XTREME POWER CONVERSION **Li90** vs Vertiv **EXSV-20KTN** COMPARISON

The Xtreme Power Li90 and Vertiv Liebert EXS are high-performance, online double-conversion UPS systems for critical three-phase loads. The Li90 stands out with higher efficiency, five times longer lithium-ion battery life, smaller and lighter design, operation to 50 °C without derating, and longer warranty coverage—delivering lower installation, maintenance, and lifecycle costs.

20kVA 208/120 V Three-Phase UPS Comparison

	Xtreme Power Li90-30k2	Vertiv EXSV-20KTN	Advantage
Capacities	20kVA / 20kW	20kVA / 20kW	Both deliver full-rated (unity PF) output for maximum usable capacity.
Topology	Online Double Conversion + ECO Mode	Online Double Conversion + ECO Mode	Equivalent premium protection with high-efficiency ECO operation.
Efficiency / Heat Disapation	94.5 % (online) / 3,970 BTUH	93.4 % (online) / 4,820 BTUH	Higher efficiency reduces energy consumption and cooling requirements
Maintenance Bypass	Standard (integrated)	Standard (integrated)	Both include integrated maintenance bypass for seamless servicing.
Size (W x D x H) / Weight with Base Battery	12.6 x 35.2 x 49.2 in (387 lb)	23.6 x 39.3 x 78.7 in (1212 lb)	Li90 occupies half the footprint and weighs two-thirds less, simplifying installation and reducing floor-load requirements.
Internal Battery Runtime	15 minutes @ 20 kW (2 stings). 30 minutes @ 20kW (3 strings)	13 minutes @ 20kW	Longer runtimes in a much smaller footprint
Battery Life	Up to 15 years or 3000 to 5000 cycles ($LiFePO_4$)	6-8 years or ~300 cycles (VRLA)	Much longer battery life than VRLA, reducing replacement and maintenance costs.
Temperature	Up to 50°C (122°F)	Up to 40°C (104°F)	Better suited for hot electrical rooms and edge deployments.
Battery Warranty	5 years ($LiFePO_4$)	1 years (VRLA)	5× longer battery warranty lowers ownership risk.
Start-up and Warranty	Start-up included; 2-year warranty (USA & Canada)	1-year warranty	Li90 includes factory start-up and provides longer standard system coverage.