BHARATCELL

LITHIUM-ION BATTERIES

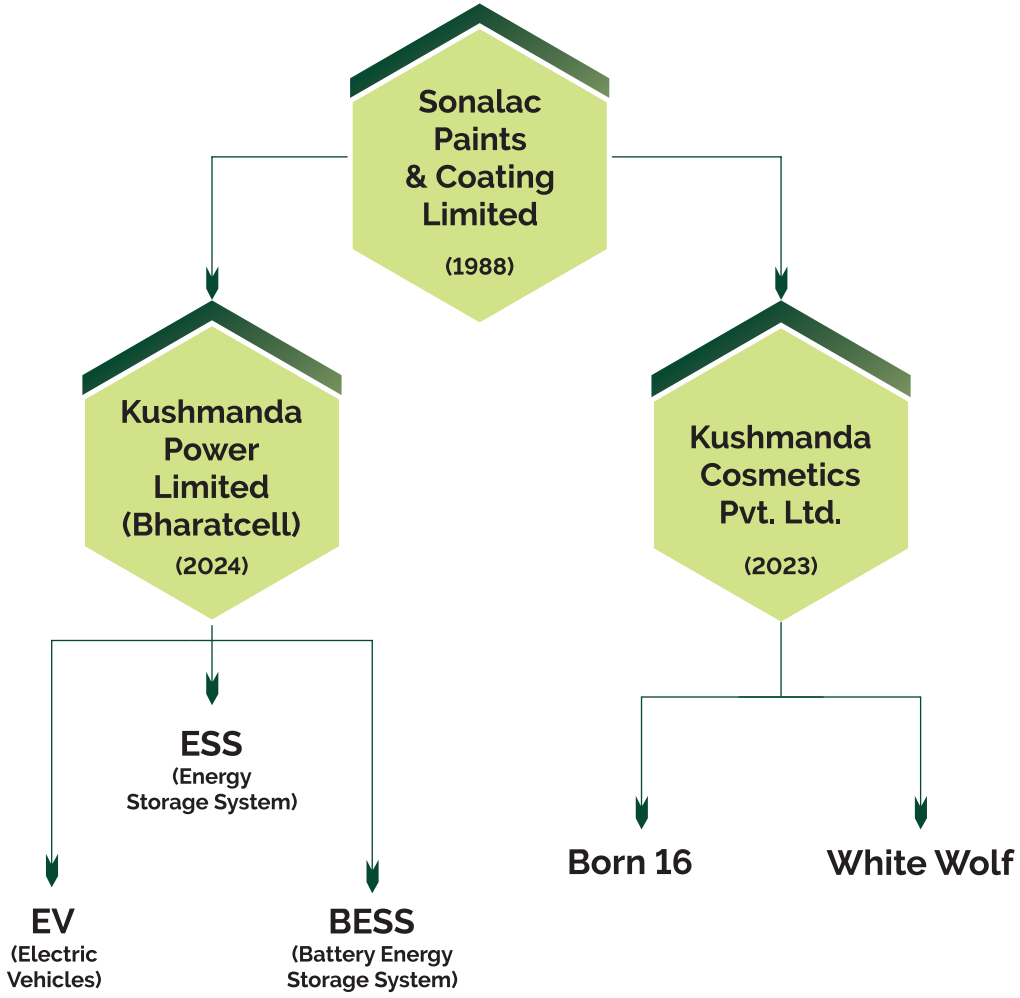
www.bharatcell.com

CONTENT

Powering Progress *with* **Lithium-Ion Innovation**

About us.

STRUCTURE & HISTORY



Sonalac Paints & Coating Limited

Established in 1988, Sonalac Paints and Coatings Ltd. has been a trusted name in the Indian paint industry for over three decades. Headquartered in Chandigarh, the company manufactures a wide range of decorative and industrial coatings, including interior and exterior emulsions, wall putties, and cement paints. With a commitment to quality and innovation, Sonalac's products are designed for aesthetic brilliance and long-lasting protection. The company's manufacturing facilities are located in Jammu & Kashmir and Rajasthan, with an installed capacity of 73,500 tonnes of dry paint and 1,050 tonnes of liquid paint per year. Sonalac exports its products to East Asia, the Middle East, and the Indian subcontinent, continually redefining industry benchmarks in quality and sustainability.

