

BATTERY

GEM

POWERED & POWERFUL

GRAND ENERGY MANUFACTURING CO LTD
Lead Acid Battery & Lithium Battery

gembattery.com



■ Profile / Company & Product ■

Preface

Electric power shall be available for everyone and everywhere, at an affordable and reasonable price. We don't generate the electric power - we do the storage, and dedicated to providing efficient, safe and stable battery power supply to every need.

Profile

From decades of years' experience in manufacturing lead-acid batteries, Grand Energy Manufacturing Co Ltd / GEM Battery has incorporated FUJIAN JIAGE POWER TECH CO LTD and GRAND ENERGY TECH (XIAMEN) CO LTD to expand the scale of manufacturing and to develop the variety of batteries. We operate a 60,000 m2 manufacturing factory located in QuanZhou City, FuJian Province since 2004, with more than 550 staffs participating in the production section.

GEM Battery currently obtains production capacity reaching up to 144,000 KVAh monthly, converted to 120,000 pieces of 12V100Ah batteries every month. The company and the products have been qualified with certificates of ISO9001, ISO14001, OHSAS18001, UL, CE, RoHS, TLC and complied with IEC60896-21/22, IEC61056-1/2 and IEC61427-1/2. More importantly, with more than 19 years of OEM experience, we are fully educated by customer-oriented mind and formed with initiative and flexible cooperation. Persisting on quality assurance and technical innovation, our batteries have been delivered to customers world-wide, and are approved by global open market.

Profile

We have been cooperated with many customers who keep different requirements of the power systems. From decade years dealing with customers, our expertise have been well educated, we could always find a correct way to develop the best power solution for any particular application and requirement. We do research on the material of battery plates to ensure the correct formula of battery-plate fabrication has been processed. We do study on the composition of the plate chemicals and additives, to ensure the batteries could present optimal performance as per particulars. No matter for civil purpose, or industrial applications, or critical conditions,

GEM Battery would be the correct choice and the best proposal for the battery power solution.



Products

GEM Battery is developing different technology to produce and supply various kinds of lead-acid batteries with extended features for wide-range applications.

Technology

- 1.AGM Technology (SMF SLA battery)
- 2.GEL Technology (AGM-Gel and PE/PVC-Gel)
- 3.Tubular-GEL Technology (OPzV battery)
- 4.Tubular Technology (OPzS battery, Vented-Wet)

Feature assortment

- ✓General Purpose
- ✓Standby Power (Float Service)
- ✓Long Life (Standby)
- ✓Long Life (Cyclic discharge)
- ✓High-Rate discharge
- ✓Deep Cycle (Deep and Cyclic discharge)
- ✓High-Low Temperature (-45°C to 65°C)
- ✓High-Power / Heavy Duty

Application

- UPS & EPS system / 12V5Ah~12V300AH
- Security & Alarm system / 6V1.3Ah~12V26Ah
- Emergency lighting & Sound / 6V4.0Ah~12V18Ah
- Medical Power Assurance / 12V batteries
- Mobile Power Supply Assurance / 2V batteries
- Telecommunication & Towers (Radio wave station & BTS) / Front Access 12V50~12V200Ah
- Household solar power / Solar home system (12V100Ah~12V300Ah)
- Renewable Energy Power Reserve (Solar & Wind Power system) / OPzV 100Ah~3000Ah
- Sizable power reserve system (On&Off-grid Power, Power Plant) / 12V200Ah~12V300Ah & 2V cells
- ESS / Energy Storage System (Modular installation 2V cells)
- Marine / Boat / Yacht / Ship / RV - Power supply for electric appliance 12V60Ah~12V300Ah
- Motive Power (Golf buggy, Electric-Bike (2 wheels), E-Tricycle (3 wheels), E-Vehicle (4 wheels), Floor Sweeper, Electric Wheelchair and Scooter) / 12V20Ah~12V100Ah & 6V180~6V400Ah.
- Engine starter (Motorcycle) / 12V3Ah~12V30Ah.
- Engine starter (Car/Automobile) / 12V30Ah~12V250Ah.

AGM & Gel Battery:

2V50Ah - 2V3000Ah
6V1.3Ah - 6V400Ah
12V0.8Ah - 12V300Ah

Front Terminal Battery:

12V40Ah - 12V200Ah

Solar Battery:

80Ah - 3000Ah (12V & 2V)

UPS & Security Battery:

12V4Ah - 12V300Ah

OPzV & OPzS Battery:

2V100Ah - 2V3000Ah

Modular installation 2V:

2V200Ah - 2V3000Ah

Motorcycle Battery:

12V2.5Ah - 12V30Ah

Motive Power Battery:

