



千海企業有限公司

Great Atlantic Enterprise Inc.

Profile

Name	Great Atlantic Enterprise Inc.
Charter Date	June 4, 1977
Capital	USD 1,000,000
Number of Staff	12
Headquarter	12 Fl., No. 293, Sec. 4, Chung Hsiao East Rd., Taipei, 10696 Taiwan, R.O.C. Tel: 886-2-2751-8147 Fax: 886-2-2741-5805 Website: www.chinametal.com.tw E-mail: sales@chinametal.com.tw
Warehouses	Bonded Warehouse: Shanghai, Keelung, Kaohsiung Non-bonded: Taipei, Kaohsiung
Affiliated	Chemetal (Shanghai) Limited Great Mountain Enterprise Inc.
Trade Association	Importers & Exporters Association, Taiwan Powder Metallurgical Association, Taiwan Foundry Industrial Association, Taiwan
Bank	First Commercial Bank, Yen Chi Branch Citibank N.A. Taipei Branch DBS, Taipei Branch
Sales Amount (2018)	US \$ 200 million

台北市大安區忠孝東路4段293號12樓

12Fl, No. 293, Sec. 4, Chung Hsiao East Road, Taipei, Taiwan R.O.C. 10696

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Fax: +886-2-27415805

www.chinametal.com.tw



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Product Specifications

Green Energy : Nickel, Aluminium, Cobalt, Copper

Nickel Briquette



LME Registered brands and off-grade,
Ni: 99.80% Min.

Aluminium Ingot



LME Registered brands and off grade,
Al: 99.70% Min.

Cobalt Briquette



LME Registered brands

Copper Cathode



LME Registered brands,
Grade A

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Battery Management System

#	Type	#Cells	Chemistry	Product Category	Product Code	Communication	Continuous Current	Peak Current	Availability
1	Smart	7-16	LFP/NMC/LTO	AQ16	AQ16-100A	BLE/RS485/CAN	100A	250A	Regular Production
2	Smart	7-16	LFP/NMC/LTO	AQ16	AQ16-40A	BLE/RS485/CAN	40A	80A	Regular Production
3	Smart	7-16	LFP/NMC/LTO	AQ16	AQ16-60A	BLE/RS485/CAN	60A	120A	Regular Production
4	Smart	17-24	LFP/NMC/LTO	AQ24	AQ24-60A	BLE/RS485/CAN	60A	120A	Beta Testing
5	Non Smart	3-5	LFP/NMC	T4E	T4E-5A	None	5A	10A	Regular Production
6	Non Smart	3-5	LFP/NMC	I4	I4-10A	None	10A	20A	Regular Production
7	Non Smart	3-5	LFP/NMC	I4	I4-30A	None	30A	60A	Regular Production
8	Non Smart	3-5	LFP/NMC	I4	I4-100A	None	100A	120A	Limited Production
9	Non Smart	6-10	LFP/NMC	I10	I10-10A	None	10A	20A	Regular Production
10	Non Smart	6-10	LFP/NMC	I10	I10-50A	None	50A	100A	Beta Testing
11	Non Smart	11-15	LFP/NMC	T15	T15-30A	None	30A	60A	Regular Production
12	Non Smart	11-15	LFP/NMC	T15	T15-60A	None	60A	100A	Regular Production
13	Non Smart	16-20	LFP/NMC	I16	I16-30A	None	30A	60A	Beta Testing
14	Non Smart	16-20	LFP/NMC	I16	I16-60A	None	60A	100A	Regular Production

