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# **VRLA BATTERY** PRODUCT MANUAL

# 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 a manufacturing base in Fuyong Town, Shenzhen and a new industrial park in Hengyang, Hunan Province. 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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# Summary

RT series is the general purpose battery with 5 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 ): 5 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 reisistance
- 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).



# **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**

	Nominal Voltage	Capacity C <sub>20</sub>	We	ight					Dim	nensior	า			Internal	Short Circuit	
Model	voltage	O <sub>20</sub>			Terminal Type	Ler	ngth	Wid	th	Hei	ight	Total I	Height	Resistance	Current	Terminal Position
	(V)	(Ah)	Lbs	Kg		mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)	
RT613	6	1.3	0.68	0.31	F1	97	3.82	24	0.94	52	2.05	58	2.28	50	68	С
RT628	6	2.8	1.17	0.53	F1	66	2.60	33	1.30	98	3.86	104	4.09	25	146	Α
RT632	6	3.2	1.43	0.65	F1	134	5.28	35	1.38	61	2.40	67	2.64	25	166	С
RT636	6	3.4	1.43	0.65	T1	194	7.64	25	0.98	62	2.44	62	2.44	32	187	N
RT640	6	4.0	1.43	0.65	F1	70	2.76	47	1.85	101	3.98	105	4.13	23	210	Α
RT640S	6	4.0	1.65	0.75	T1	194	7.64	25	0.98	62	2.44	62	2.44	33	208	N
RT645	6	4.5	1.59	0.72	F1	70	2.76	47	1.85	101	3.98	105	4.13	23	234	Α
RT650	6	5.0	1.65	0.75	F1/F2	70	2.76	47	1.85	101	3.98	105	4.13	20	250	A
RT655	6	5.3	1.76	0.80	F1/F2	70	2.76	47	1.85	101	3.98	105	4.13	20	275	A
RT670 RT680	6	7.0	2.54	1.15	F1/F2	151	5.94	34	1.34	94	3.70	100	3.94	12	350	С
	6	8.0	2.65	1.20	F1/F2	151	5.94	34	1.34	94	3.70	100	3.94	12	400	С
RT6100 RT6120	6	10 12	3.64	1.65	F1/F2 F1/F2	151 151	5.94	50 50	1.97	95 95	3.74	101	3.98	12.5 10	500 600	C
RT1213	12	1.3	1.32	0.60	F1/F2	97	3.82	43	1.69	52	2.05	58	2.28	95	68	E
RT1213	12	2.3	2.14	0.00	F1	178	7.01	35	1.38	61	2.40	67	2.64	50	120	С
RT1223E	12	2.2	1.83	0.83	F1	178	7.01	35	1.38	61	2.40	67	2.64	60	112	С
RT1232	12	3.2	2.87	1.30	F1	134	5.28	67	2.64	61	2.40	67	2.64	45	166	E
RT1245	12	4.5	3.09	1.40	F1/F2	90	3.54	70	2.76	101	3.98	107	4.21	38	234	C
RT1245S	12	4.5	3.09	1.40	F1/F2	195	7.68	47	1.85	70	2.76	76	2.99	40	225	С
RT1250	12	5.0	3.53	1.60	F1/F2	90	3.54	70	2.76	101	3.98	107	4.21	35	250	С
RT1250B	12	5.0	3.97	1.80	F1/F2	151	5.94	50	1.97	95	3.74	101	3.98	30	245	С
RT1255	12	5.3	3.75	1.70	F1/F2	90	3.54	70	2.76	101	3.98	107	4.21	35	275	С
RT1270	12	7.0	4.50	2.04	F1/F2	151	5.94	65	2.56	94	3.70	100	3.94	30	350	F
RT1272	12	7.2	4.74	2.15	F1/F2	151	5.94	65	2.56	94	3.70	100	3.94	25	360	F
RT1275	12	7.5	4.85	2.20	F1/F2	151	5.94	65	2.56	94	3.70	100	3.94	25	375	F
RT1280	12	8.0	4.98	2.26	F1/F2	151	5.94	65	2.56	94	3.70	100	3.94	25	400	F
RT1290	12	9.0	5.62	2.55	F1/F2	151	5.94	65	2.56	94	3.70	100	3.94	18	450	F
RT1290S	12	9.0	5.91	2.68	F1/F2	151	5.94	65	2.56	111	4.37	117	4.61	18.5	440	F
RT12100S	12	10	6.84	3.10	F1/F2	151	5.94	65	2.56	111	4.37	117	4.61	15	475	F
RT12100	12	10	7.06	3.20	F1/F2	151	5.94	98	3.86	95	3.74	101	3.98	18	550	F
RT12120	12	12	7.94	3.60	F1/F2	151	5.94	98	3.86	95	3.74	101	3.98	16.5	590	F
RT12180 RT12200	12 12	18	11.03	5.00	F3/ F13	181	7.13	77 77	3.03	167	6.57	167	6.57	14	750	D
RT12200	12	20 26	13.01	5.90 8.10	F3 / F13 F3/F13/T24	181	7.13 6.54	175	3.03 6.89	167 125	6.57 4.92	167 125	6.57 4.92	14	900	D D
RT12240S	12	23	16.32	7.40	F7/ F11	165	6.50	126	4.96	174	6.85	174	6.85	12	820	D
RT12260S	12	26	18.30	8.30	F7/ F11	165		126	4.96	174	6.85	174	6.85	11.5	850	D
RT12280	12	28	18.96	8.60	F3 / F13		6.54	175	6.89	125	4.92	125	4.92	9	960	D
RT12280S	12	28	19.40	8.80	F7 / F11	165	6.50	126	4.96	174	6.85	174	6.85	10	880	D
RT1270L	12	7	5.73	2.60	F1/ F2	151	5.94	65	2.56	94	3.70	100	3.94	25	360	F
RT12120L	12	12	8.93	4.05	F1/ F2	151	5.94	98	3.86	95	3.74	101	3.98	16	590	F
RT12170L	12	17	13.23	6.00	F3 / F13	181	7.13	77	3.03	167	6.57	167	6.57	14	750	D
RT12280L	12	28	18.96	8.60	F3 / F13	166	6.54	175	6.89	125	4.92	125	4.92	9	960	D