Kushmanda Cosmetics Pvt. Ltd.

Kushmanda Cosmetics is a contemporary beauty and personal care company committed to clean, conscious formulations. Home to fast-growing brands like Born 16 and White Wolf, Kushmanda blends modern skincare science with natural ingredients to cater to evolving consumer lifestyles. With a focus on efficacy, safety, and style, the company is quickly emerging as a dynamic player in India's wellness and grooming market.

BHARATCELL - Choice of Millenium

Bharatcell

Kushmanda Power Limited (KPL) is at the forefront of India's clean energy revolution. KPL is committed to redefining the renewable energy landscape through its innovative approach to Lithium-ion battery (LIB) technology.

With a clear focus on the future, KPL specializes in the development and assembly of state-of-the-art LIB packs under the brand BHARATCELL. Fully aligned with the national Atmanirbhar Bharat initiative, KPL champions local manufacturing, driving self-reliance and fostering the domestic capabilities required for a sustainable and secure energy future.

Kushmanda Power Limited (KPL) operates a 1 GWh facility in Noida and is set to launch a 5 GWh world-class plant in Kathua, J&K by end of 2025. With advanced technology and robotic automation, KPL delivers reliable, efficient, and sustainable lithium-ion battery solutions for mobility and stationary use. Committed to innovation and energy self-reliance, KPL is shaping a cleaner, greener future for India.

Mission

To drive innovation and excellence across energy, lifestyle, and infrastructure sectors by delivering high-quality, sustainable, and future-ready solutions that empower communities and industries alike.

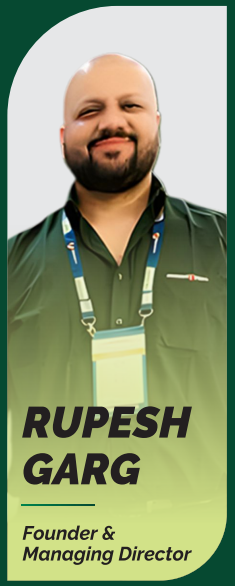
Vision

To be a multi-sectoral leader shaping India's growth story—through clean energy, transformative consumer products, and trusted building materials—anchored in integrity, technology, and customer value.

Leadership & Team

United by Innovation. Driven by Purpose.

At Bharatcell, our strength is our people. Backed by decades of experience in energy, automotive, and electronics, our expert team drives innovation in lithium-ion technology, R&D, and quality. United by a shared vision, we deliver reliable, efficient, and eco-friendly battery solutions that meet global standards.



RUPESH GARG
Founder & Managing Director

MAYANK MITTAL
Founder & Director

RAGHAV SHARMA
CEO

Core Competancy

Segment

2W / 3W / E-Rickshaw L3 & L5 / Golf carts / Electric cycles / E- Tractor / Telecom Application / ESS / BESS

Tailor-Made Solutions

Nominal operating voltage in the range of 24V, 36V, 48V, 60V till 1000 V

Smart Features

Proprietary BMS, CAN, IoT enabled, GPS/ GPRS, remote monitoring & control features, Remote battery Immobilization.

Pan India Presence

Sales and service centres across India.

Modular

Modular Battery pack, Swappable model for ease of use.

Our product range

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LITHIUM-ION BATTERIES

EV Batteries

Battery Energy Storage System

Telecom Batteries

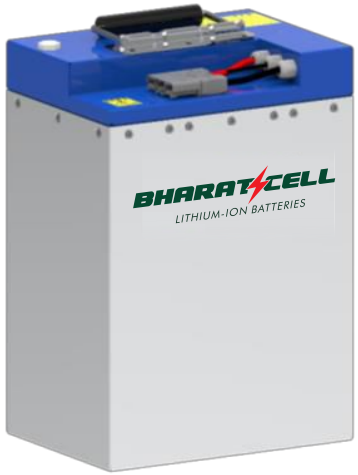
Traction Batteries

- **51.2V/ 45 Ah/ 60Ah**
- Prototype in testing
- 100 km per charge- slow speed vehicle (25km/hr)
- Single battery per vehicle

End User:

- Individuals and OEMs
- Fleet operators/ last-mile delivery services

Dimensions
W*D*H – 23.5 * 17.5 * 43.5 cm



01 | Lithium-ion 2W Batteries

Bharatcell (KPL) brings you advanced Lithium-ion Batteries for Electric Two-Wheelers — designed to deliver unmatched performance, long life, and high safety standards. Perfect for scooters, bikes, and lightweight EVs, these batteries are the heart of India's growing green movement.

