

Vertiv™ Liebert® PSI5 Lithium-Ion Frequently Asked Questions

Is the warranty on the PSI5 Lithium-Ion longer than UPSs with lead acid (VRLA) batteries?

The purchase of a Liebert® PSI5 Lithium-Ion UPS includes a 5-year advanced replacement warranty.

Are lithium-ion batteries safe?

Lithium-ion batteries in a stationary UPS application are safe and reliable. They use sophisticated battery management systems (BMS) to manage battery charging and to prevent batteries from overheating.

What are the advantages of lithium-ion batteries?

The key benefit of lithium-ion in a UPS application is that it will last 2-3 times as long as a VRLA battery pack. This reduces the cost of ownership and makes UPS installations much easier to manage remotely. The lithium-ion batteries are also much more resilient to elevated temperatures and allow for more power in smaller spaces. Lithium-ion batteries are also much lighter than VRLA batteries making them easier to install.

What is the average useful life of the battery used in the PSI5 Lithium-Ion?

The lithium-ion battery pack is designed to last 7-10 years, while VRLA batteries last about 3-5 years. The lithium-ion batteries typically last about 10 years up to 25°C, and about 7 years while operating at 40°C.

With lithium-ion carrying more power in less space, will a smaller UPS still provide the same level of protection?

Yes, the smaller physical size of the PSI5 Lithium-Ion compared to a VRLA UPS was achieved without compromising on protection or quality. The space savings was entirely due to the battery being smaller.

How can I understand if the PSI5 Lithium-Ion will provide enough runtime at my specific IT design load?

Vertiv has a [battery runtime calculator](#) available on our website to help estimate battery runtimes. These runtimes are estimates only and actual runtimes will vary up or down depending on environmental conditions.

Is there a downside to a UPS with lithium-ion batteries compared to traditional VRLA batteries?

The only downside is that many lithium-ion UPS options are more expensive than VRLA options. However, VRLA UPSs will require battery replacements every 3-5 years so the PSI5 Lithium-Ion UPS in many cases has a much lower total cost of ownership.

How do you calculate total cost of ownership (TCO)?

The easiest way is to use Vertiv's [Lithium-Ion TCO Calculator](#) on our website. In short, you compare the purchase price of a lithium-ion UPS to the price of a VRLA UPS, plus the parts and labor cost to replace the VRLA battery pack 2-3 times. The number of battery replacements required will vary based on ambient temperature, IT load, and the average number of charge/discharge cycles on the battery.

Can this product be transported safely?

Yes, the PSI5 Lithium-Ion meets UN 38.3 and UN3480 to safely ship the UPS and lithium-ion batteries by air, land, and sea. Per UN3480, when shipping by air the battery state of charge (SOC) must be ≤30%.

Is this product UL Listed?

Yes, the PSI5 Lithium-Ion meets UL 1778, UL 1642 (Battery Cells) and UL 1973 (Battery Pack).

Vertiv™ Liebert® PSI5 Lithium-Ion Frequently Asked Questions

What chemistry of lithium-ion battery is in the PSI5 Lithium-Ion, and why was it selected?

The PSI5 Lithium-Ion battery pack is made of LiFePO₄ as it provides excellent safety and can last 10 years or more in ideal operating conditions.

Are lithium-ion battery packs hot-swappable?

Yes, these battery packs are hot-swappable.

What is the process for Recycling old batteries? Can Vertiv support this?

Yes, Vertiv has a trade-in program and will provide shipping and recycling of old batteries. This program includes recycling of both VRLA and Lithium-Ion Batteries.

Is the operating temperature range of PSI5 Lithium-Ion different than VRLA?

The PSI5 Lithium-Ion UPS can operate without derating between 0 - 40°C like the VRLA UPS. However, from about 25 - 40°C VRLA batteries are susceptible to reduced lifespan making Lithium-Ion batteries more suitable for elevated temperatures.

Is the PSI5 Lithium-Ion available with external battery cabinets for longer runtime?

Scalable runtime is not supported by the PSI5 Lithium-Ion at this time.

