



# *VRLA BATTERY PRODUCT MANUAL*



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## Ritar---Listed in Nasdaq



China Ritar Power Corp. is a Sealed Lead Acid (SLA) battery company listed in Nasdaq. Established in May 2002, Ritar manufactures and sells environmentally friendly Sealed Lead Acid (SLA) batteries. Ritar introduces and develops advanced technology, and adopts the world's most advanced production equipments and testing measures to ensure long product life, high energy density, and environmental protection features such as cadmium-free, leading the domestic counterparts.

The company is a high-tech enterprise headquartered in Nanshan District, Shenzhen, China, and has three manufacturing bases in Shenzhen, Hengyang(China) and Vietnam. It has approximately 2,000 employees, including two professors who have experience over 40 years in batteries research, and over 50 research engineers. Ritar also has invested strongly in domestic and foreign institutions and scientific research institutions to overcome difficulties in battery technology. The performance of the batteries independently researched and developed by Ritar has met and exceeded international standards, and a variety of technologies have been granted national and international patents.

Ritar products are exported to more than 200 countries and regions all over the world, such as South East Asia, Europe, America, South America, Australia, etc. Ritar batteries are applied to light electric vehicles (LEVs), uninterruptible power supply (UPS) systems, electricity and telecommunications backup systems, automatic control, wind and solar power systems. With its reliable products and quality services, Ritar battery has won high praise from users at home and abroad.

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## Application

- Small UPS
- Emergency Light
- Security System
- Toys
- Medical

## Compliant Standards

- GB/T19639 - 2005
- JIS C8702 - 2006
- IEC 61056 - 2002
- Passed ISO9001, ISO14001, OHSAS18001, UL, CE and TLC certificate.

## Main Parameters

Model	Nominal Voltage	Capacity C <sub>20</sub>	Weight		Dimension								Internal Resistance (mΩ@25°C)	Short Circuit Current (A)	Terminal Type	Terminal Position
	(V)		(Ah)	Lbs	Kg	Length		Width		Height		Total Height				
					mm	inch	mm	inch	mm	inch	mm	inch				
RT 613	6	1.3	0.68	0.31	97	3.82	24	0.94	52	2.05	58	2.28	50	68	F1	C
RT628	6	2.8	1.17	0.53	66.5	2.62	34	1.34	97	3.82	103	4.06	32	146	F1	A
RT632	6	3.2	1.43	0.65	134	5.28	34	1.34	60	2.36	66	2.60	25	166	F1	C
RT636	6	3.6	1.43	0.65	194	7.64	25	0.98	62	2.44	62	2.44	36	187	T1	N
RT640	6	4	1.43	0.65	70	2.76	47	1.85	99	3.90	105	4.13	24	210	F1	A
RT640S	6	4	1.65	0.75	194	7.64	25	0.98	62	2.44	62	2.44	33	208	T1	N
RT645	6	4.5	1.59	0.72	70	2.76	47	1.85	99	3.90	105	4.13	23	234	F1	A
RT650	6	5	1.65	0.75	70	2.76	47	1.85	99	3.90	105	4.13	20	250	F1/F2	A
RT655	6	5.5	1.76	0.80	70	2.76	47	1.85	99	3.90	105	4.13	20	275	F1/F2	A
RT670	6	7	2.31	1.05	151	5.94	34	1.34	94	3.70	100	3.94	12	350	F1/F2	C
RT680	6	8	2.65	1.20	151	5.94	34	1.34	94	3.70	100	3.94	12	400	F1/F2	C
RT6100	6	10	3.64	1.65	150	5.91	50	1.97	93	3.66	99	3.90	12.5	500	F1/F2	C
RT 6120	6	12	3.97	1.80	150	5.91	50	1.97	93	3.66	99	3.90	10	600	F1/F2	C
RT1213	12	1.3	1.21	0.55	98	3.86	43.5	1.71	53	2.09	59	2.32	95	68	F1	E
RT1223	12	2.3	2.14	0.97	177	6.97	35	1.38	62	2.44	68	2.68	50	120	F1	C
RT1223E	12	2.3	1.83	0.83	177	6.97	35	1.38	62	2.44	68	2.68	70	112	F1	C
RT1232	12	3.2	2.87	1.30	134	5.28	67	2.64	60	2.36	66	2.60	45	166	F1	E
RT1240	12	4	2.87	1.30	90	3.54	70	2.76	101	3.98	107	4.21	45	210	F1/F2	C
RT1245	12	4.5	3.09	1.40	90	3.54	70	2.76	101	3.98	107	4.21	38	234	F1/F2	C
RT1250	12	5	3.53	1.60	90	3.54	70	2.76	101	3.98	107	3.98	35	250	F1/F2	C
RT1255	12	5.5	3.75	1.70	90	3.54	70	2.76	101	3.98	107	4.21	35	250	F1/F2	C
RT1256	12	5.6	3.97	1.80	151	5.94	65	2.56	94	3.70	100	3.94	31	280	F1/F2	F
RT1265	12	6.5	4.19	1.90	151	5.94	65	2.56	94	3.70	100	3.94	32	325	F1/F2	F
RT1270	12	7	4.50	2.04	151	5.94	65	2.56	94	3.70	100	3.94	30	350	F1/F2	F
RT1272	12	7.2	4.74	2.15	151	5.94	65	2.56	94	3.70	100	3.94	25	260	F1/F2	F
RT1280	12	8	5.18	2.35	151	5.94	65	2.56	94	3.70	100	3.94	25	375	F1/F2	F
RT1290	12	9	5.62	2.55	151	5.94	65	2.56	94	3.70	100	3.94	18	450	F1/F2	F
RT1290S	12	9	5.91	2.68	151	5.94	65	2.56	111	4.37	117	4.61	20	440	F1/F2	F
RT12100	12	10	7.05	3.20	151	5.94	98	3.86	95	3.74	101	3.98	18	550	F1/F2	F
RT12100S	12	10	6.83	3.10	151	5.94	65	2.56	111	4.37	117	4.61	20	475	F1/F2	F
RT12120	12	12	7.94	3.60	151	5.94	98	3.86	95	3.74	101	3.98	16.5	590	F1/F2	F
RT12170L	12	17	13.23	6.00	181	7.13	77	3.03	167	6.57	167	6.57	16	750	F3 / F13	D
RT12180	12	18	11.46	5.20	181	7.13	77	3.03	167	6.57	167	6.57	14	750	F3 / F13	D
RT12200	12	20	13.01	5.90	181	7.13	77	3.03	167	6.57	167	6.57	14	820	F3 / F13	D
RT12220	12	22	14.33	6.50	181	7.13	77	3.03	167	6.57	167	6.57	13	830	F3 / F13	D
RT12240	12	24	16.53	7.50	166	6.54	178	7.01	125	4.92	125	4.92	16	850	F13	D
RT12240S	12	24	16.31	7.40	165	6.50	125	4.92	174	6.85	174	6.85	12	820	T28	D
RT12260	12	26	17.86	8.10	166	6.54	178	7.01	125	4.92	125	4.92	10	900	F3 / F13 / T24	D
RT12260S	12	26	18.30	8.30	165	6.50	125	4.92	174	6.85	174	6.85	11.5	850	F7 / F11	D
RT12280	12	28	18.96	8.60	166	6.54	178	7.01	125	4.92	125	4.92	9	960	F3 / F13	D
RT12280L	12	28	18.96	8.60	166	6.54	178	7.01	125	4.92	125	4.92	8	960	F3 / F13	D
RT12280S	12	28	19.40	8.80	165	6.50	125	4.92	174	6.85	174	6.85	9	880	F7 / F11	D

# RT Series

## Summary

RT series is the general purpose battery with 6-8 years design life for float service . It meets IEC and JIS standards .With up-dated AGM valve regulated technology and high purity raw materials, the RT series battery has reliable standby service life.

It is suitable for UPS/EPS, medical equipment, emergency light and security systems applications.

## Product Features

- Capacity range :1.3Ah—28Ah
- Voltage class:6V/12V
- Long design life (25°C) : 6-8 years  
10 years(L type)
- Low self-discharge rate : ≤ 3%/month
- Good high rate discharge performance
- High sealed reaction efficiency : ≥ 99%
- Wide operation temperature range : -20°C ~60°C
- Structure: compact design,shorter internal connectors between cells, thus low internal resistance
- Plate: Pasted flat type, with patent formula of AM
- Terminal: two or more types terminals are convenient for selection
- Separator: using improved AGM separator, makes lower resistance, higher assembling pressure to increase cycle life;
- Battery case: made of high strength ABS(UL94-HB) and UL94-V0 is optional;
- Terminal sealing: double sealing technics(mechanical +epoxy gule).