- **48V - 15AH to 60AH**
- **60V - 20AH to 60AH**
- **72V - 15AH to 60AH**

High Cycle Life | *Ip67* | *Fireproof* | *Smart BMS* | *Fast Charging*

02 Lithium-ion 3W Batteries

Features

- 2000-2800 Cycles
- Ip67
- Fireproof
- Smart BMS
- Fast Charging

At Bharatcell, we're driving India's electric revolution with our advanced Lithium-ion Batteries, specially designed for three-wheeler electric vehicles. Built for Indian roads and climate, our batteries deliver unmatched performance, reliability, and long-term value.

Bharatcell deals in L3 & L5 category. This marks their commitment in powering a broader range of vehicles, ensuring enhanced performance and reliability.

- 51.2V - 100AH
- 51.2V - 150AH
- 51.2V - 230AH
- 51.2V - 304AH
- 60V - 110AH to 200AH
- 72V - 110AH to 200AH

"POWER THAT GOES THE EXTRA MILE – 100+ KM RANGE ON A SINGLE CHARGE"

100+ Km Range

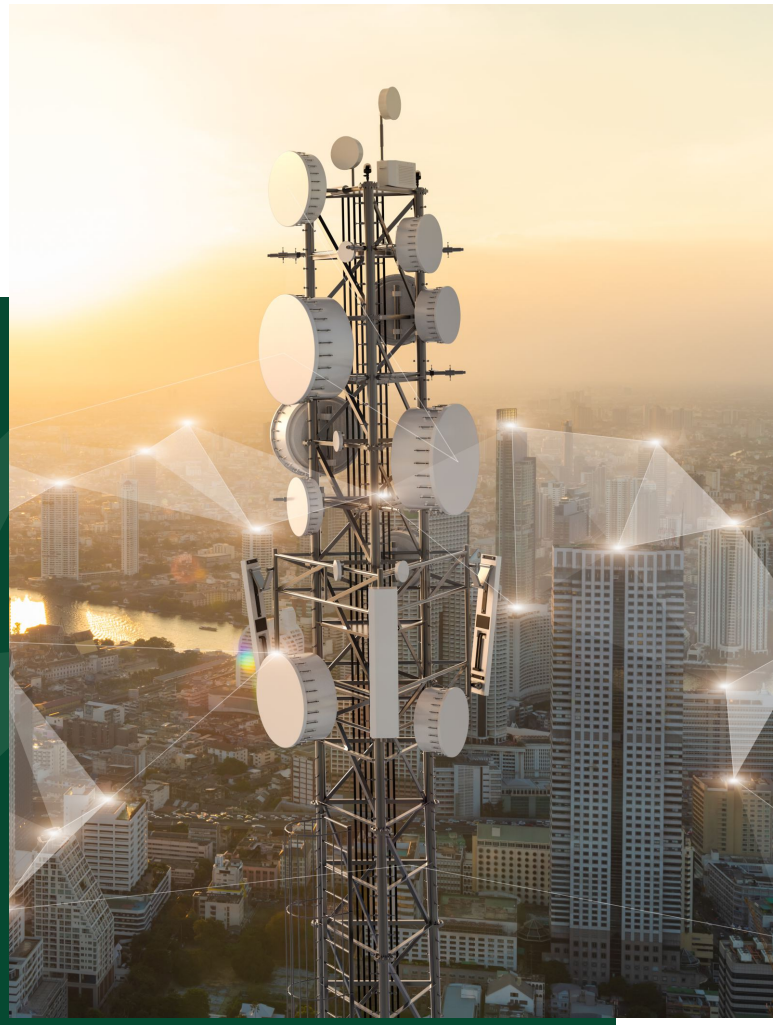
Product Specification Sheet

S.No.	Product Characteristics	Parameters
1	Battery Voltage	51.2V
2	Battery Nominal Capacity	105 Ah
3	Battery Pack Actual Capacity at 100% DOD	108~110 Ah
4	Cell Technical specification	@0.5C EVE 105Ah
5	Battery operating Voltage Range	45~58.4±1V
6	Cell Cycle Life at 0.5C @25C/@45C	4000 cycles, 80% SOH/2000 cycles, 80% SOH
7	IP Rating	Ip67
8	Battery Enclosure	MS (GI)
9	Operating Temp Range	0C~60°C
10	Recommended working Temp Range	10°C~45°C
11	Recommended Discharge Current	0.33 C
12	Peak Discharge Current -10 Sec	0.6 C
13	Battery Weight	46* KG
14	Maximum Recommended Motor Power	≤ 1.5 KW
15	Maximun load capacity	350 Kgs
16	DOD Percentage	95%
17	Warranty	3 Year

S.No.	Product Characteristics	Parameters
18	Cell Configuration	16S 1P
19	Battery Dimension(mm) ±5 mm	440*326*283
20	BMS Type	Smart
21	Charge & Discharge separate port	Yes
22	Charge Connector	Anderson SBS 75 X/ SB 50
