



# BOX-BE<sup>TM</sup>

## CONTAINERIZED ENERGY STORAGE SYSTEM

Pre-integrated, transport-ready energy storage in standard ISO containers.  
384 kWh to 768 kWh. Non-flammable. No HVAC. 15-year daily cycle life warranty.

384-768 kWh • >90% Efficient • -40°C to 55°C • 15yr Warranty • Zero Fire Risk

# CONTAINERIZED BIPOLAR LEAD STORAGE

## Box-BE™: Pre-Integrated Containerized Energy Storage

The Box-BE™ product line delivers Advanced Battery Concepts' proven CEES™ bipolar lead cartridges pre-integrated into standard 10-foot and 20-foot ISO containers. Every unit is factory-assembled, tested, and shipped transport-ready, eliminating on-site integration risk. Rated IP55/NEMA 3R for outdoor installation, Box-BE™ systems operate from -40°C to 55°C with convection fans only, requiring no HVAC and no climate-controlled enclosures. Fire suppression not needed. Non-flammable aqueous electrolyte chemistry means zero thermal runaway risk.



Box-BE™ 10-foot ISO container, doors closed configuration

384-768 kWh

>90% Efficiency

-40°C to 55°C

15yr Warranty

Zero Fire Risk

### Why Not Lithium Containers?

- × Thermal runaway fire risk
- × Mandatory HVAC and fire suppression
- × 10-15% capacity fade in 10 years
- × Limited cold-weather performance
- × Complex BMS failure modes
- × Difficult to recycle, toxic waste
- × Frequent augmentation required

### Box-BE™ Delivers

- ✓ Non-flammable aqueous chemistry
- ✓ Convection fans only, no HVAC needed
- ✓ Less than 0.1%/yr fade over design life
- ✓ Operates -40°C to 55°C, no derating to -20°C
- ✓ Simple, robust battery management
- ✓ 100% recyclable, established supply chain
- ✓ 15-year daily cycle warranty, no augmentation

## ELECTRICAL SPECIFICATIONS

Parameter	BOX-BE-10 384 kWh / 384V	BOX-BE-10 384 kWh / 1152V	BOX-BE-20 768 kWh / 1152V
Nominal Voltage	384 VDC	1152 VDC	1152 VDC
Maximum Voltage	498 VDC	1498 VDC	1498 VDC
Energy Capacity	<b>384 kWh</b>	<b>384 kWh</b>	<b>768 kWh</b>
Maximum Current	400 A	175 A	350 A
Maximum Power	154 kW	192 kW	384 kW
Round Trip Efficiency	> 90% DC-DC	> 90% DC-DC	> 90% DC-DC
Discharge Duration	2.5 - 100 h	2 - 100 h	2 - 100 h
Capacity Fade	< 0.1% per year	< 0.1% per year	< 0.1% per year
Cycles	Unlimited	Unlimited	Unlimited
Energy Throughput Limit	2,102 MWh	2,102 MWh	4,204 MWh
Calendar Life Limit	15 years	15 years	15 years
Battery Type	Advanced bi-polar	Advanced bi-polar	Advanced bi-polar
Battery Chemistry	Aqueous	Aqueous	Aqueous

## BATTERY ENCLOSURE SPECIFICATIONS

Parameter	BOX-BE-10 384V	BOX-BE-10 1152V	BOX-BE-20 1152V
Dimensions	120L x 96W x 102H in	120L x 96W x 102H in	240L x 96W x 102H in
Shipping Weight	31,900 lbs	31,900 lbs	56,000 lbs
Enclosure Type	10' ISO container	10' ISO container	20' ISO container
Floor Spacing Requirement	144L x 120W in	144L x 120W in	288L x 120W in
DC Disconnect / Breaker	400 A	175 A	350 A
Cooling / Heating	Convection Fans	Convection Fans	Convection Fans

## ENVIRONMENTAL SPECIFICATIONS

Parameter	All Models
Operating Temperature	-20°C to +55°C
Derated Energy Capacity	-40°C to -20°C
Noise Level	<47 dB
Storage Temperature	-40°C to +60°C
Operating Humidity	85% RH NC
IP/NEMA Rating	IP55 / NEMA 3R
Installation	Outdoor

## COMPLIANCE INFORMATION

Parameter	All Models
Certifications*	UL 1973
Grid Connection	Capable
Inverter Requirements	Modbus 485 or CAN bus
Installation Requirements	NEC / Local code

\*UL 9540/9540A in process

## Key Features

- **Pre-Integrated and Transport-Ready**  
Factory-assembled CEES™ cartridges in standard ISO containers. Ship by truck, rail, or vessel. Deploy in hours, not weeks.
- **Non-Flammable Chemistry**  
Aqueous electrolyte eliminates thermal runaway, fire, and toxic gas hazards. Inherently safe by chemistry, not by mitigation.
- **No HVAC, No Fire Suppression**  
Convection fans only. No chillers, no sprinklers, no suppression agents. Dramatically lower auxiliary power consumption and maintenance cost.
- **Scalable: 384 kWh to 768 kWh**  
10-foot containers deliver 384 kWh. 20-foot containers deliver 768 kWh. Combine units for MWh-scale deployments.
- **Constant Energy Delivery**  
Less than 0.1% capacity fade per year. No measurable fade over the design life. No augmentation required.
- **15-Year Daily Cycle Warranty**  
Warranted for 15 years of daily cycling with unlimited cycles. 20-25 year design life. 100% recyclable at end of life.
- **100% Recyclable**  
Established lead recycling infrastructure. Over 99% material recovery rate. No hazardous waste disposal burden.

## Applications

- Microgrid Energy Storage
- Renewable Energy Integration
- Backup Power / UPS
- Demand Response
- Peak Shaving / Load Shifting
- Off-Grid / Extreme Environment
- Coastal / Island Deployments
- Mining Operations
- Military / Defense

Built for the Hardest Environments on Earth