## Main Parameters

Model	Nominal Voltage	Capacity C <sub>10</sub>	Weight		Dimension								Internal Resistance	Short Circuit Current	Terminal Type	Terminal Position
			Lbs	Kg	Length		Width		Height		Total Height					
	(V)	(Ah)			mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)		
RA6-100	6	100	36.38	16.5	194	7.64	170	6.69	205	8.07	212	8.35	2.5	1850	F14	A
RA6-150	6	150	51.81	23.5	260	10.24	180	7.09	245	9.65	252	9.92	2.2	2770	F12	B
RA6-180	6	180	58.42	26.5	306	12.05	168	6.61	220	8.66	227	8.94	3	3330	F12	B
RA6-200	6	200	63.93	29.0	322	12.68	177.5	6.99	226	8.90	231	9.09	1.8	3700	F16 / F14	A
RA6-200S	6	200	66.14	30.0	260	10.24	180	7.09	245	9.65	252	9.92	1.8	3850	F12	B
RA6-225	6	225	68.34	31.0	322	12.68	177.5	6.99	226	8.90	231	9.09	1.7	4070	F16 / F14	A
RA6-225S	6	225	70.55	32.0	243	9.57	187	7.36	275	10.83	275	10.83	1.7	4100	F14	B
RA12-33	12	33	22.49	10.2	195	7.68	130	5.12	155	6.10	168	6.61	9	825	F7 / F11	C
RA12-33E	12	33	21.83	9.9	195	7.68	130	5.12	155	6.10	168	6.61	9	800	F7 / F11	D
RA12-40	12	40	28.66	13.0	198	7.80	166	6.54	169	6.65	169	6.65	8	920	F4 / F11	D
RA12-40A	12	40	27.34	12.4	198	7.80	166	6.54	169	6.65	169	6.65	8	880	F4 / F11	D
RA12-40B	12	40	27.34	12.4	198	7.80	166	6.54	169	6.65	169	6.65	8	880	F4 / F11	D
RA12-45	12	45	29.76	13.5	198	7.80	166	6.54	169	6.65	169	6.65	8	1050	F4 / F11	D
RA12-55	12	55	39.68	18.0	229	9.02	138	5.43	211	8.31	216	8.50	6	1160	F15 / F11	C
RA12-55A	12	55	38.58	17.5	229	9.02	138	5.43	211	8.31	216	8.50	6	1100	F15 / F11	C
RA12-60	12	60	45.19	20.5	260	10.24	169	6.65	211	8.31	216	8.50	6	1380	F15 / F11	C
RA12-65	12	65	46.30	21.0	350	13.78	167	6.57	182	7.17	182	7.17	6	1500	F5 / F11	C
RA12-65A	12	65	44.09	20.0	350	13.78	167	6.57	182	7.17	182	7.17	7	1450	F5 / F11	C
RA12-65B	12	65	42.99	19.5	350	13.78	167	6.57	182	7.17	182	7.17	7	1410	F5 / F11	C
RA12-70	12	70	49.60	22.5	350	13.78	167	6.57	182	7.17	182	7.17	6	1520	F5 / F11	C
RA12-70S	12	70	47.40	21.5	260	10.24	169	6.65	211	8.31	216	8.50	6	1480	F15 / F11	C
RA12-75	12	75	51.81	23.5	260	10.24	169	6.65	211	8.31	216	8.50	6.5	1720	F15 / F11	C
RA12-75A	12	75	50.71	23.0	260	10.24	169	6.65	211	8.31	216	8.50	5.8	1700	F15 / F11	C
RA12-75B	12	75	49.60	22.5	260	10.24	169	6.65	211	8.31	216	8.50	5.8	1650	F15 / F11	C
RA12-80	12	80	52.91	24.0	350	13.78	167	6.57	182	7.17	182	7.17	5.5	1840	F5 / F11	C
RA12-80A	12	80	50.04	22.7	350	13.78	167	6.57	182	7.17	182	7.17	5.5	1780	F5 / F11	C
RA12-80B	12	80	49.60	22.5	350	13.78	167	6.57	182	7.17	182	7.17	5.5	1740	F5 / F11	C
RA12-85	12	85	57.32	26.0	306.5	12.07	168.5	6.63	210	8.27	215	8.46	5.2	1900	F15 / F12	C
RA12-90	12	90	62.83	28.5	306.5	12.07	168.5	6.63	210	8.27	215	8.46	5.2	1940	F15 / F12	C
RA12-90A	12	90	61.73	28.0	306.5	12.07	168.5	6.63	210	8.27	215	8.46	5.2	1850	F15 / F12	C
RA12-90B	12	90	60.63	27.5	306.5	12.07	168.5	6.63	210	8.27	215	8.46	5.2	1810	F15 / F12	C
RA12-100	12	100	66.14	30.0	328	12.91	172	6.77	215	8.46	220	8.66	5	2150	F5 / F12	C
RA12-100A	12	100	63.93	29.0	328	12.91	172	6.77	215	8.46	220	8.66	5.5	2050	F5 / F12	C
RA12-100B	12	100	62.83	28.5	328	12.91	172	6.77	215	8.46	220	8.66	5	1950	F12	C
RA12-100S	12	100	63.93	29.0	306.5	12.07	168.5	6.63	210	8.27	215	8.46	4.8	2200	F15 / F12	C
RA12-120S	12	110	70.55	32.0	328	12.91	172	6.77	215	8.46	220	8.66	4.2	2300	F12	C
RA12-120SA	12	110	67.24	30.5	328	12.91	172	6.77	215	8.46	220	8.66	4.2	2250	F12	C
RA12-120	12	120	77.16	35.0	407	16.02	177	6.97	225	8.86	225	8.86	4.5	2220	F5 / F12	C
RA12-120A	12	120	74.96	34.0	407	16.02	177	6.97	225	8.86	225	8.86	4.5	2200	F5 / F12	C
RA12-120B	12	120	73.85	33.5	407	16.02	177	6.97	225	8.86	225	8.86	4.5	2150	F5 / F12	C
RA12-134	12	134	91.49	41.5	340	13.39	173	6.81	280	11.02	287	11.30	4	2480	F5 / F12	C
RA12-145	12	145	94.80	43.0	340	13.39	173	6.81	280	11.02	287	11.30	4	2520	F5 / F12	C
RA12-150	12	150	98.11	44.5	483	19.02	170	6.69	241	9.49	241	9.49	4	2700	F5 / F12	C
RA12-150A	12	150	96.34	43.7	483	19.02	170	6.69	241	9.49	241	9.49	4.4	2600	F5 / F12	C
RA12-150B	12	150	94.80	43.0	483	19.02	170	6.69	241	9.49	241	9.49	4.4	2550	F5 / F12	C
RA12-160	12	160	110.23	50.0	532	20.94	207	8.15	214	8.43	219	8.62	4.5	2550	F16 / F12	E
RA12-180	12	180	116.84	53.0	532	20.94	207	8.15	214	8.43	219	8.62	4	2800	F16 / F12	E
RA12-200	12	200	132.28	60.0	522	20.55	240	9.45	219	8.62	224	8.82	4	3430	F16 / F10	E
RA12-225	12	225	143.30	65.0	522	20.55	240	9.45	219	8.62	224	8.82	3.7	3980	F16 / F10	E
RA12-230	12	230	147.71	67.0	521	20.51	269	10.59	204	8.03	209	8.23	4	4100	F10	E
RA12-240	12	240	152.12	69.0	522	20.55	240	9.45	219	8.62	224	8.82	3.6	4300	F16 / F10	E
RA12-260	12	260	163.14	74.0	521	20.51	268	10.55	220	8.66	225	8.86	3.5	4810	F14	E

# RA Series

## Summary

RA series is the general purpose battery with 12 years design life in float service. It meets IEC, JIS and BS standards. With up-dated AGM valve regulated technology and high purity raw materials, the RA series battery maintains high consistency for better performance and reliable standby service life.

It is suitable for UPS/EPS, medical equipment, emergency light and security system applications.

## Product Features

- Capacity range : 33Ah-260Ah
- Voltage class: 6V/12V
- Long design life (25°C) : 12 years
- Low self-discharge rate : ≤ 3%/month
- Good high rate discharge performance
- High sealed reaction efficiency : ≥ 99%
- Wide operation temperature range : -20°C ~60°C
- Structure: compact design, lower internal resistance,
- Plate: Pasted flat type, with patent formula of AM
- Terminal: two or more types terminals are convenient for selection
- Separator: using improved AGM separator, makes lower resistance, higher assembling pressure to increase deep cycle life;
- Battery case: made of high strength ABS(UL94-HB) and UL94-V0 is optional;
- Terminal sealing: double sealing technics(mechanical + epoxy gule).

## Application

- UPS/EPS
- Emergency Light
- Security System
- Medical

## Compliant Standards

- GB/T19638 - 2005
- YD/T799 - 2002
- JIS C8704 - 2006
- IEC 60896-21/22 - 2004
- Passed ISO9001, ISO14001, OHSAS18001, UL, CE and TLC certificate





## Application

- Telecommunication
- UPS/EPS
- Power storage plant
- Utility

## Compliant Standards

- GB/T19638 - 2005
- YD/T799 - 2002
- JIS C8704 - 2006
- BS 6290.4 - 2006
- IEC 60896-21/22- 2004
- Passed ISO9001, ISO14001, OHSAS18001, UL, CE and TLC certificate

## Main Parameters

Model	Nominal Voltage	Capacity C <sub>10</sub>	Weight		Dimension								Internal Resistance	Short Circuit Current	Terminal Type	Terminal Position
	(V)		(Ah)	Lbs	Kg	Length		Width		Height		Total Height				
					mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)		
RL2-200A	2	200	26.90	12.2	170	6.69	106	4.17	330	13.0	342	13.5	0.80	2650	F10	G
RL2-200AB	2	200	25.35	11.5	170	6.69	106	4.17	330	13.0	342	13.5	0.80	2650	F10	G
RL2-250A	2	250	30.42	13.8	170	6.69	106	4.17	330	13.0	342	13.5	0.78	2800	F10	G
RL2-250AB	2	250	29.32	13.3	170	6.69	106	4.17	330	13.0	342	13.5	0.78	2800	F10	G
RL2-300A	2	300	38.58	17.5	170	6.69	150	5.91	330	13.0	342	13.5	0.72	2910	F10	G
RL2-300AB	2	300	36.38	16.5	170	6.69	150	5.91	330	13.0	342	13.5	0.72	2910	F10	G
RL2-350A	2	350	41.67	18.9	170	6.69	150	5.91	330	13.0	342	13.5	0.70	3200	F10	G
RL2-400AS	2	400	41.89	19.0	170	6.69	150	5.91	330	13.0	342	13.5	0.70	3400	F10	G
RL2-400A	2	400	52.91	24.0	196	7.72	171	6.73	330	13.0	342	13.5	0.65	3400	F10	G
RL2-450A	2	450	55.12	25.0	196	7.72	171	6.73	330	13.0	342	13.5	0.62	3630	F10	G
RL2-500AS	2	500	56.22	25.5	196	7.72	171	6.73	330	13.0	342	13.5	0.60	4210	F10	G
RL2-500A	2	500	63.93	29.0	241	9.49	171	6.73	330	13.0	342	13.5	0.58	4210	F10	G
RL2-600AS	2	600	66.14	30.0	241	9.49	171	6.73	330	13.0	342	13.5	0.55	5080	F10	G
RL2-600A	2	600	76.06	34.5	285	11.2	171	6.73	330	13.0	342	13.5	0.55	5080	F10	H
RL2-750AS	2	750	83.77	38.0	285	11.2	171	6.73	330	13.0	342	13.5	0.52	5880	F10	H
RL2-800AS	2	800	85.98	39.0	285	11.2	171	6.73	330	13.0	342	13.5	0.50	6370	F10	H
RL2-800A	2	800	102.5	46.5	383	15.1	171	6.73	330	13.0	342	13.5	0.50	6370	F10	H
RL2-1000AS	2	1000	112.4	51.0	383	15.1	171	6.73	330	13.0	342	13.5	0.48	6850	F10	H
RL2-1000A	2	1000	129.0	58.5	471	18.5	171	6.73	330	13.0	342	13.5	0.48	6850	F10	H
RL2-1200A	2	1200	152.1	69.0	471	18.5	171	6.73	330	13.0	342	13.5	0.45	7830	F10	H
RL2-1200AS	2	1200	132.3	60.0	471	18.5	171	6.73	330	13.0	342	13.5	0.42	7830	F10	H
RL2-1500A	2	1500	187.4	85.0	355	14.0	337	13.3	330	13.0	342	13.5	0.40	10200	F10	K
RL2-1800A	2	1800	202.8	92.0	355	14.0	337	13.3	330	13.0	342	13.5	0.38	12000	F10	K
RL2-2000A	2	2000	251.3	114.0	476	18.7	337	13.3	330	13.0	342	13.5	0.35	13380	F10	K
RL2-2500A	2	2500	266.8	121.0	476	18.7	337	13.3	330	13.0	342	13.5	0.33	18100	F10	K
RL2-3000A	2	3000	374.8	170.0	696	27.4	340	13.4	330	13.0	342	13.5	0.30	23150	F10	L

# RL Series

## Summary

RL series is the general purpose battery with 20 years design life in float service. With heavy duty grids, thicker plates, special additives and updated AGM valve regulated technology, the RL series battery provides consistent performance and long service life. The new grid design effectively reduces the internal resistance, which provides higher specific energy density and excellent high rate discharge characteristics.

It is suitable for communication back-up power and EPS/UPS applications .

## Product Features

- Capacity range: 200Ah—3000Ah
- Voltage class: 2V
- Long design life (25°C): 20 year
- Polarity sign: symmetrical and more clear
- Low self-discharge rate: ≤3 % per month
- High recombination efficiency: ≥ 99%
- Compact structure and high specific energy
- Wide operation temperature: -20°C ~ 60°C
- Grid: thicker grid and radiative grid structure;
- Positive plate: Pasted flat type, latest grid alloy + patent formula of AM;
- Separator: AGM separator with high adsorptive and low resistance;
- Battery container: High strength ABS(UL94-HB) and UL94-V0 is optional;
- Post sealing: patent multi-layer post sealing with M8 copper insert terminal;
- Safety Valve: sensitive operate pressure and reliable equipped with explosion-proof arrester and acid filter.



# RL-L Series

## Summary

RL-L series is the general purpose battery with 20 years design life in float service. With heavy duty grids, thicker plates, special additives and updated AGM valve regulated technology, the RL-L series battery provides consistent performance and long service life. The new grid design effectively reduces the internal resistance, which provides higher specific energy density and excellent high rate discharge characteristics.

It is suitable for communication back-up power, such as Telecommunication, EPS applications.

## Product Features

- Capacity range: 200Ah—3000Ah
- Voltage class: 2V
- Long design life (25°C): more than 20 years
- Polarity sign: symmetrical and more clear
- Low self-discharge rate: ≤3 % per month
- High recombination efficiency: ≥ 99%
- Compact structure and high specific energy
- Wide operation temperature: -20°C ~ 60°C
- Grid: thicker grid and radiative grid structure;
- Positive plate: Pasted flat type, latest grid alloy + patent formula of AM;
- Separator: AGM separator with high adsorptive and low resistance;
- Battery container: High strength ABS(UL94-HB) and UL94-V0 is optional;
- Post sealing: patent multi-layer post sealing with M8 copper insert terminal;
- Safety Valve: sensitive operate pressure and reliable equipped with explosion-proof arrester and acid filter.