12V20Ah - 12V150Ah

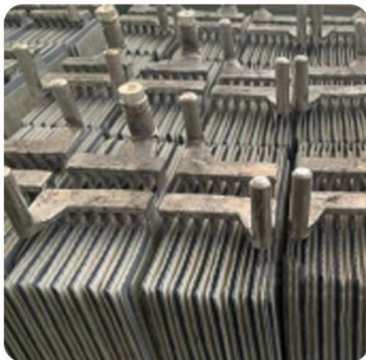
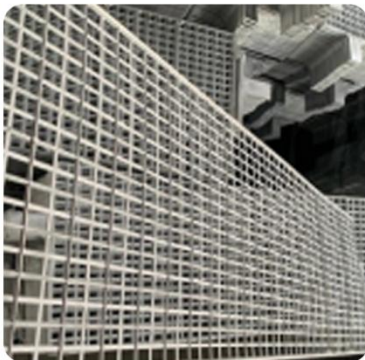
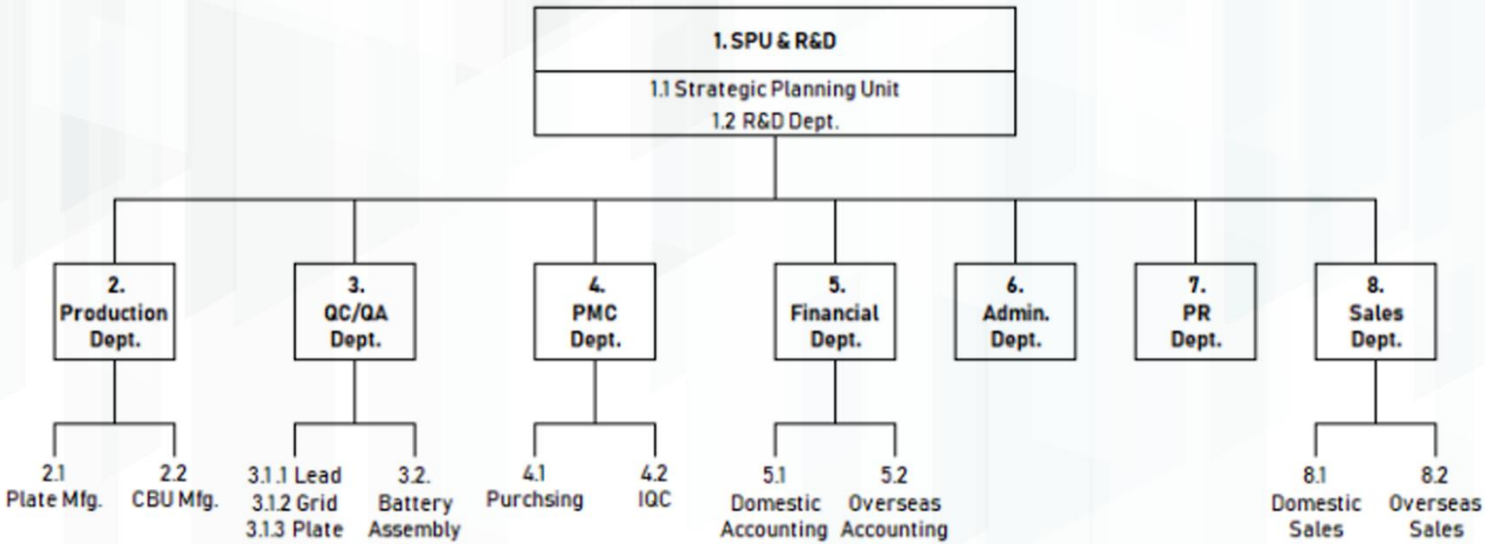
Deep Cycle Battery:

30Ah - 300Ah (6V & 12V)



Professionals

GEM Battery has teams of experts with great and long time experience working in Product Engineering, R&D, PMC, Quality Control, and Process Management. With the purpose of "Offering Reliable and Powerful Batteries", GEM Battery is doing a lot to control every process of quality-management during the production. Our in-house labs make great support to our products, in the plate testing lab we got both manual chemical-dropping/mixing testing station and Spectrum instrument ► to analyse the composition of ①the battery plates ②the grids, ③the lead ingot. The analysis correctly shows the excellent purity of Pb% from the lead ingot more than 99.996%, it's also showing the PbO2% from PAM and Pb% from NAM of the battery plates which help us to know the plate-pasting and plate-formation have been well processed, and ensure the finished-plates for the coming battery-assembly are in best condition. ► We analyze the formation and conversion of PbSO4 to know round-trip of electric power Reserve and Supply performance of the plates during the cycles charged and discharged. In the battery testing station, ► we create extreme conditions (constant high or low temperature, constant high power discharge, short circuit current test, etc.) and ► execute destructive experiments on completed-batteries to know the electric limits and to prevent micro-short-circuit. Apart from the electric tests, ► experiments on Semi-products are regular. We cut open the inter-cell connection to check the welding quality, we check the status of internal terminal installation to assure the further sealing quality and prevent leakage. We believe we shall well know the batteries before delivering them to customers.



GS Series

batteries have been developed from decades experience of manufacturing to meet various general-purpose and commercial applications. The batteries are AGM technology based products and complied with IEC61056-1/2 and IEC60896-21/22. GS Series batteries are in compact size with sealed maintenance-free design, quite flexible for multi-positioning installation and portable handling. The batteries could be applied for many civil applications, lamp and lantern, electric toys, power tools, civil or commercial UPS systems, emergency lights, security system, sound devices, etc... Compacted size and portable handling enable the batteries to be widely using in civil and mobile purpose.

Feature assortment

- ◆ Innovated technology of battery plate formula designed for Deep Discharge.
- ◆ Outstanding re-charge acceptability after deep discharged.
- ◆ Extreme low self-discharge, low internal resistance and low internal pressure.
- ◆ Long Life - Assembly using thicker plate with special chemical formation.

Feature assortment

- ◆ Innovated technology of battery plate formula designed for Deep Discharge.
- ◆ Outstanding re-charge acceptability after deep discharged.
- ◆ Extreme low self-discharge, low internal resistance and low internal pressure.
- ◆ Long Life - Assembly using thicker plate with special chemical formation.

GS Series

Voltage: 4V, 6V, 8V, 12V, 24V
Capacity: 0.8Ah - 30Ah @20Hr



GEM Battery GS Series	Voltage (V)	Capacity (AH/20HR)	Dimension (mm)				Weight ±3% (kgs)
			±1 L (mm)	±1 W (mm)	±2 H (mm)	±2 TH (mm)	
GS 4-4.5	4	4.5	48	48	102	108	0.50
GS 8-3.2	8	3.2	134	36	63	69	0.80
GS 24-4	24	4	97	24	52	58	2.40
GS 6-1.3	6	1.3	97	24	52	58	0.27
GS 6-2.3	6	2.3	43	37	76	76	0.30
GS 6-2.8	6	2.8	66	33	97	104	0.50
GS 6-3.2	6	3.2	125	33	61	67	0.62
GS 6-3.3	6	3.3	134	35	61	67	0.63
GS 6-4.5	6	4.5	70	47	101	107	0.80
GS 6-7	6	7	151	34	94	100	1.15
GS 6-9	6	9	151	34	94	100	1.30
GS 6-12	6	12	151	50	94	100	1.75
GS 6-14	6	14	108	71	140	140	2.10
GS 12-0.8	12	0.8	96	25	62	62	0.30
GS 12-1.3	12	1.3	97	43	52	58	0.55
GS 12-2.2	12	2.2	70	43	99	102	0.76
GS 12-2.3	12	2.3	179	35	61	66	0.92
GS 12-2.7	12	2.7	80	56	99	103	1.20
GS 12-2.8	12	2.8	132	33	98	104	1.00
GS 12-3.3	12	3.3	134	67	61	66	1.30
GS 12-4	12	4	90	70	101	105	1.43
GS 12-4.5	12	4.5	90	70	101	105	1.48
GS 12-5	12	5	90	70	101	105	1.67
GS 12-5 HR**	12	5	90	70	101	105	1.80
GS 12-6S HR**	12	6	151	51	94	98	1.85
GS 12-7	12	7	151	65	94	98	2.10
GS 12-7.2	12	7.2	151	65	94	98	2.20
GS 12-7.5	12	7.5	151	65	94	98	2.28
GS 12-8	12	8	151	65	94	98	2.38
GS 12-9	12	9	151	65	94	98	2.50
GS 12-9 HR**	12	9	151	65	94	98	2.68
GS 12-10	12	10	151	65	110	115	3.10
GS 12-12	12	12	151	98	94	98	3.37
GS 12-12A	12	13	151	98	94	98	3.65
GS 12-17	12	17	181	77	167	167	5.00
GS 12-18	12	18	181	77	167	167	5.30
GS 12-20	12	20	181	75	167	167	5.50
GS 12-22 HR**	12	22	181	77	167	167	6.10
GS 12-28L	12	28	165	125	174	174	8.10
GS 12-26	12	26	175	166	125	125	7.60
GS 12-28	12	28	175	166	125	125	7.90
GS 12-30	12	30	175	166	125	125	8.10
GS 12-30 HR**	12	30	175	166	125	125	8.60

