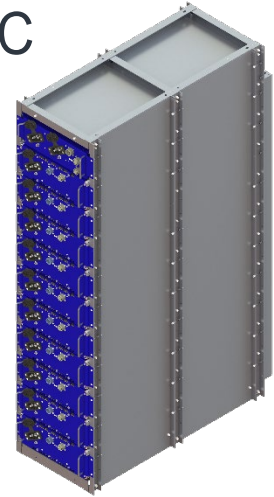


TRIDENT VERSA 1000 VDC



PERFORMANCE

- 108 Wh / kg
- 237 W / kg
- 94 Wh / L
- 206 W / L

INDUSTRIES SERVED

- Marine
- Rail
- Mining
- Energy Harvesting

CERTIFICATIONS

- UN 38.3
- ABS
- DNV – GL
- Bureau Veritas
- RINA
- Lloyd's Register
- S9310 (pending)

ENVIRONMENTAL

- NMA RSV 12-2016
- UN 38.3 T1 thru T5
- CISPR 16
- IEC 60028-2-6, 64
- IEC 60068-2-1, -2, -30
- IEC 60945, Ed.3
- IEC 61000-4-2 thru -6

Trident Versa is Spear Power System's patented commercial off-the-shelf (COTS) battery solution. Spear provides its battery systems to defense, marine, and Industrial markets.

Key components in each system are the scalable Modules (sMOD) and scalable Battery Management System (sBMS). The sMOD provides a common building block for our systems.

Versa systems can be scaled from 50 VDC to 1250 VDC and are available in both air-cooled and liquid-cooled options.

1000 VDC SYSTEM SPECIFICATION

Configuration	2P 240S
Cell Chemistry	NMC
Capacity	126 Ah
Energy	111 kWh
Maximum Operating Voltage	1,002 VDC
Nominal Operating Voltage	883 VDC
Minimum Operating Voltage	720 VDC
Maximum Continuous Charge / Discharge Current	282 A
Maximum Charge / Discharge Current (15 minutes)	350 A
Height	1,948 mm
Width	495 mm
Depth	1,233 mm
Weight (Air-Cooled)	1,032 kg
Weight (Liquid-Cooled, dry)	1,100 kg
Maximum Operating Temperature	45°C
Minimum Operating Temperature	-25°C
Maximum Storage Temperature	60°C
Minimum Storage Temperature	-30°C
Relative Humidity	100%

Spear's Versa system is patented for its design for mitigation of thermal event propagation for battery systems. Versa offers NMA Level 1 safety (no fire suppression required) and controlled cell venting without the need for active liquid cooling.

Trident Versa is a light-weight, compact energy storage solution. Spear employs two-sided module cooling to optimize heat transfer between the cells and outer heat exchanging surfaces, resulting in extended battery life.