## Application

- Telecommunication
- UPS/EPS
- Power storage plant
- Utility

## Compliant Standards

- GB/T19638 - 2005
- YD/T799 - 2002
- JIS C8704 -2006
- BS 6290.4 -2006
- IEC 60896-21/22- 2004
- Passed ISO9001, ISO14001, OHSAS18001, UL , CE and TLC certificate

## Main Parameters

Model	Nominal Voltage	Capacity C <sub>10</sub>	Weight		Terminal Type	Dimension								Internal Resistance	Short Circuit Current	Terminal Position
			Lbs	Kg		Length		Width		Height		Total Height				
	(V)	(Ah)			mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)		
RL2200L	2	200	33.08	15	F10	171	6.73	111	4.37	366	14.41	366	14.41	0.8	2550	G
RL2320L	2	320	44.10	20	F10	171	6.73	150	5.91	365	14.37	365	14.37	0.72	2900	G
RL2400L	2	400	59.54	27	F10	211	8.31	176	6.93	329	12.95	366	14.41	0.67	3400	H
RL2500L	2	500	70.56	32	F10	242	9.53	172	6.77	329	12.95	366	14.41	0.62	4200	H
RL2600L	2	600	90.41	41	F10	302	11.89	175	6.89	328	12.91	365	14.37	0.6	5100	H
RL2800L	2	800	116.9	53	F10	411	16.18	175	6.89	327	12.87	368	14.49	0.6	6300	J
RL21000L	2	1000	143.3	65	F10	479	18.86	175	6.89	327	12.87	368	14.49	0.55	6800	J
RL21500L	2	1500	220.5	100	F10	401	15.79	352	13.86	338	13.31	383	15.08	0.5	10200	K
RL22000L	2	2000	291.1	132	F10	490	19.29	349	13.74	338	13.31	383	15.08	0.4	13350	L
RL23000L	2	3000	443.2	201	F10	712	28.03	351	13.82	338	13.31	383	15.08	0.3	23100	L





# FT Series

## Summary

FT (Front Terminal) Series is specially designed for telecom use with 12 years design life in float service. By adopting a new AGM separator and centralised venting system, the battery can be installed in any position while maintaining high reliability. The dimensions of the FT series is designed for 19" and 23" cabinet installation.

It is suitable for UPS/EPS applications.

## Product Features

- Capacity range :55Ah—260Ah
- Voltage class :12V
- Long design life (25°C) : 12 years
- Low self-discharge rate : ≤ 3%/month
- Good high rate discharge performance
- High sealed reaction efficiency : ≥ 99%
- Wide operation temperature range : -20°C ~60°C
- Narrow structure:each cell has same heat dissipation efficiency thus good to prevent "thermal runaway" ;
- Plate: Pasted flat type, with patent formula of AM ensure good service life;
- Front terminal is convenient for connection and maintenance;
- Centralized vent system: battery internal gas can be vented out of the system, and flame arrester is equipped;
- Terminal cover: avoiding short circuit and dust ,the inspection hole is available for maintenance;
- Separator: use improved AGM separator, makes lower resistance, higher assembling pressure to increase deep cycle life;
- Terminal sealing: double sealing technics(mechanical + epoxy glue).

## Application

- Telecommunication
- Emergency Light
- Photovoltaic / Wind Energy

## Compliant Standards

- IEC60896-21/22 -2004
- BS 6290-4 -1997
- YD/T799-2002
- GB/T19638-2005
- JIS8704-2006
- Passed ISO9001, ISO14001, OHSAS18001, UL, CE certificate
- NEBS certificate

## Main Parameters

Model	Nominal Voltage	Capacity C <sub>10</sub>	Weight		Dimension								Internal Resistance	Terminal Type	Terminal Position
			Lbs	Kg	Length		Width		Height		Total Height				
	(V)	(Ah)			mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)		
FT12-55	12	55	39.68	18.0	291	11.46	106	4.17	230	9.06	230	9.06	7.5	F11	E
FT12-90	12	90	58.42	26.5	562	22.13	114	4.49	188	7.40	188	7.40	5.8	F11/F6	E
FT12-100	12	100	66.14	30.0	508	20.00	110	4.33	236	9.29	236	9.29	5.5	F14	E
FT12-100A	12	100	63.93	29.0	508	20.00	110	4.33	236	9.29	236	9.29	5.5	F14	E
FT12-100L	12	100	72.75	33.0	410	16.14	110	4.33	286	11.26	286	11.26	4.8	F9	E
FT12-100S	12	100	68.34	31.0	410	16.14	110	4.33	286	11.26	286	11.26	5.5	F9	E
FT12-105	12	105	71.65	32.5	508	20.00	110	4.33	236	9.29	236	9.29	6.5	F14/F8	E
FT12-110	12	110	72.75	33.0	410	16.14	110	4.33	286	11.26	286	11.26	4.8	F9	E
FT12-150	12	150	95.90	43.5	565	22.24	110	4.33	288	11.34	288	11.34	5	F9	E
FT12-160	12	160	108.03	49.0	565	22.24	110	4.33	288	11.34	288	11.34	4	F9	E
FT12-160A	12	160	103.62	47.0	565	22.24	110	4.33	288	11.34	288	11.34	4.2	F9	E
FT12-180	12	180	114.64	52.0	560	22.05	125	4.92	316	12.44	316	12.44	4	F9	E
FT12-185	12	185	123.46	56.0	560	22.05	125	4.92	316	12.44	316	12.44	4	F9	E
FT12-185L	12	185	132.28	60.0	560	22.05	125	4.92	316	12.44	316	12.44	4	F9	E
FT12-260	12	260	162.04	73.5	694	27.32	133	5.24	311	12.24	311	12.24	3.5	F10	E



# EV Series

## Summary

EV series is specially designed for frequent deep cycle discharge. By using the specially designed active material and strong grids, the EV series battery offers reliable performance in high load situations and can deliver more than 300 cycles at 100% DOD. Suitable for mobility scooters, electric wheel chairs, golf buggies etc.

## Product Features

- Pb-Ca-Sn alloy, no Cd ,environmentally-friendly;
- High purity raw material and patent EV deep cycle formula of AM;
- High performance AGM separator;
- Excellent cycle life and recovery performance during deep cycle use;
- Sealed construction and Maintenance free.

## Application

- Electric Bike
- Electric Motorcycle
- Wheelchair
- Electric Tools
- Golf car
- Electrical tractor
- Farm Equipment

## Compliant Standards

- GB/T 22199-2008;
- GB/T 23636-2009;
- GB/T 18332.1-2009;
- Passed ISO9001:2000, ISO14001, OHSAS18001, UL, CE certificate

## Main Parameters

Model	Nominal Voltage (V)	Capacity C <sub>20</sub> (Ah)	Weight		Dimension								Internal Resistance (mΩ@25°C)	Short Circuit Current (A)	Terminal Type	Terminal Position
			Lbs	Kg	Length		Width		Height		Total Height					
	mm	inch	mm	inch	mm	inch	mm	inch	mm	inch						
EV6-180	6	180	61.73	28.0	306	12.05	168	6.61	220	8.66	227	8.94	2.5	3000	F12	B
EV6-180H	6	180	64.00	29.0	306	12.05	168	6.61	220	8.66	227	8.94	2.4		F12	B
EV6-200	6	200	66.14	30.0	322	12.68	177.5	6.99	226	8.90	231	9.09	2.4	3100	F14	A
EV6-205	6	205	63.93	29.0	260	10.24	180	7.09	245	9.65	264	10.39	2.5	2800	F14/F22	B
EV6-205H	6	205	68.01	30.85	260	10.24	180	7.09	245	9.65	264	10.39	2.3		F14/F22	B
EV6-210	6	210	70.55	32.0	322	12.68	177.5	6.99	226	8.90	231	9.09	2.2	3100	F16/ F10	A
EV6-225	6	225	70.55	32.0	260	10.24	180	7.09	263	10.35	282	11.10	2	2950	F14/F22	B
EV6-225H	6	225	77.82	35.3	260	10.24	180	7.09	263	10.35	270	10.63	1.8		F14	B
EV6-310	6	310	98.11	44.5	295	11.61	178	7.01	346	13.62	364	14.33	2		F14/F22	B
EV6-335	6	335	105.82	48.0	295	11.61	178	7.01	346	13.62	364	14.33	1.8	3250	F14/F22	B
EV6-400	6	400	125.66	57.0	295	11.61	178	7.01	404	15.91	423	16.65	1.1		F14/F22	B
EV8-170	8	170	76.06	34.5	260	10.24	182	7.17	295	11.61	314	12.36	3.2	2450	F14/F22	C
EV8-170S	8	170	75.84	34.4	260	10.24	182	7.17	267	10.51	272	10.71	2.1		F14	C
EV8-200	8	200	83.78	38.0	260	10.24	182	7.17	295	11.61	314	12.36	3	2650	F14/F22	C
EV12-10	12	10	8.49	3.85	151	5.94	98	3.86	95	3.74	101	3.98	15	640	F1/F2	F
EV12-12	12	12	9.26	4.20	151	5.94	98	3.86	95	3.74	101	3.98	13	660	F1/F2	F
EV12-14	12	14	9.92	4.50	151	5.94	98	3.86	99	3.90	105	4.13	12	700	F1/F2	F
EV12-18	12	18	13.01	5.90	181	7.13	77	3.03	167	6.57	167	6.57	14	900	F3/F13	D
EV12-22	12	22	13.67	6.20	181	7.13	77	3.03	167	6.57	167	6.57	14	1100	F3/F13/F18	D
EV12-24	12	24	15.43	7.00	182.5	7.19	78.5	3.09	170	6.69	170	6.69	10	1100	T23/F18	D
EV12-24X	12	24	15.43	7.00	181	7.13	77	3.03	170	6.69	170	6.69	10	1100	F18	D
EV12-26	12	26	19.40	8.80	166	6.54	178	7.01	125	4.92	125	4.92	8	900	F3/ F13	D
EV12-33	12	33	22.49	10.2	195	7.68	130	5.12	155	6.10	168	6.61	9	1150	F7/ F11	C
EV12-45	12	45	32.19	14.6	198	7.80	166	6.54	169	6.65	169	6.65	7	1250	F4/ F11	D
EV12-55	12	55	39.68	18.0	229	9.02	138	5.43	211	8.31	216	8.50	7	1160	F15/ F11	C
EV12-60	12	60	44.09	20.0	260	10.24	169	6.65	180	7.09	185	7.28	6.5	1450	F15/ F11	C
EV12-60S	12	60	42.99	19.5	250	9.84	160	6.30	178	7.01	183	7.20	6.5	1450	F15	D
EV12-75	12	75	51.81	23.5	260	10.24	169	6.65	211	8.31	216	8.50	6	1750	F15/ F11	C
EV12-90	12	90	66.14	30.0	306.5	12.07	168.5	6.63	210	8.27	215	8.46	4.8	2150	F15/ F12	C
EV12-100	12	100	69.45	31.5	328	12.91	172	6.77	215	8.46	220	8.66	5	2200	F12	C
EV12-100S	12	100	68.34	31.0	306.5	12.07	168.5	6.63	210	8.27	215	8.46	4.8	2200	F15/ F12	C
EV12-110	12	110	70.55	32.0	328	12.91	172	6.77	215	8.46	220	8.66	5	2300	F5/ F12	C
EV12-110H	12	110	73.19	33.2	328	12.91	172	6.77	215	8.46	220	8.66	4.8		F5/ F12	C
EV12-120	12	120	80.47	36.5	407	16.02	177	6.97	225	8.86	225	8.86	4.5	2350	F5/ F12	C
EV12-150	12	150	103.62	47.0	483	19.02	170	6.69	241	9.49	241	9.49	4	2950	F5/ F12	C
EV12-180	12	180	113.54	51.5	483	19.02	170	6.69	241	9.49	241	9.49	4		F5/ F12	C
EV12-200	12	200	137.79	62.5	522	20.55	240	9.45	219	8.62	224	8.82	3.8	3750	F16/ F10	E
EV12-200S	12	200	139.99	63.5	382	15.04	179	7.05	351	13.82	370	14.57	5		F22	C
EV12-240	12	240	152.12	69.0	522	20.55	240	9.45	219	8.62	224	8.82	3.8	4300	F16/ F10	E





# HR Series

## Summary

HR (High Rate) series is especially designed for heavy load discharge applications with 8 to 15 years design life in float service. By using strong grids and specially designed active material the HR series offers stable performance during high current discharge. The HR series offers 30% more power output than the standard range. Suitable for UPS/EPS where high current loads are required.