* Please contact GEM Battery sales rep to get latest updating model list of the batteries.

GM Series

GM Series batteries are designed at a larger size and higher capacity than GS Series and carrying more energy power to support more-power-requiring applications. The batteries are using GEM selected models of Pb-Ca-Sn alloyed plates for assembly and adopt AGM technology, complied with IEC60896-21/22.

GEM I GM Series batteries are perfect for commercial power reserve and storage systems. The high-energy-containing could greatly support to high-performance UPS systems, Data Center, Solar Power systems and Telecom Power applications, especially the 12V batteries with High-Rate (HR**) marked models are doing great for critical medical and UPS application, assuring electric power reserve and stable supply. Benefited from the completely sealing structure and high-efficiency of the internal gas recombination.

Main Application:

- Sizable and critical UPS systems
- Solar PV & Wind power
- Medical power assurance
- Telecom & Towers power assurance
- High performance UPS system
- Deep cycle discharge
- Industrial battery & power reserve
- Off-grid power system / Power plant

GM Series

Voltage: 6V, 8V, 12V

Capacity: 30Ah - 300Ah @10Hr



GEM Battery GM Series	Voltage (V)	Capacity (AH/10HR)	Dimension (mm)				Weight ±3% (kgs)
			L (mm) ±1	W (mm) ±1	H (mm) ±2	TH (mm) ±2	
GM 12-30	12	31	194	133	167	170	10.00
GM 12-33	12	33	196	133	167	170	10.80
GM 12-36 HR**	12	36	194	130	169	170	11.50
GM 12-40	12	40	196	165	168	168	13.20
GM 12-42	12	42	196	165	168	168	13.80
GM 12-45 HR**	12	45	196	165	168	168	14.10
GM 12-50	12	50	230	137	210	215	15.50
GM 12-55 HR**	12	55	230	137	210	215	17.50
GM 12-65	12	65	350	168	179	179	21.00
GM 12-65 HR**	12	80	350	168	179	179	23.50
GM 12-75	12	75	260	168	213	216	21.50
GM 12-80 HR**	12	80	260	168	213	216	23.50
GM 12-90	12	90	305	167	210	213	28.50
GM 12-100 HR**	12	100	305	167	210	213	30.00
GM 12-100	12	100	330	173	217	220	29.00
GM 12-110	12	110	330	173	217	220	30.80
GM 12-105 HR**	12	105	330	173	217	220	32.50
GM 12-120	12	120	406	173	208	236	36.00
GM 12-150	12	145	486	171	241	243	45.50
GM 12-150 HR**	12	150	341	172	283	286	44.50
GM 12-200	12	200	523	240	219	223	60.00
GM 12-200 HR**	12	200	523	240	219	223	65.00
GM 12-250	12	250	521	269	220	224	69.00
GM 12-270	12	270	521	269	220	224	73.00
GM 12-300	12	300	521	269	220	224	77.00

* Please contact GEM Battery sales rep to get latest updating model list of the batteries.

GL Series

GL Series batteries are 2V monoblock cells and typically working in stationary mode. GEM I GL Series batteries are adopted with AGM technology and mainly installed to Telecommunication system, Data Center and Solar Power system where high-energy power reserve is required, featured with sealed structure and maintenance-free operation, The special valve regulation structure enables the batteries running at very low internal gas pressure and presenting good recovery after discharge. The GEM I GL Series batteries are designed for extremely long life (15 years) in float service, they are always silently there protecting your power supplies.

Main Features:

- ◆ Innovated technology of battery plate formula designed for Deep Discharge.
- ◆ Outstanding re-charge acceptability after deep discharged.
- ◆ Extreme low self-discharge, low internal resistance and low internal pressure.
- ◆ Long Life - Assembly using thicker plate with special chemical formation.

GL Series

Voltage: 2V

Capacity: 50Ah - 3,000Ah @10Hr

Feature assortment

- Solar PV & Wind power
- Off-grid power system / Power plant
- Telecom & Towers power assurance
- Medical power assurance ● Sizable UPS system
- Data centers ● Deep cycle discharge
- Industrial battery & power reserve ● All general purpose



GEM Battery GL Series	Voltage (V)	Capacity (AH/10HR)	Dimension (mm)				Weight ±3% (kgs)
			±1 L (mm)	±1 W (mm)	±2 H (mm)	±2 TH (mm)	
GL 2-50	2	50	161	50	166	175	3.30
GL 2-100	2	100	170	72	205	228	5.90
GL 2-150	2	150	172	102	208	223	8.60
GL 2-200	2	200	170	110	334	365	13.40
GL 2-250	2	250	171	151	340	365	18.20
GL 2-300	2	300	171	151	340	365	19.50
GL 2-400	2	400	210	175	334	365	27.00
GL 2-450	2	450	210	175	334	365	28.50
GL 2-500	2	500	240	173	338	365	31.00
GL 2-500A	2	500	240	173	338	365	34.50
GL 2-600	2	600	300	175	335	365	38.50
GL 2-800	2	800	410	175	331	365	53.20
GL 2-1000	2	1000	474	173	329	366	61.50
GL 2-1200	2	1200	474	173	329	366	65.00
GL 2-1500	2	1500	398	350	341	383	97.00
GL 2-2000	2	2000	490	350	342	381	129.00
GL 2-2500	2	2500	712	353	341	382	171.00
GL 2-3000	2	3000	712	353	341	382	188.00

* Please contact GEM Battery sales rep to get latest updating model list of the batteries.