23	Discharge Connector	Anderson SB 50
24	Voltage level protections	Enabled
25	Over Current Protection	Enabled
26	Temperature protection	Enabled
27	Short Circuit Protection	Enabled
28	Bluetooth Compatibility	Enabled
29	Cell Balancing	Passive
30	Communication Protocol	CAN/Non CAN
31	Recommended Charger Rating	20/25A
32	IOT/GPS	On Demand
33	Application Standard	AIS156-A3

03 Telecom Batteries

At Bharatcell KPL, we specialize in delivering advanced Telecom Lithium-ion Batteries designed to meet the evolving power demands of modern communication networks. Our batteries are engineered for high performance, long life, and consistent power backup, ensuring your telecom infrastructure operates seamlessly.



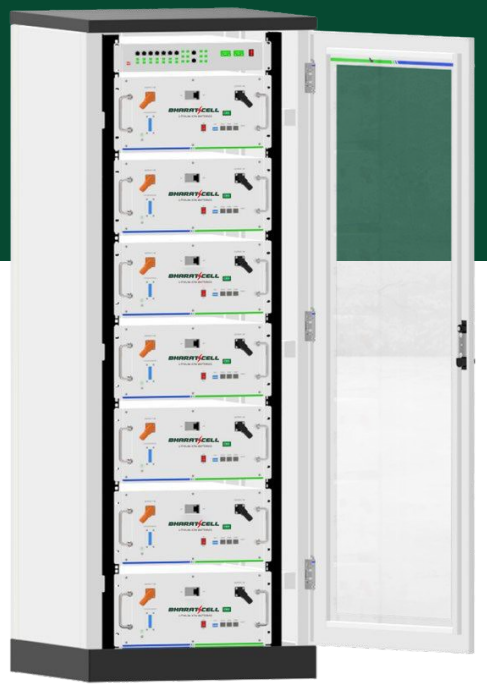
W*D*H - Rack : 70 * 70 * 200 cm

Technical Details

- 48V-800Ah battery rack with indigenous BMS
- Ready for dispatch
- Reliable solution for telecom tower power need

End User

- Telecom tower operators (Indus Towers, Tower Visions, GreenPole, CloudExtel etc)
- MNO (BSNL, Airtel, Vodafone-Idea, Jio)
- Mobile Network Operator



SWITCH TO SMARTER
TELECOM ENERGY.

Features

- *Longer cycle life*
- *Maintenance free*
- *Campatible with Standard 19" panel*
- *Smart BMS*
- *Fast Charging*

BHARATCELL
LITHIUM-ION BATTERIES

High Power.
Superior Performance.
Reliable Batteries.

Charges Twice as Fast as Lead-Acid Batteries

When it's time to recharge, our lithium-ion batteries get you back on the move faster. With rapid charging and consistent performance across cycles, they're perfect for applications where downtime is not an option.

Cut Electricity Costs by Up to 50%

Built with cutting-edge technology, our lithium-ion batteries not only enhance vehicle efficiency but also reduce energy consumption—helping you lower operational costs while boosting overall performance and reliability.