## Product Features

- Capacity range : 16W-850W
- Voltage class : 6V/12V
- Long design life (25°C) : 8-15 years
- Low self-discharge rate : ≤ 3%/month
- Good high rate discharge performance
- High sealed reaction efficiency : ≥ 99%
- Wide operation temperature range : -20°C ~ 60°C
- Structure: compact design, shorter internal connectors between cells, thus low internal resistance
- Plate: Pasted flat type, with patent high rate formula of AM
- Terminal: two or more types terminals are convenient for selection
- Safety valve: flame arrester / filter is equipped with safety valve system;
- Separator: using improved AGM separator, makes lower resistance higher assembling pressure to increase deep cycle life;
- Battery case: made of high strength ABS(UL94-HB) and UL94-V0 is optional;
- Terminal sealing: double sealing technics(mechanical + epoxy gule).

## Application

- UPS/EPS
- Electric Tools
- Toys
- Medical
- Wheelchair
- Security System

## Compliant Standards

- GB/T19638.2-2005
- YD/T799-2002
- JIS C8704-2006
- IEC 60896-21/22-2004
- Passed ISO9001, ISO14001, OHSAS18001, UL, CE certificate

## Main Parameters

Model	Nominal Voltage	Watts/cell @ 15min (1.67Vpc)	Weight		Dimension								Internal Resistance (mΩ@25°C)	Short Circuit Current (A)	Terminal Type	Terminal Position
			Lbs	Kg	Length		Width		Height		Total Height					
	(V)			mm	inch	mm	inch	mm	inch	mm	inch					
HR6-16W	6	16	1.59	0.72	70	2.76	47	1.85	99	3.90	105	4.13	20	223	F1/F2	A
HR6-18W	6	18	1.65	0.75	70	2.76	47	1.85	99	3.90	105	4.13	20	251	F1/F2	A
HR6-20W	6	20	1.76	0.80	70	2.76	47	1.85	99	3.90	105	4.13	18	278	F1/F2	A
HR6-22W	6	22	1.76	0.80	70	2.76	47	1.85	99	3.90	105	4.13	16	306	F1/F2	A
HR6-28W	6	28	2.65	1.20	151	5.94	34	1.34	94	3.70	100	3.94	10	390	F2	C
HR6-32W	6	32	2.87	1.30	151	5.94	34	1.34	94	3.70	100	3.94	10	445	F2	C
HR6-36W	6	36	2.98	1.35	151	5.94	34	1.34	94	3.70	100	3.94	8	450	F2	C
HR6-630W	6	630	57.32	26.0	260	10.24	180	7.09	245	9.65	252	9.92	2	---	F12	A
HR6-850W	6	850	72.75	33.0	243	9.57	187	7.36	275	10.83	275	10.83	1.7	3850	F14	B
HR12-16W	12	16	3.09	1.40	90	3.54	70	2.76	101	3.98	107	4.21	35	225	F1/F2	C
HR12-18W	12	18	3.53	1.60	90	3.54	70	2.76	101	3.98	107	4.21	35	250	F1/F2	C
HR12-20W	12	20	3.75	1.70	90	3.54	70	2.76	101	3.98	107	4.21	30	275	F1/F2	C
HR12-20WB	12	20	4.08	1.85	151	5.94	50	1.97	95	3.74	101	3.98	25	270	F1/F2	F
HR12-22W	12	22	3.64	1.65	90	3.54	70	2.76	101	3.98	107	4.21	25	280	F1/F2	C
HR12-28W	12	28	4.85	2.20	151	5.94	65	2.56	94	3.70	100	3.94	18	390	F2	F
HR12-32W	12	32	5.25	2.38	151	5.94	65	2.56	94	3.70	100	3.94	18	440	F2	F
HR12-32WB	12	32	5.18	2.35	151	5.94	65	2.56	94	3.70	100	3.94	18	415	F2	F
HR12-36W	12	36	5.73	2.60	151	5.94	65	2.56	94	3.70	100	3.94	18	450	F2	F
HR12-38W	12	38	5.62	2.55	151	5.94	65	2.56	94	3.70	100	3.94	18	445	F2	F
HR12-48W	12	48	9.26	4.20	151	5.94	98	3.86	95	3.74	101	3.98	12	660	F2	F
HR12-48WB	12	48	7.72	3.50	151	5.94	98	3.86	95	3.74	101	3.98	14	620	F2	F
HR12-50W	12	50	9.26	4.20	181	7.13	77	3.03	167	6.57	167	6.57	14	700	F3/F13	D
HR12-60W	12	60	10.25	4.65	181	7.13	77	3.03	167	6.57	167	6.57	14	780	F3/F13	D
HR12-68W	12	68	10.80	4.90	181	7.13	77	3.03	167	6.57	167	6.57	12	820	F3/F13	D
HR12-70W	12	70	12.35	5.60	181	7.13	77	3.03	167	6.57	167	6.57	12	860	F3/F13	D
HR12-80W	12	80	13.67	6.20	181	7.13	77	3.03	167	6.57	167	6.57	12	900	F3/F13	D
HR12-88W	12	88	13.89	6.30	181	7.13	77	3.03	167	6.57	167	6.57	10	920	F18/F3/F13	D
HR12-96W	12	96	17.86	8.10	166	6.54	178	7.01	125	4.92	125	4.92	8	950	F13	D
HR12-104W	12	104	18.96	8.60	166	6.54	178	7.01	125	4.92	125	4.92	8	980	F13	D
HR12-125W	12	125	22.49	10.2	195	7.68	130	5.12	155	6.10	168	6.61	9	930	F11	C
HR12-150WL	12	150	28.66	13.0	198	7.80	166	6.54	169	6.65	169	6.65	7.5	1100	F11	D
HR12-200WL	12	200	39.68	18.0	229	9.02	138	5.43	211	8.31	216	8.50	5.7	1350	F11	C
HR12-240WL	12	240	46.30	21.0	350	13.78	167	6.57	182	7.17	182	7.17	5.5	1650	F11	C
HR12-280WL	12	280	54.67	24.8	260	10.24	169	6.65	211	8.31	216	8.50	6	1850	F11	C
HR12-350WL	12	340	63.93	29.0	306.5	12.07	168.5	6.63	210	8.27	215	8.46	5	2100	F12	C
HR12-380WL	12	380	70.55	32.0	328	12.91	172	6.77	215	8.46	220	8.66	4	2350	F12	C
HR12-380WSL	12	380	69.45	31.5	306.5	12.07	168.5	6.63	210	8.27	215	8.46	4.5	2550	F12	C
HR12-450WAL	12	450	80.47	36.5	407	16.02	177	6.97	225	8.86	225	8.86	---	---	F12	C
HR12-450WL	12	450	83.78	38.0	407	16.02	177	6.97	225	8.86	225	8.86	4	3000	F12	C
HR12-520WL	12	520	94.80	43.0	340	13.39	173	6.81	280	11.02	287	11.30	4.5	2900	F5/F12	C
HR12-570WL	12	570	101.41	46.0	483	19.02	170	6.69	241	9.49	241	9.49	3.8	3100	F12	C
HR12-580WL	12	580	103.62	47.0	340	13.39	173	6.81	280	11.02	287	11.30	3.8	3150	F12	C
HR12-650WL	12	650	139.99	63.5	522	20.55	240	9.45	219	8.62	224	8.82	3.6	3850	F10	E
HR12-690WL	12	690	143.30	65.0	522	20.55	240	9.45	219	8.62	224	8.82	3.5	4050	F10	E
HR12-780WL	12	780	164.24	74.5	522	20.55	240	9.45	219	8.62	224	8.82	3.0	4200	F10	E





# DC Series

## Summary

DC series is specially designed for frequent cyclic performance. By using strong grids and specially designed active material, the DC series battery offers more cyclic life than standby series. It is suitable for solar energy systems, marine and RV etc.

## Product Features

- Capacity range :26Ah —3000Ah
- Voltage class :2V/6V/12V
- Long design life (25°C) : 8 years (≤28Ah)  
12 years(>28Ah)  
20 years(2V)
- Low self-discharge rate : ≤ 3%/month
- Good high rate discharge performance
- High sealed reaction efficiency : ≥ 99%
- Wide operation temperature range : -20°C ~60°C
- Structure: compact design,shorter internal connectors between cells, thus low internal resistance
- Plate: Pasted flat type, with patent deep cycle formula of AM
- Terminal: two or more types terminals are convenient for selection
- Vent system: gases can be vented through flame arrester/ filter;
- Separator: using improved AGM separator, makes lower resistance higher assembling pressure to increase deep cycle life;
- Battery case: made of high strength ABS(UL94-HB) and UL94-V0 is optional;
- Terminal sealing: double sealing technics(mechanical + epoxy gule).

\* HS battery:

Container and lid is sealed with heat seal technology; automatic through the-partition welding between inter-cell.

## Application

- Photovoltaic / Wind Energy
- UPS/EPS
- Marine / Boat
- Light Electric Power Supply

## Compliant Standards

- IEC60896-21/22-2004
- DIN43539-T5
- YD/T1360-2005
- Passed ISO9001, ISO14001, OHSAS18001, UL, CE certificate