GHM Series

GHM Series batteries are Modular batteries.

Rack mounted or container based system configuration 2V monoblock cells, installed horizontally making 24/48/96V power systems.

GEM I GHM Series batteries are adopted with AGM Gel technology, main applications to be Telecommunication system, Data Center, Solar Power system and Turnkey systems where high-energy power reserve is required. The **GEM I GHM Series** batteries are designed for extremely long life (20 years) in float service, with flexible rack mounted and counting.

3-cells module (3 units of 2V cells per layer, making 6V module)

4-cells module (4 units of 2V cells per layer, making 8V module)

6-cells module (6 units of 2V cells per layer, making 12V module)

GHM Series

Voltage: 2V

Capacity: 200Ah – 3,000Ah @10Hr

Main Features:

- ◆ Innovated technology of battery plate formula designed for Deep Discharge.
- ◆ Outstanding re-charge acceptability after deep discharged..
- ◆ Extreme low self-discharge, low internal resistance and low internal pressure.
- ◆ Long Life – Assembly using thicker plate with special chemical formation.

Main Application:

- Telecom & Towers power assurance
- Sizable UPS system & Data Center
- Medical power assurance
- Solar PV & Wind power
- Off-grid power system / Power plant
- High performance UPS system
- Deep cycle discharge
- Industrial battery & power reserve
- All general purpose



GEM Battery GHM Series	Voltage (V)	Capacity (AH/10HR)	Dimension (mm)				Weight ±3% (kgs)
			±1	±1	±2	±2	
			L (mm)	W (mm)	H (mm)	TH (mm)	
GHM 200	2	200	95	185	361	372	14.00
GHM 300	2	300	123	185	361	372	18.50
GHM 400	2	400	166	185	361	372	24.50
GHM 500	2	500	195	185	361	372	30.50
GHM 600	2	600	223	185	361	372	35.00
GHM 800	2	800	154	229	555	566	52.00
GHM 1000	2	1000	186	229	555	566	62.00
GHM 1200	2	1200	225	229	555	566	75.00
GHM 1500	2	1500	266	229	555	566	92.00
GHM 2000	2	2000	349	233	555	566	121.00
GHM 3000	2	3000	496	363	362	374	175.00

* Please contact GEM Battery sales rep to get latest updating model list of the batteries.

GF Series

GF Series batteries are tailor-designed for telecom applications and the data centers. With the front terminal access layout, the batteries could be easily installed in modular cabinet & rack systems. **The GEM I GF Series batteries** adopt AGM technology, the new material AGM separator enables great efficiency of the internal gas re-combination and internal centralized venting operation, it makes the internal mechanism of the batteries running at low gas pressure so as to provide absolutely safe conditions and excellent reliability even if the compact width of the batteries. High quality Pb-Ca-Sn thicker plates are assembled to support long durability, the batteries would be offering 12 years float service time. Flame Retardant material for ABS cases is available.

Main Features:

- ◆ Innovated technology of battery plate formula designed for Deep Discharge.
- ◆ Outstanding re-charge acceptability after deep discharged.
- ◆ Extreme low self-discharge, low internal resistance and low internal pressure.
- ◆ Long Life - Assembly using thicker plate with special chemical formation.

Main Application:

- Telecom & Towers power assurance
- Data center
- Sizable UPS system
- High performance UPS system
- Medical power assurance
- Solar PV & Wind power
- Off-grid power system / Power plant
- Industrial battery & power reserve
- All general purpose

GF Series

Voltage: 12V

Capacity: 50Ah - 200Ah @10Hr



GEM Battery GF Series	Voltage (V)	Capacity (AH/10HR)	Dimension (mm)				Weight ±3% (kgs)
			±1	±1	±2	±2	
			L (mm)	W (mm)	H (mm)	TH (mm)	
GF 12-50	12	50	277	105	223	230	17.00
GF 12-75	12	75	562	115	187	194	19.50
GF 12-100	12	100	394	110	288	288	30.00
GF 12-110	12	110	394	110	288	288	33.00
GF 12-105	12	105	507	110	223	240	32.00
GF 12-120	12	120	551	110	240	240	40.70
GF 12-125	12	125	545	105	315	315	40.20
GF 12-155	12	155	551	110	288	288	46.50
GF 12-180	12	180	561	125	316	316	53.80
GF 12-200	12	200	561	125	316	316	59.00

* Please contact GEM Battery sales rep to get latest updating model list of the batteries.

GDC Series

GDC Series batteries are innovated and developed from ordinary AGM batteries with 15 years of float service life. The **GDC Series** batteries adopt AGM-GEL technology, complied with IEC60896-21/22 (for stationary installation) and IEC61427-1/2 (for Solar Power PV system) and designed for deep cycle discharge purpose. Selected high-quality AGM separator cooperates with formulated Gelled electrolyte and cyclic-featured thicker plates, **GEM I GDC Series** batteries are widely used for industrial power reserve and supply systems, such as Solar power and sizable EPS, as well as Deep Cycle applications.

Main Features:

- ◆ Innovated technology of battery plate formula designed for Deep Discharge.
- ◆ Outstanding re-charge acceptability after deep discharged.
- ◆ Extreme low self-discharge, low internal resistance and low internal pressure.
- ◆ Long Life - Assembly using thicker plate with special chemical formation.