04 | Lithium-ion **Traction Batteries**

With a legacy of innovation and quality manufacturing, Bharatcell KPL leads the way in clean energy solutions. Our traction batteries are engineered for performance, safety, and sustainability—helping businesses and transport systems transition to electric with confidence.

High Cycle Life ***Ip67*** ***Fireproof*** ***Smart BMS*** ***Fast Charging***

05 Battery Energy Storage System

Bharatcell's advanced Lithium-ion Battery Energy Storage System (BESS) is designed to meet the evolving demands of modern energy infrastructure. Engineered for reliability, scalability, and sustainability, our BESS solutions offer seamless integration into both grid-connected and off-grid systems.

Whether for commercial, industrial, or renewable energy applications, Bharatcell BESS ensures optimal energy utilization, peak load management, and backup power support. Built with cutting-edge lithium-ion technology and supported by intelligent battery management systems (BMS), our solutions deliver high energy density, long lifecycle, and enhanced safety.

5 MWH | 10 MWH | 15 MWH | 20MWH

Technical Details

- Battery racks with DC voltage 200V-1,500V with indigenous BMS
- Long duration energy storage (LDES)
- 3-layer BMS for Module/ Rack/Multiple Racks

Dimensions
10ft/ 20ft/ 40ft

Better Temperature Control

The liquid cooling scheme keeps cell temperature difference less than 3°C

Higher Protection

The product utilizes the Ip55 (PACK IP65) high protection level

Lower Local Power Consumption

Variable-frequency compressor reduces the equipment's power consumption.

Higher Energy Density

Liquid-cooled energy storage container provides high energy density, and saving costs.

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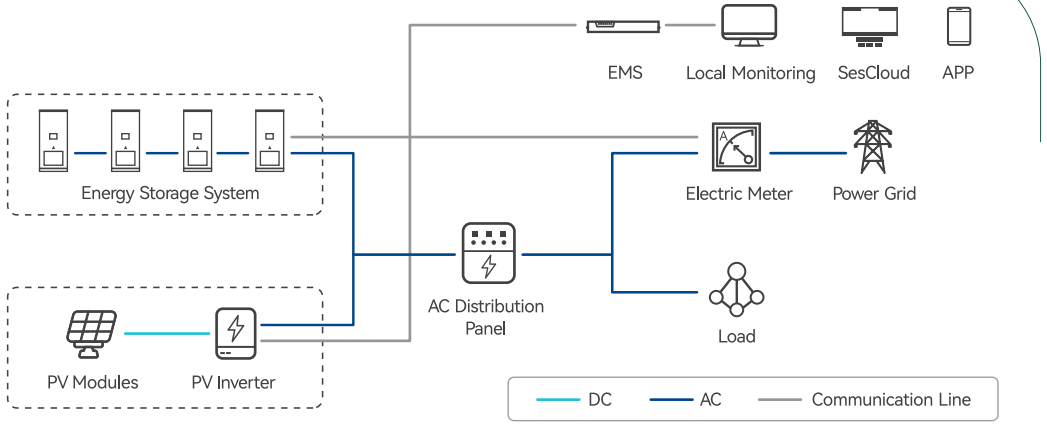
06 Energy Storage System LV Series

Energy Storage Solution



Industrial Parks · Buildings · Data Centers · Charging Stations

Ultimate Safety

- Incorporating a three-tier fire protection system at the cell, pack, and system levels to ensuring safety.
- Utilizing heat-resistant materials between cells to effectively mitigate thermal runaway risks.

High Energy Effciency

- Maintaining a temperature difference within 5℃ at the product level,reducing energy consumption of liquid cooling units by 15%.
- Sustaining energy conversion effciency above 88% throughout the year.
- Ensuring a cell temperature difference below 2.8℃, a max.temperature rise below 4.5℃, and a max. cell temperature below 35℃, boosting cycle life by 20%.
- Employing AI algorithms for real-time operational strategy adjustments, enhancing system e[illegible] ciency by approximately ≈1%.

High-Level Integration

- Featuring an "all-in-one" design, with a single cabinet occupying approximately ≈1.35m², reducing space requirements by 26% .
- PCS is downward compatible with PDU · featuring integrated control, protection, and detection, enhancing unit installed capacity by 10%.
- Integrating EMS with BMS, enabling unified aggregation and utilization of energy storage data.