## Main Parameters

Model	Nominal Voltage (V)	Capacity C <sub>20</sub> (Ah)	Weight		Dimension								Internal Resistance (mΩ@25°C)	Short Circuit Current (A)	Terminal Type	Terminal Position
			Lbs	Kg	Length		Width		Height		Total Height					
					mm	inch	mm	inch	mm	inch	mm	inch				
DC12-26	12	26	17.86	8.10	166	6.54	178	7.01	125	4.92	125	4.92	11.5	900	F3/F13/T24	D
DC12-26S	12	26	18.30	8.30	165	6.50	125	4.92	174	6.85	174	6.85	11.5	850	F7 / F11	D
DC12-28S	12	28	19.40	8.80	165	6.50	125	4.92	174	6.85	174	6.85	9	880	F7 / F11	D
DC12-40	12	40	28.66	13.0	198	7.80	166	6.54	169	6.65	169	6.65	8	1000	F4/ F11	D
DC12-40A	12	40	27.34	12.4	198	7.80	166	6.54	169	6.65	169	6.65	8	900	F4/ F11	D
DC12-40B	12	40	27.34	12.4	198	7.80	166	6.54	169	6.65	169	6.65	8	900	F4 / F11	D
DC12-50	12	50	34.17	15.5	250	9.84	160	6.30	178	7.01	183	7.20	7	1050	F11 /F15	C
DC12-55	12	55	39.68	18.0	229	9.02	138	5.43	211	8.31	216	8.50	6	1100	F15 / F11	C
DC12-55A	12	55	38.58	17.5	229	9.02	138	5.43	211	8.31	216	8.50	6	1500	F15 / F11	C
DC12-65	12	65	46.30	21.0	350	13.78	167	6.57	182	7.17	182	7.17	6	1500	F5 / F11	C
DC12-65A	12	65	42.99	19.5	350	13.78	167	6.57	182	7.17	182	7.17	6	1450	F5 / F11	C
DC12-65B	12	65	42.99	19.5	350	13.78	167	6.57	182	7.17	182	7.17	6	1450	F5 / F11	C
DC12-75	12	75	51.81	23.5	260	10.24	169	6.65	211	8.31	216	8.50	5.8	1720	F15 / F11	C
DC12-75A	12	75	50.71	23.0	260	10.24	169	6.65	211	8.31	216	8.50	6	1720	F15 / F11	C
DC12-80	12	80	52.91	24.0	350	13.78	167	6.57	182	7.17	182	7.17	5.5	1840	F5 / F11	C
DC12-80A	12	80	50.04	22.7	350	13.78	167	6.57	182	7.17	182	7.17	5.5	1700	F5 / F11	C
DC12-80B	12	80	49.60	22.5	350	13.78	167	6.57	182	7.17	182	7.17	5.5	1700	F5 / F11	C
DC12-80S	12	80	54.23	24.6	260	10.24	169	6.65	211	8.31	216	8.50	5.5	1700	F5 / F11	C
DC12-90	12	90	62.83	28.5	306.5	12.07	168.5	6.63	210	8.27	215	8.46	5.2	1940	F15 / F12	C
DC12-90A	12	90	61.73	28.0	306.5	12.07	168.5	6.63	210	8.27	215	8.46	5.2	1850	F15 / F12	C
DC12-100	12	100	66.14	30.0	328	12.91	172	6.77	215	8.46	220	8.66	5	2100	F5 / F12	C
DC12-100A	12	100	63.93	29.0	328	12.91	172	6.77	215	8.46	220	8.66	5	2150	F5 / F12	C
DC12-120S	12	114	69.45	31.5	328	12.91	172	6.77	215	8.46	220	8.66	4.2	2130	F5 / F12	C
DC12-100S	12	120	63.93	29.0	306.5	12.07	168.5	6.63	210	8.27	215	8.46	4.8	2150	F15 / F12	C
DC12-120	12	120	77.16	35.0	407	16.02	177	6.97	225	8.86	225	8.86	4	2220	F5 / F12	C
DC12-120A	12	120	74.96	34.0	407	16.02	177	6.97	225	8.86	225	8.86	4.5	2220	F5 / F12	C
DC12-134	12	134	91.49	41.5	340	13.39	173	6.81	280	11.02	287	11.30	4	2480	F5 / F12	C
DC12-145	12	145	94.80	43.0	340	13.39	173	6.81	280	11.02	287	11.30	4	2630	F5 / F12	C
DC12-150	12	150	98.11	44.5	483	19.02	170	6.69	241	9.49	241	9.49	4.2	2780	F5 / F12	C
DC12-150A	12	150	96.34	43.7	483	19.02	170	6.69	241	9.49	241	9.49	4	2600	F5 / F12	C
DC12-160	12	160	110.23	50.0	532	20.94	207	8.15	214	8.43	219	8.62	4	2960	F16 / F12	E
DC12-160A	12	160	108.03	49.0	532	20.94	207	8.15	214	8.43	219	8.62	4	2900	F5 / F12	E
DC12-180	12	180	116.84	53.0	532	20.94	207	8.15	214	8.43	219	8.62	4	3330	F16 / F12	E
DC12-180A	12	180	114.64	52.0	532	20.94	207	8.15	214	8.43	219	8.62	4	3200	F16 / F12	E
DC12-200	12	200	132.28	60.0	522	20.55	240	9.45	219	8.62	224	8.82	4	3700	F16 / F10	E
DC12-200A	12	200	130.07	59.0	522	20.55	240	9.45	219	8.62	224	8.82	4	3430	F16 / F10	E
DC12-225	12	225	143.30	65.0	522	20.55	240	9.45	219	8.62	224	8.82	3.7	3950	F16 / F10	E
DC12-225A	12	225	141.10	64.0	522	20.55	240	9.45	219	8.62	224	8.82	3.8	3900	F16 / F10	E
DC12-230	12	230	147.71	67.0	521	20.51	269	10.59	204	8.03	209	8.23	3	4100	F10	E
DC12-260	12	260	163.14	74.0	521	20.51	268	10.55	220	8.66	225	8.86	3.5	4810	F14	E
DC6-180	6	180	58.42	26.5	306	12.05	168	6.61	220	8.66	227	8.94	3	3330	F12	B
DC6-180A	6	180	56.66	25.7	306	12.05	168	6.61	220	8.66	227	8.94	3	3200	F12	B
DC6-200	6	200	63.93	29.0	322	12.68	177.5	6.99	226	8.90	231	9.09	1.8	3700	F16/F14	A
DC6-200A	6	200	63.93	29.0	322	12.68	177.5	6.99	226	8.90	231	9.09	1.8	3600	F16/F14	A
DC6-225	6	225	68.34	31.0	322	12.68	177.5	6.99	226	8.90	231	9.09	1.5	4000	F16/F10	A
DC6-225A	6	225	67.24	30.5	322	12.68	177.5	6.99	226	8.90	231	9.09	1.5	3900	F16/F10	A
DC6-225S	6	225	70.55	32.0	243	9.57	187	7.36	275	10.83	275	10.83	1.7	3980	F14	B



Model	Nominal Voltage	Capacity C <sub>20</sub>	Weight		Dimension								Internal Resistance	Short Circuit Current	Terminal Type	Terminal Position
			Lbs	Kg	Length		Width		Height		Total Height					
	(V)	(Ah)			mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)		
FT12-55D	12	55	39.68	18.0	291	11.46	106	4.17	230	9.06	230	9.06	6	1460	F11	E
FT12-90D	12	90	58.42	26.5	562	22.13	114	4.49	188	7.40	188	7.40	5.8	2350	F11/F6	E
FT12-100D	12	100	66.14	30.0	508	20.00	110	4.33	236	9.29	236	9.29	5.2	2400	F14	E
FT12-100DS	12	100	68.34	31.0	410	16.14	110	4.33	286	11.26	286	11.26	5.5	2850	F9	E
FT12-105D	12	105	71.65	32.5	508	20.00	110	4.33	236	9.29	236	9.29	5	2400	F14/F8	E
FT12-110D	12	110	72.75	33.0	410	16.14	110	4.33	286	11.26	286	11.26	5	2850	F9	E
FT12-150D	12	150	95.90	43.5	565	22.24	110	4.33	288	11.34	288	11.34	4	3250	F9	E
FT12-160D	12	160	108.03	49.0	565	22.24	110	4.33	288	11.34	288	11.34	4	3550	F9	E
FT12-160DA	12	160	108.03	49.0	565	22.24	110	4.33	288	11.34	288	11.34	4	3550	F9	E
FT12-160DB	12	160	103.62	47.0	565	22.24	110	4.33	288	11.34	288	11.34	----	----	F9	E
FT12-180D	12	180	114.64	52.0	560	22.05	125	4.92	316	12.44	316	12.44	4	4150	F9	E
FT12-185D	12	185	123.46	56.0	560	22.05	125	4.92	316	12.44	316	12.44	4	4250	F9	E
FT12-185DL	12	185	132.28	60.0	560	22.05	125	4.92	316	12.44	316	12.44	4	4250	F9	E

Model	Nominal Voltage	Capacity C <sub>10</sub>	Weight		Dimension								Internal Resistance	Short Circuit Current	Terminal Type	Terminal Position
			Lbs	Kg	Length		Width		Height		Total Height					
	(V)	(Ah)			mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)		
DC2-200A	2	200	27.56	12.5	170	6.69	106	4.17	330	13.0	342	13.5	0.52	2650	F10	G
DC2-250A	2	250	30.42	13.8	170	6.69	106	4.17	330	13.0	342	13.5	0.5	2800	F10	G
DC2-300A	2	300	42.77	19.4	170	6.69	150	5.91	330	13.0	342	13.5	0.4	2910	F10	G
DC2-350A	2	350	45.41	20.6	170	6.69	150	5.91	330	13.0	342	13.5	0.4	3200	F10	G
DC2-400A	2	400	51.59	23.4	196	7.72	171	6.73	330	13.0	342	13.5	0.4	3400	F10	G
DC2-450A	2	450	56.22	25.5	196	7.72	171	6.73	330	13.0	342	13.5	0.4	3630	F10	G
DC2-500A	2	500	66.80	30.3	241	9.49	171	6.73	330	13.0	342	13.5	0.4	4210	F10	G
DC2-600A	2	600	80.47	36.5	285	11.2	171	6.73	330	13.0	342	13.5	0.4	5080	F10	H
DC2-650A	2	650	83.77	38.0	285	11.2	171	6.73	330	13.0	342	13.5	0.4	5200	F10	H
DC2-800A	2	800	105.8	48.0	383	15.1	171	6.73	330	13.0	342	13.5	0.4	6370	F10	H
DC2-1000A	2	1000	132.9	60.3	471	18.5	171	6.73	330	13.0	342	13.5	0.4	6850	F10	H
DC2-1200A	2	1200	141.1	64.0	471	18.5	171	6.73	330	13.0	342	13.5	0.4	7830	F10	H
DC2-1500A	2	1500	189.6	86.0	355	14.0	337	13.3	330	13.0	342	13.5	0.4	10200	F10	K
DC2-1800A	2	1800	198.4	90.0	355	14.0	337	13.3	330	13.0	342	13.5	0.4	----	F10	K
DC2-2000A	2	2000	260.1	118	476	18.7	337	13.3	330	13.0	342	13.5	0.4	----	F10	K
DC2-2500A	2	2500	304.2	138	476	18.7	337	13.3	330	13.0	342	13.5	0.4	----	F10	K
DC2-3000A	2	3000	385.8	175	696	27.4	340	13.4	330	13.0	342	13.5	0.4	----	F10	L

## About VRLA battery (AGM & GEL)

### What is VRLA battery?

VRLA(Valve Regulated Lead Acid) battery is sealed lead-acid battery. It includes GEL type and AGM type, both have the following characteristics:

- is sealed using special pressure valves and should never be opened.
- is completely maintenance-free, needn't topping in service life.
- all of its electrolyte are immobilized (absorbed in AGM or fixed in Gel structure).
- uses recombination reaction to prevent the escape of hydrogen and oxygen gases which normally lost in flooded lead-acid battery.
- is non-spillable, and therefore can be operated in virtually any position(except upside-down).

### What is GEL battery?

Besides the characteristics of VRLA, GEL battery has:

- using thixotropic gelled electrolyte, it is in a solid state between the plates and separators.
- not like traditional AGM electrolyte "starve" design, GEL battery has more 15~25% electrolyte volume than AGM type.
- different type of separator, such as PE, PVC etc .

### Differences between GEL batteries and absorbed glass mat (AGM) batteries?

- Both are sealed recombinant batteries. Both are sealed valve-regulated lead-acid (VRLA). AGM batteries and GEL batteries are both considered "acid-starved" and the electrolyte does not flow like a normal liquid.
- The gel electrolyte has the consistency and appearance of petroleum jelly. Like gelled electrolyte batteries, AGM batteries are also considered non-spillable – all of the liquid electrolyte is trapped in the sponge-like matted glass fiber separator material.
- Due to the physical properties of the gelled electrolyte, gel battery has higher internal resistance. Thus AGM batteries has excellent performance for high current/power discharge and GEL excels in high/lower temperature stability and lower current/power discharge applications.
- AGM batteries has higher specific energy density than GEL batteries. But GEL batteries has longer service life.

### What is the difference between VRLA batteries and traditional wet/flooded batteries?

- Wet batteries do not have special pressurized sealing vents, as they do not work on the recombination principle(gases escaped inside the battery during charging).
- It contains liquid electrolyte that can spill/flow and cause corrosion if tipped or punctured. Therefore, they are not air transportable without special containers.
- It can only be installed "upright" and "acid protection" must be maintained at the same time.
- As the wet batteries will lose gases during charging ,it is need maintenance(topping) periodically.
- As the electrolyte can flow , "stratification" will occur and need more overcharge to mix .





# OPzS Series

## Summary

OPzS series adopts flooded tubular technology and is designed and manufactured according to DIN/EN 60254-2(IEC 254-1) standards, with die-casted positive grid and patented active material formula. The OPzS batteries offer 6000 cycles design life in 30%DOD at 25 °C.

Suitable for traction electric vehicles, traction forklifts, electric cars, etc.

## Product Features

- Capacity range: 250Ah — 3000Ah
- Voltage : 2V
- Cycle life: 6000 at 30% DOD
- Self discharge rate  $\leq$  3.5%/month;
- High charge acceptance performance;
- Wide operation temperature: -15°C-50°C
- Good deep discharge recovery performance.
- Positive plate: tubular type ,with die- casting thick Pb-Ca grid, it has very good corrosion resistance and very long service life;
- Negative plate: pasted flat type ,radial grid design , good high rate discharge performance;
- Separator: PVC-SiO<sub>2</sub> separator imported from Europe, low internal resistance, high pore rate and long life;
- Flooded electrolyte design: contain more electrolyte, space between plates and separators are full of electrolyte thus means good heating capacity and avoid" thermal runaway"
- Safety valve, has good sensitivity, safe and reliable , equipped with double flame arrester/acid filter;
- Battery case: made of high strength PP and durable design.