Main Application:

- Telecom & Towers power assurance ● Data center
- Sizable UPS system ● High performance UPS system
- Medical power assurance ● Solar PV & Wind power
- Off-grid power system / Power plant
- Industrial battery & power reserve
- All general purpose

GDC Series

Voltage: 2V, 6V, 12V
Capacity: 28Ah - 3000Ah @10Hr



GEM Battery GDC Series	Voltage (V)	Capacity (AH/10HR)	Dimension (mm)				Type	Weight ±3% (kgs)
			±1	±1	±2	±2		
			L (mm)	W (mm)	H (mm)	TH (mm)		
GDC 12-28	12	28	175	166	125	125	AGM-Gel	8.00
GDC 12-30	12	30	175	166	125	125	AGM-Gel	8.32
GDC 12-33	12	33	196	133	161	170	AGM-Gel	11.00
GDC 12-42	12	42	196	165	168	168	AGM-Gel	14.00
GDC 12-45	12	45	196	165	170	170	AGM-Gel	14.50
GDC 12-55	12	55	230	137	210	215	AGM-Gel	18.00
GDC 12-65	12	65	350	168	179	179	AGM-Gel	24.00
GDC 12-80	12	80	260	168	209	227	AGM-Gel	24.00
GDC 12-100	12	100	330	173	217	220	AGM-Gel	31.50
GDC 12-120	12	120	406	173	236	236	AGM-Gel	36.60
GDC 12-150	12	145	486	171	243	243	AGM-Gel	46.30
GDC 12-150H	12	150	341	172	283	286	AGM-Gel	45.30
GDC 12-200	12	200	523	240	219	223	AGM-Gel	63.00
GDC 12-250	12	250	520	269	220	224	AGM-Gel	74.00
GDC 12-110FT	12	110	394	110	286	286	AGM-Gel	33.80
GDC 12-155FT	12	155	551	110	288	288	AGM-Gel	49.50
GDC 12-180FT	12	180	546	125	316	323	AGM-Gel	57.00
GDC 12-200FT	12	200	546	125	316	323	AGM-Gel	59.00
GDC 2-200	2	200	170	110	334	365	AGM-Gel	13.80
GDC 2-300	2	300	171	151	340	365	AGM-Gel	20.00
GDC 2-400	2	400	210	175	334	365	AGM-Gel	27.60
GDC 2-500	2	500	240	173	338	365	AGM-Gel	35.20
GDC 2-600	2	600	300	175	335	365	AGM-Gel	39.50
GDC 2-800	2	800	410	175	331	365	AGM-Gel	54.50
GDC 2-1000	2	1000	474	173	329	366	AGM-Gel	62.60
GDC 2-1500	2	1500	398	350	341	383	AGM-Gel	98.80
GDC 2-2000	2	2000	490	350	342	381	AGM-Gel	131.00
GDC 2-3000	2	3000	712	353	341	382	AGM-Gel	191.00

* Please contact GEM Battery sales rep to get latest updating model list of the batteries.

GPG Series

GPG Series batteries are using GEL technology and designed for the applications requiring frequent deep-discharge and a wider range of high-and-low temperature operation. **GEM I GPG Series** batteries are premium quality rather than AGM batteries when comparing at the same capacity range.

GEM I GPG Series batteries are using **GRAND ENERGY innovated** battery plates which are particularly designed for GPG Series. The plates are applied with special-alloyed grid manufacturing and specific-formula PAM/NAM mixing process, along with selected chemical additives, they enable GPG batteries to provide remarkable high power and longer cyclic life when being frequently deep-discharged. In the meantime, assembling by high-quality porous PVC separator and Gelled SiO₂ electrolyte, GPG batteries would keep extremely low self-discharge and do great in wide range temperature conditions. Long life (up to 18 years) float service time would be expected.

To charge battery fully before enjoy its outstanding service.

Main Features:

- ◆ Gelled SiO₂ electrolyte formulated for wide range operation temperature -25~55°C.
- ◆ Low resistance PVC micro-porous separator equipped for extreme low self-discharge.
- ◆ Innovated technology of battery plate formula designed for regular Deep Discharge.
- ◆ Outstanding re-charge acceptability after deep discharged.

Main Application:

- Telecom & Towers power assurance ● Data center
- Sizable UPS system ● High performance UPS system
- Medical power assurance ● Solar PV & Wind power
- Off-grid power system / Power plant
- Industrial battery & power reserve
- All general purpose

GPG Series

Voltage: 2V, 6V, 12V

Capacity: 18Ah - 3000Ah @10Hr



GEM Battery GPG Series	Voltage (V)	Capacity (AH/20HR)	Dimension (mm)				Type	Weight ±3% (kgs)
			±1 L (mm)	±1 W (mm)	±2 H (mm)	±2 TH (mm)		
GPG 6-200	6	200	343	188	275	275	PVC-Gel	33.00
GPG 12-18	12	18	181	76	168	168	PVC-Gel	5.80
GPG 12-26	12	26	166	126	176	176	PVC-Gel	10.00
GPG 12-33	12	33	196	133	161	170	PVC-Gel	11.00
GPG 12-38	12	38	198	166	170	170	PVC-Gel	14.80
GPG 12-40	12	40	198	166	170	170	PVC-Gel	14.80
GPG 12-55	12	55	229	138	214	214	PVC-Gel	19.00
GPG 12-70	12	70	260	168	214	214	PVC-Gel	25.50
GPG 12-80	12	80	260	168	214	214	PVC-Gel	26.50
GPG 12-90	12	90	306	168	214	214	PVC-Gel	30.50
GPG 12-100S	12	100	306	168	214	214	PVC-Gel	31.50
GPG 12-100	12	100	326	173	212	217	PVC-Gel	32.50
GPG 12-120	12	120	326	173	212	217	PVC-Gel	37.50
GPG 12-135	12	135	341	173	281	281	PVC-Gel	43.50
GPG 12-150	12	150	482	170	238	238	PVC-Gel	48.20
GPG 12-180	12	180	532	207	220	220	PVC-Gel	61.50
GPG 12-200	12	200	522	240	223	223	PVC-Gel	68.50
GPG 12-250	12	250	520	269	220	220	PVC-Gel	82.50
GPG 12-100FT	12	100	394	110	286	286	PVC-Gel	35.50
GPG 12-120FT	12	120	552	110	240	240	PVC-Gel	37.00
GPG 12-155FT	12	155	551	110	288	288	PVC-Gel	49.50
GPG 12-175FT	12	175	551	110	320	320	PVC-Gel	59.00
GPG 2-100	2	100	171	71	205	210	PVC-Gel	7.00
GPG 2-150	2	150	171	71	205	210	PVC-Gel	9.50
GPG 2-200	2	200	173	111	332	337	PVC-Gel	15.00
GPG 2-300	2	300	171	151	332	337	PVC-Gel	23.50
GPG 2-400	2	400	211	176	330	337	PVC-Gel	29.00
GPG 2-500	2	500	241	172	331	337	PVC-Gel	35.50
GPG 2-600	2	600	301	175	331	337	PVC-Gel	43.00
GPG 2-800	2	800	410	175	330	335	PVC-Gel	58.50
GPG 2-1000	2	1000	475	175	328	335	PVC-Gel	70.00

* Please contact GEM Battery sales rep to get latest updating model list of the batteries.

