ZBC 250-575

ECOoptimize

Voltage: 480 V
Frequency: 60 Hz

General Description

Atlas Copco has developed a 10 ft container for Energy Storage System, designed to meet the requirements of both off and on grid applications. Ideal for use in renewable power plants. Powered by lithium-ion batteries, this portable product is ready to supply reliable power in challenging situations. It can work in island mode, as a hybrid solution with a diesel generator, or in parallel with other Energy Storage Systems.

Technical Information

Details		
Nominal Rated Power	kW / kVA	250
Nominal Energy Storage Capacity	kWh	575
Net Energy Stored*	kWh	518
Rated Voltage (60Hz) @ 3 Phase	VAC	3 Phase 480
Power Factor Range		(-1,1)
Nominal Rated AC Current	A	301
Maximum AC Current	A	330 (<10min)
Battery System Nominal Voltage	VDC	768
Battery Voltage Range	VDC	672-864
Battery Maximum Charing/Discharing Current	A	375
Cell Chemistry		Lithium Iron Phosphate LiFePO4
Operating Temperature	°F / °C	-4° to 122° / -20° to 50°
Recharging Time	h	2.7
Autonomy at Rated Power (90%)	h	2
Dimensions (L x W x H)	ft	9.8 x 8 x 9.5
Weight	lb	24,250
Sound Power Level	dB(A)	<86
IP Level		IP54
Protection Class		Class I
Icw AC	A	700
Icw DC	A	46,710
Derating Altitude	ft	>9,842

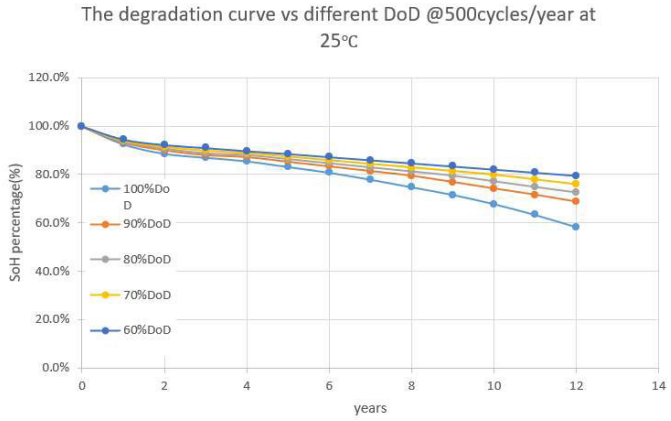
The standard reference conditions are: 25 °C, 100 kPa and 30% relative humidity. For nominal values efficiencies, deratings and DoD are not considered and tested parameter related to PF=1.
**Net energy stored may decrease over life of batteries*

Batteries

Lithium-iron-phosphate (LiFePO4 or LFP) is the safest chemistry in its family. It does not need to be fully charged to perform correctly, and its service life even slightly improves in case of partial charge instead of a full charge. This major advantage, combined with its wide operating temperature range, excellent cycling performance, low internal resistance, and high efficiency, makes LFP the preferred choice for very demanding applications.

Model Name	76.8 NESP 250	C-Rate	0.5C
Dimension W x D x H (in)	15.7 x 34.8 x 10.4	Energy Density (Wh/lb)	60
Nominal Voltage (V)	76.8	Min Charge Temperature (ºF)	32
Nominal Capacity (Ah) / (kWh)	250 / 19.2	Overcurrent Capability	1.1x Nominal Current for 10 Minutes
DoD %	90 (Recommend)	End of Discharge / Charge Volt (V)	67.2 / 86.4
Cycles	Check Chart Below	Weight (lb)	321

Nominal values for standard conditions and performance



Terms:

- **SOC% - State of Charge**
  Measures the energy content in a battery
- **SOH% - State of Health**
  Informs about the remaining initial capacity
- **DOD% - Depth of Discharge**
  Defines the energy consumed in the battery
- **Cycle** - Complete charge and discharge of its usable energy stored (DoD%)

Power Conversion System

Power Conversion System combines both an inverter and a charger. It can transform the energy supply from batteries (DC) to power loads (AC) with or without additional sources such as diesel generators or the grid. It can also convert AC to DC when charging batteries.

Model Name	PWS1-250K-NA	Efficiency %	96%
AC Voltage Range (V)	480±10%	AC Output Current (A)	301
Total Nominal Power (kW)	250	Isolation	Built-in Transformer
Overload Capability (kW)	275	-	-

Nominal values for standard conditions and performance