## Application

- Traction forklifts
- Traction electric vehicles
- Electric cars
- Photovoltaic / Wind Power

## Compliant Standards

- IEC 60254- 2005
- DIN/EN 60254-2
- GB 7403-2008
- Passed ISO9001 /ISO14001 /OHSAS18001 UL CE certificate

## Main Parameters of OPzS series Flooded Tubular Battery

Model	Nominal Voltage	Capacity C <sub>10</sub>	Weight		Dimension								Internal Resistance	Short Circuit Current	Terminal Type	Terminal Position
	(V)		(Ah)	Lbs	Kg	Length		Width		Height		Total Height				
					mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)		
OPzS2-250	2	250	46.52	21.1	124	4.88	206	8.11	356	14.02	413	16.26	0.76	4000	F10	G
OPzS2-300	2	300	54.01	24.5	145	5.71	206	8.11	356	14.02	413	16.26	0.7	4550	F10	G
OPzS2-350	2	350	58.86	26.7	124	4.88	206	8.11	471	18.54	528	20.79	0.65	4850	F10	G
OPzS2-420	2	420	74.08	33.6	145	5.71	206	8.11	471	18.54	528	20.79	0.58	5400	F10	G
OPzS2-490	2	490	85.32	38.7	166	6.54	206	8.11	471	18.54	528	20.79	0.5	6000	F10	G
OPzS2-600	2	600	102.29	46.4	145	5.71	206	8.11	646	25.43	703	27.68	0.45	6440	F10	G
OPzS2-770	2	770	129.85	58.9	210	8.27	254	10.00	471	18.54	528	20.79	0.31	6200	F10	G
OPzS2-800	2	800	141.76	64.3	191	7.52	210	8.27	646	25.43	703	27.68	0.35	6800	F10	H
OPzS2-1000	2	1000	171.96	78.0	233	9.17	210	8.27	646	25.43	703	27.68	0.28	7900	F10	H
OPzS2-1200	2	1200	202.38	91.8	275	10.83	210	8.27	646	25.43	703	27.68	0.23	8200	F10	H
OPzS2-1500	2	1500	250.22	113.5	275	10.83	210	8.27	795	31.30	852	33.54	0.21	8500	F10	H
OPzS2-2000	2	2000	338.19	153.4	399	15.71	214	8.43	770	30.31	827	32.56	0.17	9300	F10	I
OPzS2-2500	2	2500	420.86	190.9	487	19.17	212	8.35	770	30.31	827	32.56	0.13	10300	F10	J
OPzS2-3000	2	3000	500.01	226.8	576	22.68	212	8.35	770	30.31	827	32.56	0.11	10700	F10	J

## Main Parameters of Flooded Tubular Traction Battery

Model	Capacity C <sub>10</sub>	Dimension				Weight
	(Ah)	Length	Width	Height	Total Height	(Kg)
2 PzS 120	120	47	198	340	370	8.0
3 PzS 180	180	65	198	340	370	11.0
4 PzS 240	240	83	198	340	370	14.5
5 PzS 300	300	101	198	340	370	18.0
6 PzS 360	360	119	198	340	370	21.0
7 PzS 420	420	137	198	340	370	25.0
8 PzS 480	480	155	198	340	370	28.0
9 PzS 540	540	174	198	340	370	32.0
10 PzS 600	600	192	198	340	370	35.0
2 PzS 160	160	47	198	405	435	9.0
3 PzS 240	240	65	198	405	435	13.0
4 PzS 320	320	83	198	405	435	17.0
5 PzS 400	400	101	198	405	435	21.0
6 PzS 480	480	119	198	405	435	24.5
7 PzS 560	560	137	198	405	435	29.0
8 PzS 640	640	155	198	405	435	33.0
9 PzS 720	720	174	198	405	435	40.0
10 PzS 800	800	192	198	405	435	45.0

## Main Parameters of Flooded Tubular Traction Battery

Model	Capacity C <sub>5</sub>	Dimension				Weight (Kg)
	(Ah)	Length	Width	Height	Total Height	
2 PzS 180	180	47	198	475	505	11.0
3 PzS 270	270	65	198	475	505	15.5
4 PzS 360	360	83	198	475	505	20.0
5 PzS 450	450	101	198	475	505	25.0
6 PzS 540	540	119	198	475	505	29.0
7 PzS 630	630	137	198	475	505	34.0
8 PzS 720	720	155	198	475	505	38.0
9 PzS 810	810	174	198	475	505	43.5
10 PzS 900	900	192	198	475	505	47.5
2 PzS 230	230	47	198	545	575	13.0
3 PzS 345	345	65	198	545	575	18.5
4 PzS 460	460	83	198	545	575	24.0
5 PzS 575	575	101	198	545	575	29.5
6 PzS 690	690	119	198	545	575	34.0
7 PzS 805	805	137	198	545	575	39.0
8 PzS 920	920	155	198	545	575	46.0
9 PzS 1035	1035	174	198	545	575	51.5
10 PzS 1150	1150	192	198	545	575	57.5
2 PzS 250	250	47	198	570	600	14.0
3 PzS 375	375	65	198	570	600	19.5
4 PzS 500	500	83	198	570	600	25.0
5 PzS 625	625	101	198	570	600	30.5
6 PzS 750	750	119	198	570	600	37.5
7 PzS 875	875	137	198	570	600	43.5
8 PzS 1000	1000	155	198	570	600	49.5
9 PzS 1125	1125	174	198	570	600	55.0
10 PzS 1250	1250	192	198	570	600	60.5
2 PzS 280	280	47	198	685	715	18.0
3 PzS 420	420	65	198	685	715	23.5
4 PzS 560	560	83	198	685	715	30.5
5 PzS 700	700	101	198	685	715	37.0
6 PzS 840	840	119	198	685	715	45.0
7 PzS 980	980	137	198	685	715	52.0
8 PzS 1120	1120	155	198	685	715	59.5
9 PzS 1260	1260	174	198	685	715	67.5
10 PzS 1400	1400	192	198	685	715	73.5
2 PzS 310	310	47	198	720	750	18.0
3 PzS 465	465	65	198	720	750	24.0
4 PzS 620	620	83	198	720	750	32.0
5 PzS 775	775	101	198	720	750	39.5
6 PzS 930	930	119	198	720	750	47.5
7 PzS 1085	1085	137	198	720	750	55.5
8 PzS 1240	1240	155	198	720	750	63.5
9 PzS 1395	1395	174	198	720	750	71.5
10PzS 1550	1550	192	198	720	750	76.5
2 PzB 46	46	45	158	200	230	4.0
3 PzB 69	69	61	158	200	230	5.2
4 PzB 92	92	77	158	200	230	6.5
5 PzB 115	115	93	158	200	230	8.0
6 PzB 138	138	109	158	200	230	9.5
2 PzB 64	64	45	158	262	292	5.0
3 PzB 96	96	61	158	262	292	7.0
4 PzB 128	128	77	158	262	292	8.5
5 PzB 160	160	93	158	262	292	10.5
6 PzB 192	192	109	158	262	292	12.5
7 PzB 224	224	125	158	262	292	14.5
8 PzB 256	256	141	158	262	292	16.5
2 PzB 84	84	45	158	328	358	6.5
3 PzB 126	126	61	158	328	358	9.0
4 PzB 168	168	77	158	328	358	11.0
5 PzB 210	210	93	158	328	358	14.0
6 PzB 252	252	109	158	328	358	16.0
7 PzB 294	294	125	158	328	358	18.5
8 PzB 336	336	141	158	328	358	21.0

## Main Parameters of Flooded Tubular Traction Battery

Model	Capacity C <sub>5</sub>	Dimension				Weight (Kg)
	(Ah)	Length	Width	Height	Total Height	
2 PzB 110	110	54	158	398	428	8.0
3 PzB 165	165	61	158	398	428	11.0
4 PzB 220	220	77	158	398	428	14.0
5 PzB 275	275	93	158	398	428	17.0
6 PzB 330	330	109	158	398	428	20.0
7 PzB 385	385	125	158	398	428	22.0
8 PzB 440	440	141	158	398	428	26.0
9 PzB 495	495	157	158	398	428	28.5
10 PzB 550	550	173	158	398	428	31.0
11 PzB605	605	189	158	398	428	33.5
12 PzB660	660	205	158	398	428	37.5
2 PzB 130	130	54	158	454	484	9.0
3 PzB 195	195	61	158	454	484	12.5
4 PzB 260	260	77	158	454	484	15.5
5 PzB 325	325	93	158	454	484	19.0
6 PzB 390	390	109	158	454	484	22.0
7 PzB 455	455	125	158	454	484	25.0
8 PzB 520	520	141	158	454	484	29.0
9 PzB 585	585	157	158	454	484	33.0
10 PzB 650	650	173	158	454	484	35.5
11 PzB715	715	189	158	454	484	39.5
12 PzB780	780	205	158	454	484	43.4
2 PzB 150	150	45	158	511	541	10.5
3 PzB 225	225	61	158	511	541	14.0
4 PzB 300	300	77	158	511	541	18.0
4 PzB 300A	300	70	158	489	519	16.0
5 PzB 375	375	93	158	511	541	21.0
6 PzB 450	450	109	158	511	541	25.0
7 PzB 525	525	125	158	511	541	29.0
8 PzB 600	600	141	158	511	541	33.0
9 PzB 675	675	157	158	511	541	36.5
10 PzB 750	750	173	158	511	541	40.5
11 PzB 825	825	189	158	511	541	44.5
12 PzB900	900	205	158	511	541	48.0
2 PzB 170	170	45	158	567	597	11.5
3 PzB 255	255	61	158	567	597	16.0
4 PzB 340	340	77	158	567	597	20.5
5 PzB 425	425	93	158	567	597	25.0
6 PzB 510	510	109	158	567	597	29.0
7 PzB 595	595	125	158	567	597	33.0
8 PzB 680	680	141	158	567	597	38.0
9 PzB 765	765	157	158	567	597	42.0
10 PzB 850	850	173	158	567	597	47.0
11 PzB 935	935	189	158	567	597	51.0
12 PzB 1020	1020	205	158	567	597	56.5
2 PzB 200	200	45	158	603	633	12.0
3 PzB 300	300	61	158	603	633	17.0
4 PzB 400	400	77	158	603	633	21.5
5 PzB 500	500	93	158	603	633	26.0
6 PzB 600	600	109	158	603	633	30.0
7 PzB 700	700	125	158	603	633	35.0
8 PzB 800	800	141	158	603	633	40.0
9 PzB 900	900	157	158	603	633	44.0
10 PzB 10 00	1000	173	158	603	633	51.0
11 PzB 11 00	1100	189	158	603	633	55.0
12 PzB 12 00	1200	205	158	603	633	60.0
2 PzB 210	210	45	158	683	713	14.0
3 PzB 315	315	61	158	683	713	19.0
4 PzB 420	420	77	158	683	713	25.0
5 PzB 525	525	93	158	683	713	30.0
6 PzB 630	630	109	158	683	713	35.5
7 PzB 735	735	125	158	683	713	41.0
8 PzB 840	840	141	158	683	713	46.0
9 PzB 945	945	157	158	683	713	52.0
10 PzB 1050	1050	173	158	683	713	53.5
11 PzB 1155	1155	189	158	683	713	59.5
12 PzB 1260	1260	205	158	683	713	63.5





# OPzV Series

## Summary

OPzV series is Valve Regulated Lead Acid battery adopting immobilised GEL and Tubular Plate technology, offering high reliability and stable performance. The OPzV series is designed and manufactured according to DIN standards, with die-casted positive grid and patented active material formula, they exceed the DIN standard values. They offer 20 years design life in float service at 25°C and are more suitable for cyclic use under extreme operating conditions.

Suitable for power supply in telecommunication, photovoltaic / wind energy storage and UPS applications.

## Product Features

- Capacity range: 45Ah-3000Ah
- Voltage : 2V/12V
- Floating design life (25°C): 20 years (2V)  
18 years (12V)
- Cycle life : 5500 at 30% DOD (2V)  
4800 at 30% DOD (12V)
- Self discharge rate ≤ 2%/month;
- High charge acceptance performance;
- Wide operation temperature: -40°C~60°C
- Good deep discharge recovery performance.
- Electrolyte: gel electrolyte uses imported silica, special techniques make it in a gel immobilized state, safer than AGM type battery; special additives make it very stable, lower internal resistance and no stratification;
- Positive plate: tubular type ,with die- casting thick Pb-Ca grid; it has very good corrosion resistance and a very long service life;
- Negative plate: pasted flat type, radial grid design ,good high rate discharge performance;
- Separator: PVC-SiO<sub>2</sub> separator imported from Europe, low internal resistance, high pore rate and long life;
- Flooded electrolyte design: contain more electrolyte like a flooded battery, space between plates and separators is full of electrolyte thus means good heating capacity and avoid "thermal runaway";
- Safety valves: good sensitivity, safe and reliable , equipped with double flame arrester/acid filter;
- Battery case: made of high strength ABS and durable design.