# **RA Series**

# Summary

RA series is the general purpose battery with 10 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):10years
- Low self-discharge rate :  $\leq 3\%/\text{month}$
- Good high rate discharge performance
- High sealed reaction efficiency : ≥ 99%
- Wide operation temperature range:-20°C ~60°C

# **Application**

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

- 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).

# **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

# **Main Parameters**

	Nominal Voltage	Capacity	We	ight					Dim	nensior	n			Internal	Short Circuit	
Model	voltago	O <sub>10</sub>			Terminal Type	Ler	ngth	Wid	th	He	ight	Total I	Height	Resistance	Current	Terminal Position
	(V)	(Ah)	Lbs	Kg		mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)	
RA2-100	2	100	12.35	5.6	F10	171	6.73	72	2.83	206	8.11	211	8.31	1.0	2100	Α
RA2-150	2	150	17.64	8	F10	172	6.77	102	4.02	205	8.07	227	8.94	0.85	2780	А
RA6-100	6	100	36.38	16.5	F14	194	7.64	170	6.69	205	8.07	210	8.27	3.0	1850	Α
RA6-150	6	150	51.82	23.5	F12	260	10.24	180	7.09	247	9.72	252	9.92	3.0	2770	В
RA6-180	6	180	58.43	26.5	F12	306	12.05	168	6.61	222	8.74	227	8.94	3.0	3330	Α
RA6-200	6	200	63.95	29	F16/F14	322	12.68	178	7.01	226	8.90	247	9.72	2.5	3700	Α
RA6-200S	6	200	66.15	30	F12	260	10.24	180	7.09	247	9.72	252	9.92	2.5	3850	В
RA6-225	6	225	68.36	31	F16/F14	322	12.68	178	7.01	226	8.90	247	9.72	2.0	4070	Α
RA6-225S	6	225	70.56	32	F14	243	9.57	188	7.40	275	10.83	275	10.83	2.0	4100	В
RA12-33	12	33	22.49	10.2	F7/F11	195	7.68	130	5.12	159	6.26	180	7.09	9.0	825	С
RA12-40	12	40	28.67	13	F4/F11	198	7.80	166	6.54	171	6.73	171	6.73	8.0	920	D
RA12-45	12	45	29.77	13.5	F4/F11	198	7.80	166	6.54	171	6.73	171	6.73	8.0	1050	D
RA12-55	12	55	39.69	18	F15/F11	229	9.02	138	5.43	210	8.27	235	9.25	7.0	1160	С
RA12-60	12	60	45.20	20.5	F15/F11	260	10.24	169	6.65	210	8.27	235	9.25	6.5	1380	С
RA12-65	12	65	46.31	21	F5/F11	350	13.78	167	6.57	180	7.09	183	7.20	6.5	1500	С
RA12-70	12	70	49.61	22.5	F5/F11	350	13.78	167	6.57	180	7.09	183	7.20	6.5	1520	С
RA12-70S	12	70	47.41	21.5	F15/F11	260	10.24	169	6.65	210	8.27	235	9.25	6.5	1480	С
RA12-75	12	75	51.82	23.5	F15/F11	260	10.24	169	6.65	210	8.27	235	9.25	6.0	1720	С
RA12-80	12	80	52.92	24	F5/F11	350	13.78	167	6.57	180	7.09	183	7.20	5.5	1840	С