KEY FEATURES

High Reliability

- Automotive-grade pack production line that guarantees stringent quality control.
- Wide operating temperature range from -30℃ to 50℃.
- Resistant to hurricanes of 15 mph and above.
- High corrosion resistance of above C4.

Intelligent Operations Control

- Enabling local energy management functions, such as dynamic demand tracking and control, peak load shifting.
- Facilitating various operational strategies for temperature regulation, fire protection, and PCS.
- Allowing for over-the-air (OTA) upgrades.

Cost Effciency

- Incorporating a multi-fusion system design to decrease individual cabinet cost by 8% and shorten the ROI payback period.
- Utilizing lithium iron phosphate battery cells to boost installed energy per unit by 12%.

Model	R232L1	R232L2	R261L1
BATTERY			
Nominal capacity	232.96kWh		261.24kWh
Usable capacity	221.31kWh		248.18kWh
Single Cell	3.2V 280Ah		3.2V 314Ah
Battery Pack	1P260S		
Battery technology	LFP		
Charge/discharge rate	≤0.5P (constant power)		
Cooling method	Liquid Cooling		
BMS (Battery Management System)	Integrated		
Rated DC voltage	832V		
DC voltage range	728Vdc ~ 936Vdc		
Battery life cycle	8000 CYC @25℃, 95% DOD, ≥70% EOL		
AC/DC INVERTER			
Operating voltage range (DC connection)	580V ~ 1000V		
Rated AC power	115kW		125kW
Max AC power	125kW (Allow 30s)		150kW (Allow 30s)
Rated AC current	166A		180A
AC line voltage	400±15%		
Rated AC line frequency	50Hz/60Hz		
Rated AC line voltage	400V		
ENERGY MANAGMENT SYSTEM			
EMS	Integrated		
COMMUNICATION			
Communication protocol	RS485/CAN/TCP		
Touch panel	10.1 " industrial standard		
Cloud	SUPPORT		
App	YES		
OPERATION			
Relative operating humidity	0 ~ 95%, no-condensation		
Operating temperature range	-25℃ ~ 55℃		
Operating altitude	≤2000m		
System Effciency	87%	89%	88%
Max. Effciency	88%	90%	89%
DIMENSIONS (TOTAL)			
Dimensions (W x D x H)	1350x1310x2110mm	1007x1350x2250mm	
Weight	Aprox. 2600kg	Aprox. 2350kg	Aprox. 2380kg
SAFETY/STANDARDS			
Protection	IP54		
Safety features	a. Smoke detection b. Temperature detection c. Aerosol fire extinguish d. Siren and strobe alarm e. Emergency stop button		
Certification	IEC 62619, EN61000-6-1/-2/-3/-4, IEC 60730-1, IEC 62477-1, UN38.3, UN3480, EN50549-1, EN50549-10, VDE-AR-N-4105, VDE-AR-N-4110, VDE-AR-N-4120, G99, UNE217001, UNE217002, NTS631, TOR Erzeuger, NRS097-2-1, AS 4777.2,CEI-016, CEI-021.		GB/T36276-2023
WARRANTY			
Warranty	5 years (Option: 10 years)		

◆ APPLICATION MODES

- ✓ Peak load shifting
- ✓ Dynamic capacity expansion
- ✓ Emergency backup provision
- ✓ Demand response aggregation

◆ APPLICATION SCENARIOS

- ✓ Industrial parks
- ✓ Commercial buildings (office buildings, shopping malls, hotels,hospitals, etc.)
- ✓ Intelligent solar-storage supercharging stations
- ✓ Data centers
- ✓ Transformer substation (TS) service area expansion

07 Energy Storage System MV & HV Series

Generators · Grid · Industrial Parks · Buildings · Charging Stations · Data Centers

Integrated BMS & EMS Control

Enhanced discharge capacity through intelligent and flexible control through BMS and EMS coordination.

Cost Effciency and Performance Enhancement

High integration leading to a 30% boost in energy density and a 20% decrease in system losses.

Lifecycle Management

Comprehensive lifecycle management incorporating liquid cooling technology, intelligent battery health management, and more.