## Application

- Telecommunication
- Photovoltaic / Wind Energy
- UPS
- Power Storage Plant
- Military

## Compliant Standards

- IEC60896-21/22- 2004
- DIN43539-T5
- IEC61427-2005
- YD/T1360-2005
- GB/T 22473-2008
- Passed ISO9001, ISO14001, OHSAS18001, UL, CE certificate

## Main Parameters

Model	Nominal Voltage	Capacity C <sub>10</sub>	Weight		Dimension								Internal Resistance (mΩ@25°C)	Terminal Type	Terminal Position
	(V)		(Ah)	Lbs	Kg	Length		Width		Height		Total Height			
		mm				inch	mm	inch	mm	inch	mm	inch			
OPzV2-200	2	200	37.04	16.8	103	4.06	206	8.11	355	13.98	390	15.35	1.00	F10	G
OPzV2-250	2	250	45.19	20.5	124	4.88	206	8.11	355	13.98	390	15.35	0.90	F10	G
OPzV2-300	2	300	54.01	24.5	145	5.71	206	8.11	355	13.98	390	15.35	0.85	F10	G
OPzV2-350	2	350	60.63	27.5	124	4.88	206	8.11	470	18.50	505	19.88	0.80	F10	G
OPzV2-420	2	420	72.75	33.0	145	5.71	206	8.11	470	18.50	505	19.88	0.65	F10	G
OPzV2-490	2	490	84.88	38.5	166	6.54	206	8.11	470	18.50	505	19.88	0.65	F10	G
OPzV2-600	2	600	102.51	46.5	145	5.71	206	8.11	645	25.39	680	26.77	0.60	F10	G
OPzV2-770	2	770	123.46	56.0	210	8.27	254	10.00	470	18.50	505	19.88	0.55	F10	G
OPzV2-800	2	800	138.89	63.0	191	7.52	210	8.27	645	25.39	680	26.77	0.50	F10	H
OPzV2-800A	2	800	133.38	60.5	191	7.52	210	8.27	645	25.39	680	26.77	0.52	F10	H
OPzV2-1000	2	1000	169.76	77.0	233	9.17	210	8.27	645	25.39	680	26.77	0.45	F10	H
OPzV2-1000A	2	1000	162.04	73.5	233	9.17	210	8.27	645	25.39	680	26.77	0.48	F10	H
OPzV2-1200	2	1200	202.83	92.0	276	10.87	210	8.27	645	25.39	680	26.77	0.45	F10	H
OPzV2-1500	2	1500	242.51	110.0	275	10.83	210	8.27	795	31.30	830	32.68	0.40	F10	H
OPzV2-2000	2	2000	330.69	150.0	399	15.71	214	8.43	770	30.31	805	31.69	0.40	F10	I
OPzV2-2500	2	2500	418.88	190.0	487	19.17	212	8.35	770	30.31	805	31.69	0.35	F10	J
OPzV2-3000	2	3000	496.04	225.0	576	22.68	212	8.35	770	30.31	805	31.69	0.35	F10	J
OPzV12-45	12	45	39.68	18.0	260	10.24	169	6.65	211	8.31	216	8.50	19	F15/F11	C
OPzV12-60	12	60	50.71	23.0	260	10.24	169	6.65	211	8.31	216	8.50	15	F15/F11	C
OPzV12-80	12	80	66.14	30.0	328	12.91	172	6.77	215	8.46	220	8.66	10	F5/F12	C
OPzV12-100	12	100	79.37	36.0	407	16.02	177	6.97	225	8.86	225	8.86	8	F5/F12	C
OPzV12-120	12	120	101.19	45.9	483	19.02	170	6.69	241	9.49	241	9.49	7.5	F5/F12	C
OPzV12-140	12	140	117.95	53.5	532	20.94	207	8.15	214	8.43	219	8.62	7	F16/F12	C
OPzV12-160	12	160	125.66	57.0	532	20.94	207	8.15	214	8.43	219	8.62	6.5	F16/F12	C
OPzV12-180	12	180	146.61	66.5	522	20.55	240	9.45	219	8.62	224	8.82	6	F16/F10	C
OPzV12-200	12	200	160.94	73.0	521	20.51	268	10.55	220	8.66	225	8.86	5	F14	C



# DG Series

## Summary

DG (Deep Cycle GEL) series is designed for frequent cyclic charge and discharge applications under extreme environments. By using strong grids, high purity lead and patented Gel electrolyte, DG series offers excellent recovery after deep discharge under frequent cyclic discharge, and can deliver 400 cycles at 100% DOD. Suitable for solar, CATV, marine, RV and deep discharge UPS etc..

## Product Features

- Capacity range: 26Ah-3000Ah
- Voltage class: 2V/6V/12V
- Long design life (25°C): 15 years for 6V/12V  
20 years for 2V
- Low self-discharge rate: ≤3 % per month
- High sealed reaction efficiency : ≥ 98%
- High specific energy density
- Excellent charge acceptance
- Wide operation temperature: -40°C~60°C
- Grid: patent primary and secondary grid structure design;
- Positive plate: Pasted flat type, high temperature and humidity formation technics;
- Separator: high porosity PE separator with glass fibre good cyclic characteristics and lower resistance;
- Battery container: High strength ABS(UL94-HB) and UL94-V0 is optional;
- Post sealing: patent double layer post sealing
- Safety Valve: narrow operate pressure range and equipped with explosion-proof arrester and acid filter.

## Application

- Telecommunication
- Photovoltaic / Wind Energy
- UPS
- Cable TV

## Compliant Standards

- IEC60896-21/22- 2004
- DIN43539-T5
- IEC61427-2005
- YD/T1360-2005
- GB/T 22473-2008
- Passed ISO9001, ISO14001, OHSAS18001, UL, CE certificate

## Main Parameters

Model	Nominal Voltage (V)	Capacity C <sub>20</sub> (Ah)	Weight		Dimension								Internal Resistance (mΩ@25°C)	Short Circuit Current (A)	Terminal Type	Terminal Position
			Lbs	Kg	Length		Width		Height		Total Height					
					mm	inch	mm	inch	mm	inch	mm	inch				
DG6-100	6	100	36.38	16.5	194	7.64	170	6.69	205	8.07	212	8.35	5	1710	F14	A
DG6-150	6	150	51.81	23.5	260	10.24	180	7.09	245	9.65	252	9.92	4.5	2370	F12	B
DG6-180	6	180	58.42	26.5	306	12.05	168	6.61	220	8.66	227	8.94	5	2840	F12	B
DG6-200	6	200	63.93	29.0	322	12.68	177.5	6.99	226	8.90	231	9.09	4	3150	F16/ F14	A
DG6-200S	6	200	66.14	30.0	260	10.24	180	7.09	245	9.65	252	9.92	4	3250	F12	B
DG6-225	6	225	70.55	32.0	322	12.68	177.5	6.99	226	8.90	231	9.09	4	3465	F16/ F14	A
DG6-225S	6	225	70.55	32.0	243	9.57	187	7.36	275	10.83	275	10.83	4	3580	F14	B
DG6-280	6	280	91.93	41.7	295	11.61	178	7.01	346	13.62	364	14.33	3	---	F14	B
DG6-310	6	310	98.11	44.5	295	11.61	178	7.01	346	13.62	364	14.33	2.1	---	F10	B
DG6-335	6	335	100.31	45.5	295	11.61	178	7.01	346	13.62	364	14.33	2	---	F14/F22	B
DG12-26	12	26	17.86	8.10	166	6.54	178	7.01	125	4.92	125	4.92	11	---	F3/F13/T24	D
DG12-33	12	33	22.49	10.2	195	7.68	130	5.12	155	6.10	168	6.61	9.5	670	F7/F11	C
DG12-40	12	40	29.10	13.2	198	7.80	166	6.54	169	6.65	169	6.65	9	750	F4/F11	D
DG12-55	12	55	37.48	17.0	229	9.02	138	5.43	211	8.31	216	8.50	8.6	1040	F15/F11	C
DG12-60	12	60	45.19	20.5	260	10.24	169	6.65	211	8.31	216	8.50	8.5	1130	F15/F11	C
DG12-65	12	65	46.30	21.0	350	13.78	167	6.57	182	7.17	182	7.17	8	1250	F5/F11	C
DG12-70	12	70	49.60	22.5	350	13.78	167	6.57	182	7.17	182	7.17	8	1320	F5/F11	C
DG12-70S	12	70	47.40	21.5	260	10.24	169	6.65	211	8.31	216	8.50	8	1350	F15/F11	C
DG12-75	12	75	51.81	23.5	260	10.24	169	6.65	211	8.31	216	8.50	7	1410	F15/F11	C
DG12-75S	12	75	49.60	22.5	350	13.78	167	6.57	182	7.17	182	7.17	7	---	F5/F11	C
DG12-80	12	80	55.12	25.0	260	10.24	169	6.65	211	8.31	216	8.50	7	1510	F15/F11	C
DG12-80S	12	80	52.91	24.0	328	12.91	172	6.77	215	8.46	220	8.66	8	---	F5/F12	C
DG12-85	12	85	57.32	26.0	306.5	12.07	168.5	6.63	210	8.27	215	8.46	6	---	F15/F11	C
DG12-90	12	90	62.83	28.5	306.5	12.07	168.5	6.63	210	8.27	215	8.46	6.5	1600	F15/F12	C
DG12-100	12	100	66.14	30.0	328	12.91	172	6.77	215	8.46	220	8.66	7.5	1760	F5/F12	C
DG12-120	12	120	78.26	35.5	407	16.02	177	6.97	225	8.86	225	8.86	5.5	1900	F5/F12	C
DG12-134	12	134	91.49	41.5	340	13.39	173	6.81	280	11.02	287	11.30	5	2120	F5/F12	C
DG12-145	12	145	97.00	44.0	340	13.39	173	6.81	280	11.02	287	11.30	5	2300	F5/F12	C
DG12-150	12	150	98.11	44.5	483	19.02	170	6.69	241	9.49	241	9.49	6	2460	F5/F12	C
DG12-160	12	160	110.23	50.0	532	20.94	207	8.15	214	8.43	219	8.62	6	2450	F16/F12	E
DG12-160S	12	160	105.82	48.0	483	19.02	170	6.69	241	9.49	241	9.49	6	---	F16/F12	C
DG12-180	12	180	116.84	53.0	532	20.94	207	8.15	214	8.43	219	8.62	5.5	2700	F16/F12	E
DG12-200	12	200	132.28	60.0	522	20.55	240	9.45	219	8.62	224	8.82	5.2	3020	F16/F10	E
DG12-225	12	225	143.30	65.0	522	20.55	240	9.45	219	8.62	224	8.82	4.8	3650	F16/F10	E
DG12-230	12	230	147.71	67.0	521	20.51	269	10.59	204	8.03	209	8.23	6	2750	F10	E
DG12-260	12	260	163.14	74.0	521	20.51	268	10.55	220	8.66	225	8.86	5	4460	F14	E



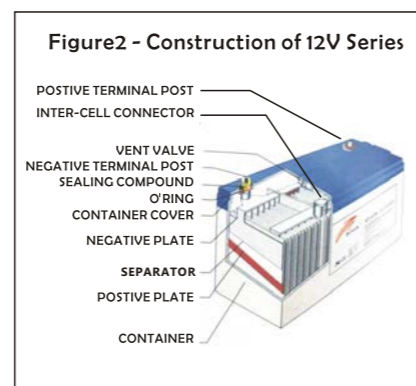
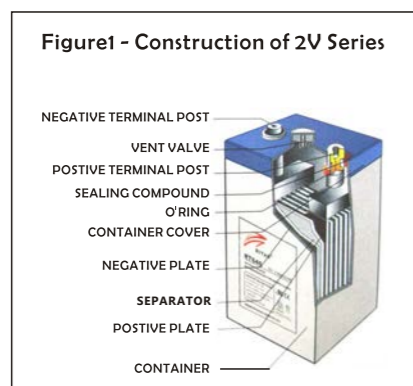
# Certificates