GzV Series

GzV Series batteries are known as OPzV battery, particularly designed for Renewable Energy Power reserve and supply system.

Features:

1. Extremely long life, GzV batteries are designed for 20 years of float service life.
2. Wide operation temperature between -45°C and 60°C.
3. High and stable durability for deep and cyclic discharges.
4. Modular installation for saving footprint space and easy management.
5. Highly reliable performance offers peace of mind away from battery power failure.



Technical highlights:

1. Tubular positive plates: alloyed by strengthened and special-formulated Pb-Ca-Sn-Ag grids with high corrosion resistance. The tubular tube construction is optimized for high-energy containing PAM.
2. Flat pasted negative plates: selected thicker plates and grids consisting of high purity Pb-Ca-Sn alloy for a long-life cooperation supporting to the positive plates.
3. Separator: High quality Micro-porous PVC-SiO₂ material, it's excellent for electrolyte permeability and low internal resistance.
4. Electrolyte: Gelled electrolyte mixing with material of high purity Sulfuric Acid H₂SO₄ and hydrophilic pyrogenic silica SiO₂, and following a tailor-made mixing formula. The Gelled electrolyte is perfect for acid storage and supply under low-and-high temperature operation, and providing good recovery capability after deep discharge.
5. Valve Regulates: GzV-OPzV is kind of Sealed and Maintenance-free VRLA battery equipped with high quality flame arrestor valves which keep the batteries operating at low gas pressure.

Typical applications:

1. Renewable Energy Power reserve and supply, sizable Solar power and Wind power projects.
2. On-Off-Grid Power industry
3. Power Plant
4. Mobile Energy power storage systems
5. Telecom, BTS, Radio wave station

GzV Series

Voltage: 2V, 12V

Capacity: 100Ah - 3000Ah @10Hr

GEM Battery GzV Series	Voltage (V)	Capacity (AH/10HR)	Dimension (mm)				Type	Weight ±3% (kgs)
			±1 L (mm)	±1 W (mm)	±2 H (mm)	±2 TH (mm)		
GzV 2-200	2	200	206	103	356	389	OPzV (Tubular Gel)	18.50
GzV 2-250	2	250	206	124	356	389	OPzV (Tubular Gel)	22.50
GzV 2-300	2	300	206	145	356	389	OPzV (Tubular Gel)	26.50
GzV 2-350	2	350	206	124	473	505	OPzV (Tubular Gel)	28.50
GzV 2-420	2	420	206	145	473	505	OPzV (Tubular Gel)	33.50
GzV 2-490	2	490	206	166	473	505	OPzV (Tubular Gel)	38.50
GzV 2-600	2	600	206	145	646	678	OPzV (Tubular Gel)	47.00
GzV 2-800	2	800	210	191	646	678	OPzV (Tubular Gel)	63.00
GzV 2-1000	2	1000	233	210	646	678	OPzV (Tubular Gel)	77.50
GzV 2-1200	2	1200	275	210	646	678	OPzV (Tubular Gel)	91.00
GzV 2-1500	2	1500	275	210	795	827	OPzV (Tubular Gel)	112.00
GzV 2-2000	2	2000	399	212	770	802	OPzV (Tubular Gel)	150.00
GzV 2-2500	2	2500	487	212	770	802	OPzV (Tubular Gel)	188.50
GzV 2-3000	2	3000	576	212	770	802	OPzV (Tubular Gel)	225.00
GzV 12-100	12	100	406	173	210	235	OPzV (Tubular Gel)	36.00
GzV 12-150	12	150	532	210	216	218	OPzV (Tubular Gel)	54.00
GzV 12-200	12	200	499	259	219	220	OPzV (Tubular Gel)	72.00

* Please contact GEM Battery sales rep to get latest updating model list of the batteries.

GzS Series

GEM Battery | GzS Series batteries are known as OPzS battery (wet battery, vented battery, flooded battery), it is particularly designed for Renewable Energy Power reserve and supply system. system.

Features:

1. Extremely long life, GzV batteries are designed for 20 years of float service life.
2. Wide operation temperature between -45°C and 60°C.
3. High and stable durability for deep and cyclic discharges.
4. Modular installation for saving footprint space and easy management.
5. Highly reliable performance offers peace of mind away from battery power failure.



Technical highlights:

1. Tubular positive plates: alloyed by strengthened and special-formulated Pb-Ca-Sn-Ag grids with high corrosion resistance. The tubular tube construction is optimized for high-energy containing PAM.
2. Flat pasted negative plates: selected thicker plates and grids consisting of high purity Pb-Ca-Sn alloy for a long-life cooperation supporting to the positive plates.
3. Separator: High quality Micro-porous PVC-SiO₂ material, it's excellent for electrolyte permeability and low internal resistance.
4. Electrolyte: High purity Sulfuric Acid H₂SO₄ following a tailor-made mixing formula.
5. Vented open, flooded lead acid battery, regular maintenance is required for GzS-OPzS batteries.

