ZBC 500-250

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	500
Nominal Energy Storage Capacity	kWh	246
Net Energy Stored*	kWh	221
Rated Voltage (60Hz) @ 3 Phase	VAC	3 Phase 480
Power Factor Range		(-1,1)
Nominal Rated AC Current	A	600
Maximum AC Current	A	660 (<10min)
Battery System Nominal Voltage	VDC	768
Battery Voltage Range	VDC	672-864
Battery Maximum Charing/Discharging Current	A	640
Cell Chemistry		Lithium Iron Phosphate LiFePO4
Discharging Temperature	°F / °C	-4° to 122° / -20° to 50° (>113/45C Derating)
Recharging Time	h	1.2
Autonomy at Rated Power (90%)	h	0.45
Dimensions (L x W x H)	ft	9.8 x 8 x 9.5
Weight	lb	22,250
Sound Power Level	dB(A)	<86
IP Level		IP54
Protection Class		Class I
Icw AC	A	1,300
Icw DC	A	33,880
Derating Altitude	ft	>9,842

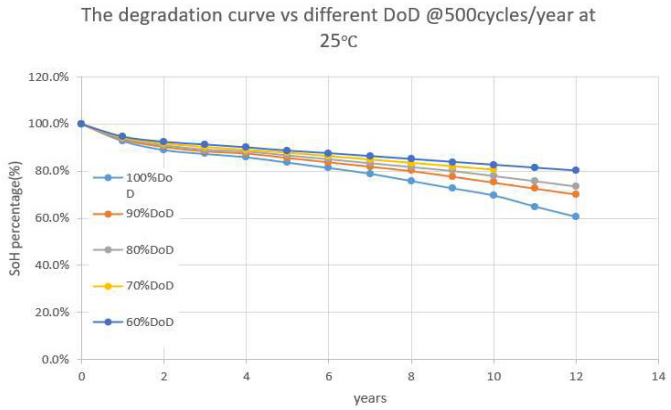
The standard reference conditions are:77 °F / 25 °C, 100 kPa and 30% relative humidity. For nominal values efficiencies, deratings and DoD are not considered and tested parameter related to PF=1.
**Net energy stored may decrease over life of batteries*

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 160	C-Rate	2C
Dimension W x D x H (in)	15.7 x 34.8 x 10.4	Energy Density (Wh/lb)	50
Nominal Voltage (V)	76.8	Min Charge Temperature (°F)	32
Nominal Capacity (Ah) / (kWh)	160 / 12.3	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)	243

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 change AC to DC when charging batteries.

Model Name	P WS1 500K	Efficiency (%)	96%
AC Voltage Range (V)	480±10%	AC Output Current (A)	600
Total Nominal Power (kW)	500	Isolation	External Transformer
Overload Capability (kW)	550 (10 Minutes)	-	-

Nominal values for standard conditions and performance