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Energy Storage Stack

		STACK230P		STACK230E		STACK360P		STACK360E	
Electrical	DC Voltage	760 - 937 V				1193 - 1470 V			
	Duration	1.5+ hrs		3+ hrs		1.5+ hrs		3+ hrs	
	Maximum DC Energy Capacity	230 kWh		235 kWh		360 kWh		365 kWh	
	Rated DC Power	150 kW		57.5 kW		236 kW		90 kW	
	DC Energy Capacity @ Rated Power	225 kWh		230kWh		355 kWh		360 kWh	
	Duration @ Rated Power	1.5 hrs		4 hrs		1.5 hrs		4 hrs	
	Aux Load per Stack (Standby/Peak)	84 W / 1,221 W				168 W / 2,045 W			
	Daily Aux Energy per Stack	7.0 kWh		8.8 kWh		10.2 kWh		13 kWh	
	Daily Aux Energy per Stack, Net of Balancing	5 - 6 kWh				6 - 7 kWh			
Performance & Safety	Cycle Life	4,745 cycles	6,570 cycles	5,475 cycles	7,300 cycles	4,745 cycles	5,475 cycles	7,300 cycles	
	Calendar Life	20 years				20 years			
	Cell Model	EVE LF280L	CATL CB2W0	EVE LF280L	CATL CB310	EVE LF280L	EVE LF280L	CATL CB310	
	DC Round Trip Efficiency @ Rated Power	92%		94%		92%		94%	
	Cell Chemistry	Lithium Iron Phosphate (LFP)							
	Cell Operating Temperature Range	20 - 35° C							
	Depth of Discharge	100%							
	Codes & Compliance	UL9540A, UL1973, UN3480, UN38.3							

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Mechanical	Weight (Approximate)	5,000 lbs (2,273 kg)	7,500 lbs (3,409 kg)
	Enclosure Dimensions	4'4" W x 3'2" D x 6'5" H (1,321 mm x 965 mm x 1,956 mm)	6'2" W x 3'2" D x 6'5" H (1,880 mm x 965 mm x 1,956 mm)
	Enclosure Type / Rating	NEMA 1 / IP20	
	Operating Temperature	-10 - 45° C	

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Energy Storage Container



		40' ENCLOSURE		53' ENCLOSURE		
		STACK230P	STACK230E	STACK230P	STACK230E	STACK360P STACK360E
Electrical	DC Voltage	760 - 937 V		760 - 937 V		1193 - 1470 V
	Duration	1.5+ hrs	3+ hrs	1.5+ hrs	3+ hrs	1.5+ hrs 3+ hrs
	Maximum DC Energy Capacity	3,188 kWh	3,257 kWh	4,554 kWh	4,652 kWh	4,990 kWh 5,029 kWh
	Rated DC Power	2,100 kW	805 kW	2,850 kW	1,150 kW	3,304 kW 1,260 kW
	DC Energy Capacity @ Rated Power	3,119 kWh	3,229 kWh	4,455 kWh	4,613 kW	4,920 kWh 5,031 kWh
	Duration @ Rated Power	1.5 hrs	4 hrs	1.5 hrs	4 hrs	1.5 hrs 4 hrs
	Aux Load per Enclosure (Standby / Peak)	1.5 kW / 63 kW	1.5 kW / 52 kW	2.0 kW / 69 kW	2.1 kW / 59 kW	2.0 kW / 92 kW 2.7 kW / 65 kW
	Daily Aux Energy per Enclosure	167 - 196 kWh	152 - 186 kWh	181 - 215 kWh	211 - 240 kWh	192 - 242 kWh 234 - 263 kWh
	Daily Aux Energy per Enclosure, Net of Balancing	124 - 153 kWh	124 - 158 kWh	143 - 177 kWh	149 - 178 kWh	150 - 200 kWh 142 - 171 kWh
	DC Round Trip Efficiency @ Rated Power	92%	94%	92%	94%	92% 94%
Performance & Safety						

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	Energy Density	9.96 kWh/ft2	10.18	10.74	10.97	11.77	11.86 kWh/ft2
			kWh/ft2	kWh/ft2	kWh/ft2	kWh/ft2	
	Battery Chemistry	Lithium Iron Phosphate (LFP)					
	Cycle Life	3,650 - 7,300 cycles					
	Calendar Life	15 - 20 years					
	Explosion Prevention & Mitigation	Hydrogen detection with redundant active ventilation; deflagration panels optional					
	Fire Suppression	Clean agent fire suppression system with UPS backup, strobes, horn, and FDC dry standpipe connection					
	Heating & Cooling	Dual forced air HVAC with thermostat, humidity control, & economizer					
	Codes & Compliance	NFPA 855, NFPA 68/69, UL 1973					
Mechanical	Max Number of Stacks	14		19	20	14	
	Weight (Approximate)	90,500 lbs (41,050 kg)		126,415 lbs (57,461 kg)		136,315 lbs (61,691 kg)	
	Enclosure Dimensions	40' L x 8' W x 9'6" H		53' L x 8' W x 9'6" H			
	Enclosure Type / Rating	NEMA 3R / IP54					
	Operating Temperature	-10 - 50° C					

*** Alternative specifications available upon request. ***