Typical applications:

1. Renewable Energy Power reserve and supply, sizable Solar power and Wind power projects.
2. On-Off-Grid Power industry
3. Power Plant
4. Mobile Energy power storage systems
5. Telecom, BTS, Radio wave station

GzS Series

Voltage: 2V

Capacity: 200Ah - 3000Ah @10Hr

GEM Battery GzS Series	Voltage (V)	Capacity (AH/10HR)	Dimension (mm)				Type	Dry Weight (kg) ±3%	Wet Weight ±3% (kgs)
			±1 L	±1 W	±2 H	±2 TH			
GzS 2-200	2	200	206	103	356	410	OPzS	12.80	17.50
GzS 2-250	2	250	206	124	356	410	OPzS	15.10	20.50
GzS 2-300	2	300	206	145	356	410	OPzS	17.50	24.00
GzS 2-350	2	350	206	124	473	526	OPzS	19.80	27.00
GzS 2-400	2	400	206	145	473	526	OPzS	23.00	32.00
GzS 2-500	2	500	206	166	473	526	OPzS	26.20	38.00
GzS 2-600	2	600	206	145	646	701	OPzS	32.50	47.00
GzS 2-800	2	800	210	191	646	701	OPzS	45.00	64.00
GzS 2-1000	2	1000	233	210	646	701	OPzS	53.90	73.00
GzS 2-1200	2	1200	275	210	646	701	OPzS	63.40	92.00
GzS 2-1500	2	1500	275	210	795	850	OPzS	77.00	106.00
GzS 2-2000	2	2000	399	212	770	825	OPzS	104.00	145.00
GzS 2-2500	2	2500	487	212	770	822	OPzS	130.00	180.00
GzS 2-3000	2	3000	576	212	770	825	OPzS	156.00	220.00

* Please contact GEM Battery sales rep to get latest updating model list of the batteries.

GEV Series

GEV Series batteries are using **GEM selected** models of Pb-Ca-Sn alloyed plates for assembly and adopt AGM technology.

GEV Series batteries are perfect for low speed Electric Vehicles and Electric Bikes, working as the main motive-power source to applications of:

- 2-Wheels Electric Bikes
- 3-Wheels Electric Tricycle
- 4-Wheels Electric Car (low speed)
- Golf Cart
- Electric Buggy (tourist and sightseeing buggy, security patrol buggy)
- Electric Wheelchair
- Floor-Cleaning Machine, Electric Floor-Sweeper
- Electric Scooter

GEV Series

Voltage: 2V

Capacity: 200Ah - 3000Ah @10Hr



GEM Battery GEV Series	Voltage (V)	Capacity (AH/10HR)	Dimension (mm)				Weight ±3% (kgs)
			±1	±1	±2	±2	
			L (mm)	W (mm)	H (mm)	TH (mm)	
GEV 6-170	6	170	260	180	246	252	30.00
GEV 6-200	6	200	260	180	270	275	36.00
GEV 6-260	6	260	350	180	270	275	46.00
GEV 6-300	6	300	295	178	346	350	54.50
GEV 6-400	6	400	295	178	404	425	58.00
GEV 8-150	8	150 / 3HR	261	180	283	288	34.50
GEV 12-14	12	14	151	98	98	98	4.40
GEV 12-18	12	18	181	77	168	168	6.60
GEV 12-20	12	20	181	77	168	168	7.00
GEV 12-35	12	35	196	130	167	167	10.80
GEV 12-40	12	40	196	166	174	174	12.50
GEV 12-55	12	45	229	138	226	226	17.50
GEV 12-75	12	75	260	169	215	220	23.00
GEV 12-100S	12	100	307	172	215	220	30.00
GEV 12-100	12	100	328	172	215	220	32.00
GEV 12-120	12	120	407	174	222	225	36.50

* Please contact GEM Battery sales rep to get latest updating model list of the batteries.

GMC Series

GEM I GMC Series batteries are designed for engine starter of motorcycle, available with functional types of storage options and maintenance modes.

MCSA Series motorcycle batteries are Sealed Maintenance Free (SMF) and Activated in factory, they are all-the-time ready to be installed and provide instant power supplies to get the race started immediately. The fine quality porous AGM separator would greatly reduce internal electric resistance, thus to get a low self-discharge rate along with high energy reserved. Considering on regular self-discharge conditions, a topping charge to MCSA Series motorcycle batteries would be recommended when stock time over 6 months.

MCM Series batteries are Un-Sealed but with Maintenance Free featured, you will receive the batteries together with a high quality adhesive sticker which helps the users easily make DIY-sealing to the batteries. The MCM Series motorcycle batteries are favorable for business requires regular SKU planning with shelf storage up to 18 months. To read instruction before filling the electrolyte.

MCF Series motorcycle batteries would always take over heavy duties for hard loading and outdoor conditions. They are flooded and vented wet-battery, regular maintenance is required, as well as visible checking of electrolyte status. To read instruction before filling the electrolyte.

● GMC I MCSA Series Sealed Maintenance-Free Activated battery

GEM Battery MCSA Series	Voltage (V)	Capacity (AH/10HR)	Rating	Dimension (mm)				Weight ±3% (kgs)
				L ±1	W ±1	H ±2	TH ±2	
MCSA 12-2.5	12	2.5	10Hr	80	77	104	104	1.12
MCSA 12-3	12	3	10Hr	98	56	109	109	1.32
MCSA 12-3S	12	3	10Hr	114	70	85	85	1.30
MCSA 12-4	12	4	10Hr	114	70	85	85	1.37
MCSA 12-4B	12	4	10Hr	120	71	91	91	1.65
MCSA 12-5	12	5	10Hr	114	70	106	106	1.76
MCSA 12-5B	12	5	10Hr	120	61	130	130	2.00
MCSA 12-6	12	6	10Hr	135	60	130	130	2.30
MCSA 12-6.5	12	6.5	10Hr	138	66	101	101	2.00
MCSA 12-7	12	7	10Hr	114	69	132	132	2.32
MCSA 12-7NB	12	7	10Hr	148	57	129	129	2.33
MCSA 12-7A	12	7	10Hr	150	86	94	94	2.50
MCSA 12-7N	12	7	10Hr	136	77	125	125	2.50
MCSA 12-9B	12	9	10Hr	136	77	136	136	2.90
MCSA 12-9	12	9	10Hr	150	86	106	106	2.70
MCSA 12-12	12	12	10Hr	150	86	131	131	4.13
MCSA 12-14	12	14	10Hr	150	86	146	146	4.32
MCSA 12-18	12	18	10Hr	151	87	161	161	5.60
MCSA 12-18H	12	18	10Hr	177	87	153	153	5.60
MCSA 12-20	12	20	10Hr	177	87	153	153	6.32
MCSA 12-24	12	24	10Hr	177	123	166	166	7.60
MCSA 12-28	12	28	10Hr	177	123	166	166	8.45
MCSA 12-30	12	30	10Hr	168	127	177	177	9.35

* Please contact GEM Battery sales rep to get latest updating model list of the batteries.