Model	Nominal Voltage	Capacity C <sub>20</sub>	Weight		Dimension								Internal Resistance (mΩ@25°C)	Short Circuit Current (A)	Terminal Type	Terminal Position
	(V)		(Ah)	Lbs	Kg	Length		Width		Height		Total Height				
					mm	inch	mm	inch	mm	inch	mm	inch				
FT12-55G	12	55	39.68	18.0	291	11.46	106	4.17	230	9.06	230	9.06	9	1250	F11	E
FT12-90G	12	90	58.42	26.5	562	22.13	114	4.49	188	7.40	188	7.40	8.7	2030	F11/F6	E
FT12-105G	12	105	71.65	32.5	508	20.00	110	4.33	236	9.29	236	9.29	7.5	2120	F14/F17/F8	E
FT12-110G	12	110	72.75	33.0	410	16.14	110	4.33	286	11.26	286	11.26	7.2	2240	F9	E
FT12-150G	12	150	95.90	43.5	565	22.24	110	4.33	288	11.34	288	11.34	6	2850	F9	E
FT12-160G	12	160	103.62	47.0	565	22.24	110	4.33	288	11.34	288	11.34	5.8	3050	F9	E
FT12-180G	12	180	114.64	52.0	560	22.05	125	4.92	316	12.44	316	12.44	5	3650	F9	E

Model	Nominal Voltage	Capacity C <sub>10</sub>	Weight		Dimension								Internal Resistance (mΩ@25°C)	Short Circuit Current (A)	Terminal Type	Terminal Position
	(V)		(Ah)	Lbs	Kg	Length		Width		Height		Total Height				
					mm	inch	mm	inch	mm	inch	mm	inch				
DG2-200	2	200	30.86	14.0	172.5	6.79	110	4.33	328	12.91	351	13.82	0.8	2200	F10	G
DG2-250	2	250	38.58	17.5	171	6.73	150	5.91	330	12.99	353	13.90	1.17	2350	F10	G
DG2-300	2	300	41.89	19.0	171	6.73	150	5.91	330	12.99	353	13.90	1.1	2450	F10	G
DG2-350	2	350	54.01	24.5	211	8.31	176	6.93	330	12.99	353	13.90	0.8	2640	F10	H
DG2-400	2	400	57.32	26.0	211	8.31	176	6.93	330	12.99	353	13.90	1	2820	F10	H
DG2-450	2	450	63.93	29.0	211	8.31	176	6.93	330	12.99	353	13.90	1	3000	F10	H
DG2-500	2	500	67.24	30.5	242	9.53	172	6.77	330	12.99	353	13.90	1	3850	F10	H
DG2-600	2	600	81.57	37.0	302	11.89	175	6.89	330	12.99	353	13.90	0.63	4250	F10	H
DG2-650	2	650	88.18	40.0	302	11.89	175	6.89	330	12.99	353	13.90	0.63	4350	F10	H
DG2-750	2	750	101.41	46.0	409	16.10	175	6.89	330	12.99	353	13.90	0.6	50000	F10	J
DG2-800	2	800	110.23	50.0	409	16.10	175	6.89	330	12.99	353	13.90	0.6	5250	F10	J
DG2-1000	2	1000	136.69	62.0	475	18.70	174	6.85	328	12.91	351	13.82	0.6	5870	F10	J
DG2-1200	2	1200	163.14	74.0	475	18.70	174	6.85	328	12.91	351	13.82	0.81	6950	F10	J
DG2-1500	2	1500	211.64	96.0	401	15.79	350	13.78	341	13.43	364	14.33	0.75	9170	F10	K
DG2-2000	2	2000	278.88	126.5	490	19.29	350	13.78	341	13.43	364	14.33	0.4	11500	F10	L
DG2-2500	2	2500	376.99	171.0	710	27.95	353	13.90	341	13.43	364	14.33	0.3	15000	F10	L
DG2-3000	2	3000	425.49	193.0	710	27.95	353	13.90	341	13.43	364	14.33	0.3	19000	F10	L

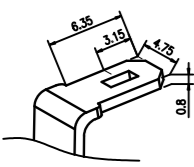
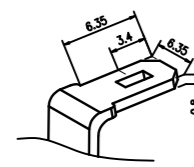
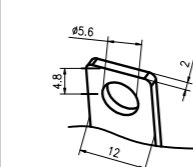
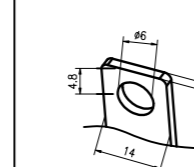
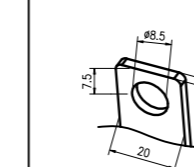
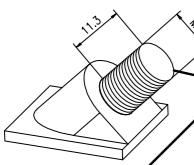
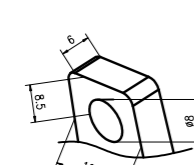
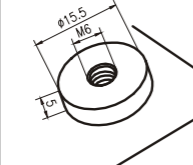
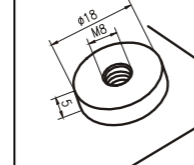
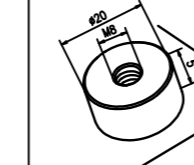
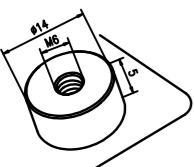
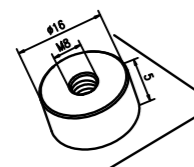
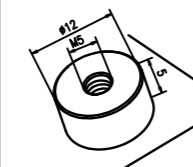
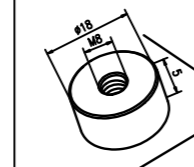
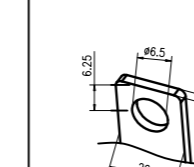
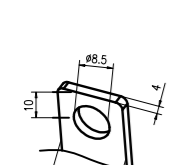
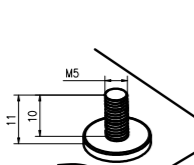
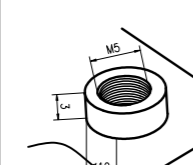
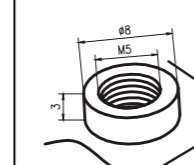
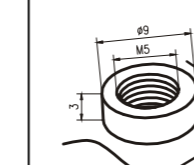
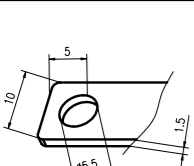
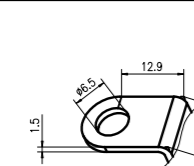
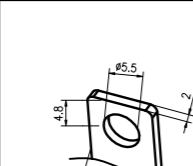
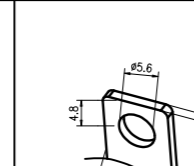
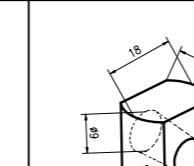
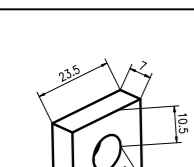
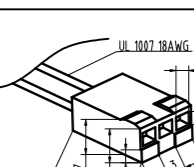
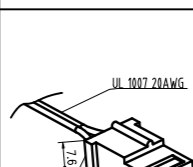
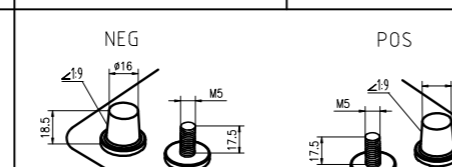


## SLA BATTERY CONSTRUCTION

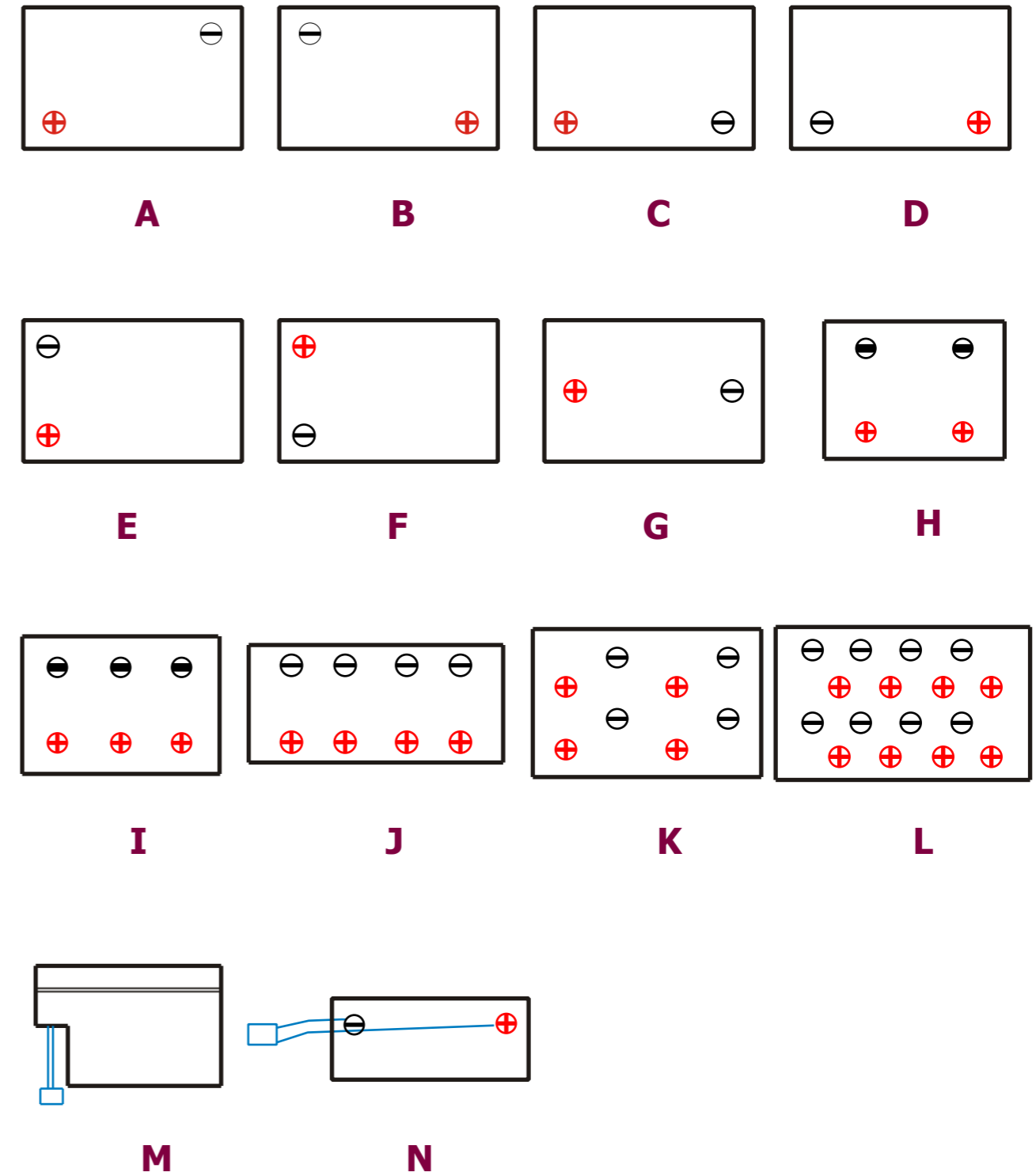


- UL: MH28539
- CE:G4M20206-910-E-16
- ISO9001, ISO14001, OHSAS18001

## Terminal Drawing:

 F1 Terminal	 F2 Terminal	 F3 Terminal	 F4 Terminal	 F5 Terminal
 F6 Terminal	 F7 Terminal	 F8 Terminal	 F9 Terminal	 F10 Terminal
 F11 Terminal	 F12 Terminal	 F13 Terminal	 F14 Terminal	 F15 Terminal
 F16 Terminal	 F17 Terminal	 F18 Terminal	 F19 Terminal	 F20 Terminal
 T23 Terminal	 T24 Terminal	 T25 Terminal	 T26 Terminal	 L1 Terminal
 L2 Terminal	 T1 Terminal	 T9 Terminal	 NEG POS F22 Terminal	

## Post Position:





## China Plant



## Vietnam Plant



### Hengyang Ritar Power Co., Ltd.

-  Investment is **USD50** million
-  Land area is **266,680** square meters
-  Annual capacity is **9** million KVAH

### Ritar Power (Vietnam) Co., Ltd.

Staged Ceremoniously on 22<sup>nd</sup> July, 2018

-  Investment is **USD80** million
-  Land area is **110,000** square meters
-  Annual capacity planning is **5** million KVAH
-  Convenient transportation, **40** min expressway to HCM Airport, **80** km to seaport