Effective Thermal Management

System temperature maintained below 35°C, inter-cluster temperature difference kept within 3°C,and system-level temperature difference within 5°C.

◆ APPLICATION MODES

- ✓ Peak load shifting
- ✓ Dynamic capacity expansion
- ✓ Emergency backup provision
- ✓ Demand response aggregation

◆ APPLICATION SCENARIOS

- ✓ Industrial parks
- ✓ Commercial buildings (office buildings, shopping malls, hotels,hospitals, etc.)
- ✓ Intelligent solar-storage supercharging stations
- ✓ Data centers
- ✓ Transformer substation (TS) service area expansion

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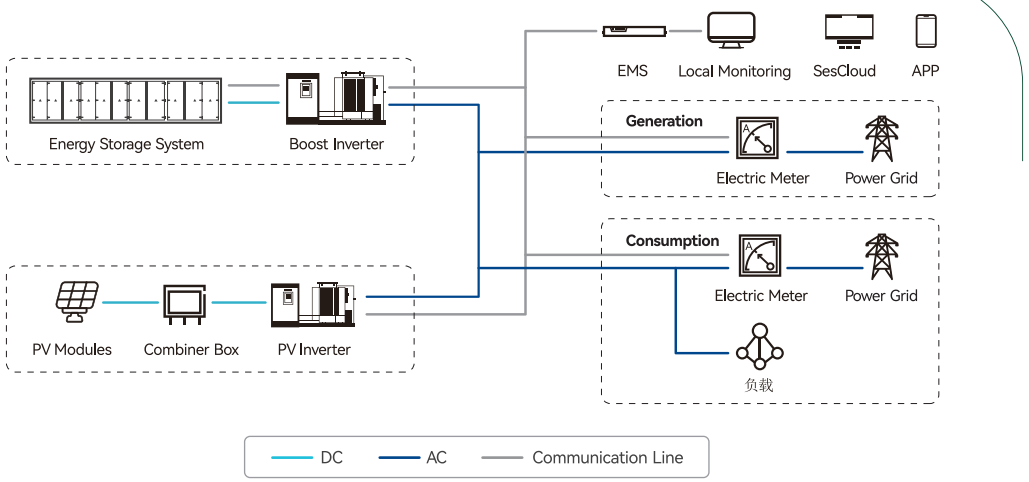
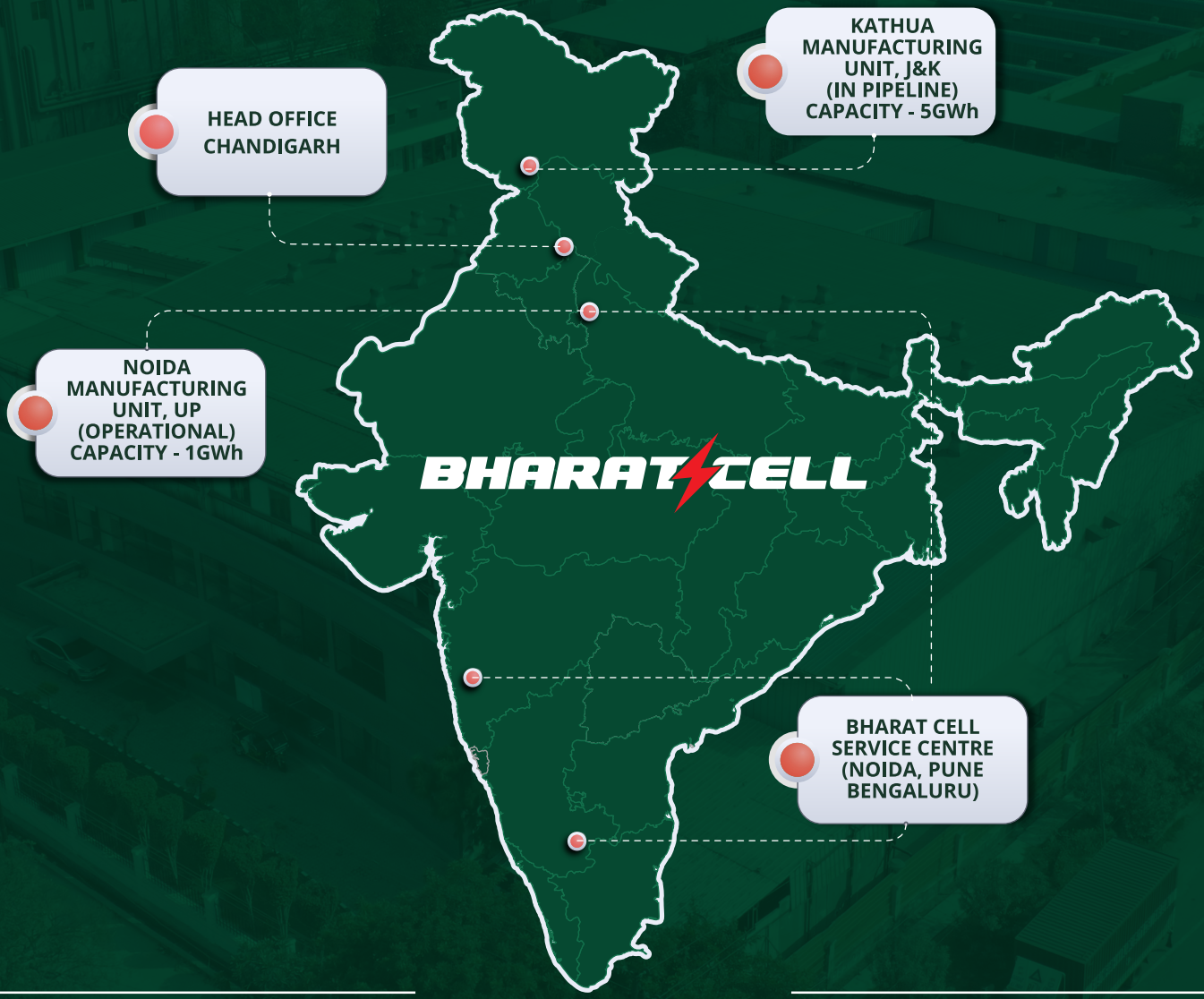
LITHIUM-ION BATTERIES

