will begin to run down more quickly because it will only discharge to the point where you have usually discharged it. Recharge the batteries for the recommended time. They do not perform well if overcharged.

Heat (and extreme cold!) — The Universal Enemy of Batteries

Avoid overheating any rechargeable battery. The worst place for it is in a closed car during the summer. This will shorten the battery's life markedly. Batteries depend on internal chemical reactions to produce power; chemical reactions are accelerated by high temperatures and retarded by low temperatures. Therefore, to minimize power loss during storage, batteries should ideally be stored at a maximum temperature of 77 F (25 C). Refrigerated storage is neither necessary nor recommended. Consumers are discouraged from storing tools in hot environments, but most of the problems occur when heat is generated by use of the tool. Chargers of NiMH batteries include fans.

Battery Specifications

Two important numbers to consider when buying a replacement rechargeable battery are the voltage (v) and the milliamp-hours (mAh). The voltage you choose should always match the voltage in the original batteries. Milliamp-hours measures how much power a particular battery will hold. This number can be larger than your original battery, but make sure that all of the batteries used together in a device have the same mAh rating.

Recycling

All rechargeable batteries need to be recycled. Many batteries contain lead, mercury, and cadmium. When thrown in landfills they pollute our environment. Components such as nickel, silver, and zinc can also be problems, but not as much. Check with local environmental agencies to learn where to recycle these hazardous materials.

Which Battery Should I Choose?	
BATTERY TYPE	PROPERTIES
Nickel Cadmium (NiCd)	<ul style="list-style-type: none"> Performs well in cold temperatures <i>Least expensive and the most durable</i> Has memory effect issues (some manufactures dispute this); Do not leave on the charger more than 2 days Can be stored for approximately five years Uses: power tools, cordless phones
Nickel Metal Hydride (NiMH)	<ul style="list-style-type: none"> Accepts slightly fewer charges than NiCad Lower memory-effect issues; Do not leave on the charger more than 2 days <i>Does not perform well in cold weather</i> Produces a lot of heat Can be stored for approximately three years Uses: computers, cell phones, camcorders, power tools
Lithium-Ion (Li-ion)	<ul style="list-style-type: none"> The newest of the rechargeables <i>Has the best performance in cold weather</i> Ideal for lightweight applications (35% less weight than NiMH) No memory effect Higher cost battery Can be stored for approximately ten years Uses: computers, cell phones
Sealed Lead-acid	<ul style="list-style-type: none"> Inexpensive and simple to manufacture. <i>No memory effect</i> Make sure that the battery is fully charged on most cycles. Always store lead-acid in a charged condition Sealed lead-acid batteries can be stored for approximately two years Uses: Video cameras, power tools, wheelchairs, ATV's, metal detectors, clocks, cameras