● GMC I MCM Series Dry Charged Maintenance-Free battery

GEM Battery MCM Series	Voltage (V)	Capacity (AH/10HR)	Rating	Dimension (mm)				Weight ±3% (kgs)
				L ±1	W ±1	H ±2	TH ±2	
MCM 12-4	12	4	10Hr	113	70	87	87	1.07
MCM 12-5	12	5	10Hr	113	70	105	105	1.35
MCM 12-5H	12	5	10Hr	120	60	130	130	1.35
MCM 12-6.5	12	6.5	10Hr	137	66	101	101	1.50
MCM 12-7B	12	7	10Hr	150	60	130	130	1.70
MCM 12-7AL	12	7	10Hr	135	77	135	135	1.75
MCM 12-7	12	7	10Hr	135	77	135	135	1.75
MCM 12-7L	12	7	10Hr	113	70	130	130	1.70
MCM 12-7A	12	9	10Hr	150	85	95	95	1.75
MCM 12-9	12	9	10Hr	135	75	137	137	1.80
MCM 12-9A	12	9	10Hr	150	85	105	105	2.00

* Please contact GEM Battery sales rep to get latest updating model list of the batteries.

● GMC I MCF Series Flooded vented wet-battery

GEM Battery MCF Series	Voltage (V)	Capacity (AH/10HR)	Rating	Dimension (mm)				Weight ±3% (kgs)
				L ±1	W ±1	H ±2	TH ±2	
MCF 12-2.5	12	2.5	10Hr	80	70	105	105	0.70
MCF 12-4	12	4	10Hr	113	70	87	87	1.09
MCF 12-5	12	5	10Hr	120	60	130	130	1.35
MCF 12-6.5	12	6.5	10Hr	138	68	101	101	1.50
MCF 12-7B-4B	12	7	10Hr	150	60	130	130	1.65
MCF 12-7-3B	12	7	10Hr	135	75	133	133	1.72
MCF 12-7L-4B	12	7	10Hr	150	85	95	95	1.75
MCF 12-9	12	9	10Hr	135	75	137	137	1.80
MCF 12-18	12	18	10Hr	186	125	171	171	3.75
MCF 12-28	12	28	10Hr	186	125	171	171	4.20

* Please contact GEM Battery sales rep to get latest updating model list of the batteries.

GiB Series

GEMFG | GiB Series Lithium battery, as critical part of the most popular Energy Storage System (ESS), is widely using in industrial & commercial applications as well as household solar systems.

- Replacement of Lead Acid batteries

GiB 12.8V Lithium batteries are designed for replacement of GEM lead acid batteries GS / GM / GF series.

- Cycle life

We offer various cycle life for customized projects, available at

DOD80% = 2000 cycles

DOD80% = 3000 cycles

DOD80% = 4000 cycles

DOD80% = 6000+

subject to the project budget.



- Safety/Fuse Protection.

Under the protection of built-in BMS, every single piece of GiB Lithium battery is extremely safe with current control. The smart BMS would protect your batteries from over-load discharge, over-charge, temperature exceed (low & high safety level).

- Equalization of battery initial specification.

We could have equalized specifications of the batteries in series/parallel on OCV, IR, Capacity, Temp, etc...

- Warming / heating panel available for low temperature application (-45°C).

This is quite helpful when batteries are using in extreme temperature conditions, summer hot and winter cold.

- Customized with digital display screen, Bluetooth, GPS, etc... more functional configuration could be developed.

GEMFG GiB Series	Energy (KWH)	Voltage (V)	Capacity (AH)	Dimension (mm)			Max. Discharge Current (A)	Type	Comm.
				L ±1	W ±1	H ±2			
GiB 12-7	0.0896	12.8	7	151	65	98	1-3C	LiFePO4	-
GiB 12-12	0.1536	12.8	12	151	98	98	1-3C	LiFePO4	-
GiB 12-20	0.256	12.8	20	181	77	170	1-3C	LiFePO4	-
GiB 12-33	0.4224	12.8	33	196	133	161	1-3C	LiFePO4	-
GiB 12-40	0.512	12.8	40	198	166	170	1-3C	LiFePO4	-
GiB 12-50	0.64	12.8	50	229	138	214	1-3C	LiFePO4	-
GiB 12-100	1.28	12.8	100	330	173	220	BMS 1C	LiFePO4	-
GiB 12-150	1.92	12.8	150	483	173	240	BMS 1C	LiFePO4	-
GiB 12-150A	1.92	12.8	150	520	238	220	BMS 1C	LiFePO4	-
GiB 12-200A	2.56	12.8	200				BMS 1C	LiFePO4	-
GiB 12-250A	3.2	12.8	250				BMS 1C	LiFePO4	-
GiB 12-300A	3.84	12.8	300				BMS 1C	LiFePO4	-
GiB 12-400A	5.12	12.8	400	561	125	316	BMS 1C	LiFePO4	-
GiB 12-100FT	1.28	12.8	100				BMS 1C	LiFePO4	-
GiB 12-150FT	1.92	12.8	150				BMS 1C	LiFePO4	-
GiB 12-150FTL	1.92	12.8	150				BMS 1C	LiFePO4	-
GiB 12-180FT	2.304	12.8	180	520	269	220	BMS 1C	LiFePO4	-
GiB 12-200FT	2.56	12.8	200				BMS 1C	LiFePO4	-
GiB 24-100	2.4	25.6	100				BMS 1C	LiFePO4	-
GiB 24-120	2.88	25.6	120				BMS 1C	LiFePO4	-
GiB 24-150	3.6	25.6	150	520	269	220	BMS 1C	LiFePO4	-
GiB 24-200	4.8	25.6	200				BMS 1C	LiFePO4	-
GiB 48-50	2.56	51.2	50	445	385	155	BMS 1C	LiFePO4	485 CAN
GiB 48-100	5.12	51.2	100	546	430	200	BMS 1C	LiFePO4	485 CAN
GiB 48-150	7.68	51.2	150	443	442	227	BMS 1C	LiFePO4	485 CAN
GiB 48-200	10.24	51.2	200	510	442	246	BMS 1C	LiFePO4	485 CAN

* Please contact GEM Battery sales rep to get latest updating model list of the batteries, and the customized battery specification, battery sizing and the pricing.

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UPS System

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