Energy Storage Solution



Model	C2508L1	C3344L1	C4180L1	C5016L1
BATTERY				
Nominal capacity	2.508MWh	3.344MWh	4.180MWh	5.016MWh
Usable capacity	2.382MWh	3.176MWh	3.971MWh	4.765MWh
Single cell	C314			
Battery pack	416S1P*6	416S1P*8	416S1P*10	416S1P*12
Battery technology	LFP			
Charge/discharge rate	≤0.5P（constant power）			
Cooling method	Liquid Cooling			
BMS (Battery Management System)	Integrated			
Rated DC voltage	1331.2V			
DC voltage range	1164.8Vdc ~ 1497.6Vdc			
Battery life cycle	8000 CYC @25℃, 95% DOD, ≥70% EOL			
COMMUNICATION				
Communication protocol	RS485/CAN/TCP			
Touch panel	10.1 " industrial standard			
OPERATION				
Relative operating humidity	0 ~ 95%, no-condensation			
Operating temperature range	-25℃ ~ 55℃			
Operating altitude	≤5000m			
DIMENSIONS (TOTAL)				
Dimensions (W x D x H)	6058x2438x2896mm			
Weight	Aprox.27t	Aprox. 32t	Aprox. 37t	Aprox. 42t
SAFETY/STANDARDS				
Protection	IP55			
Safety features	a. Flammable/explosive gas detection b. Flammable/explosive gas exhaust c. Smoke detection d. Temperature detection e. Aerosol fire extinguish f. Siren and strobe alarm g. Emergency stop button			
Certification	IEC 62619, IEC 63056, IEC 61000-6-2/-4, IEC 60730-1, IEC 62477-1, IEC 62933-5-2, UN38.3, UN3536			
WARRANTY				
Warranty	5 years (Option: 10 years)			

OUR PRESENCE - EXPANDING ORGANICALLY



Head Office -
Plot No 191, Industrial Area Phase-2,
Chandigarh - 160002

Jammu Manufacturing Unit
Village-Forelain, Near Ghati Industrial area,
Tehsil-Kathua, District-Kathua, J & K-184143

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Thankyou