RA12-85	12	85	57.33	26	F15/F12	306	12.05	169	6.65	210	8.27	235	9.25	5.2	1900	С
RA12-90	12	90	62.84	28.5	F15/F12	306	12.05	169	6.65	210	8.27	235	9.25	5.2	1940	С
RA12-90A	12	90	61.74	28	F15/F12	306	12.05	169	6.65	210	8.27	235	9.25	5.5	1850	С
RA12-95	12	95	62.84	28.5	F5/F12	328	12.91	172	6.77	222	8.74	222	8.74	5.5	1850	С
RA12-100	12	100	66.15	30	F5/F12	328	12.91	172	6.77	222	8.74	222	8.74	5.0	2150	С
RA12-100A	12	100	63.95	29	F5/F12	328	12.91	172	6.77	222	8.74	222	8.74	5.5	2050	С
RA12-100S	12	100	63.95	29	F15/F12	306	12.05	169	6.65	210	8.27	235	9.25	5.0	2200	С
RA12-120	12	120	77.18	35	F5/F12	407	16.02	177	6.97	225	8.86	225	8.86	4.5	2220	С
RA12-120S	12	115	70.56	32	F5/F12	328	12.91	172	6.77	222	8.74	222	8.74	4.2	2300	С
RA12-134	12	134	91.51	41.5	F5/F12	344	13.54	173	6.81	280	11.02	285	11.22	4.5	2480	С
RA12-145	12	145	97.02	44	F5/F12	344	13.54	173	6.81	280	11.02	285	11.22	4.5	2520	С
RA12-150	12	150	98.12	44.5	F5/F12	483	19.02	170	6.69	240	9.45	240	9.45	4.3	2700	С
RA12-150A	12	150	96.36	43.7	F5/F12	483	19.02	170	6.69	240	9.45	240	9.45	4.4	2600	С
RA12-160	12	160	110.3	50	F16/F12	530	20.87	209	8.23	214	8.43	219	8.62	4.5	2550	E
RA12-180	12	180	116.9	53	F16/F12	530	20.87	209	8.23	214	8.43	219	8.62	4.2	2800	E
RA12-200	12	200	132.3	60	F16/F10	522	20.55	240	9.45	219	8.62	240	9.45	4.0	3430	E
RA12-225	12	225	147.7	67	F16/F10		20.55		9.45	219	8.62	240	9.45	3.8	3980	E
RA12-230	12	230	147.7	67	F12		20.51		10.59		7.99	208	8.19	4.0	4100	E
RA12-240	12	240	152.1	69	F16/F10				9.45	219	8.62	240	9.45	3.7	4300	E
RA12-260	12	260	163.2	74	F14	520	20.47	268	10.55	220	8.66	225	8.86	3.5	4810	E
HS12-65	12	65	46.31	21	F11	350	13.78	169	6.65	176	6.93	181	7.13	6.0	1600	С
HS12-80	12	80	52.9	24	F11	350	13.78	169	6.65	176	6.93	181	7.13	5.5	1900	С
HS12-100	12	100	66.2	30	F12	328	12.91	172	6.77	217	8.54	222	8.74	4.5	2300	С
HS12-1205	12	115	70.6	32	F12	328	12.91	172	6.77	217	8.54	222	8.74	4.1	2300	С

#### \* HS battery:

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

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# MATERIAL MAT

# **RL Series**

# Summary

RL series is the general purpose battery with 18 years design life in float service. With heavy duty grids, thicker plates, special additives and updated AGM valve regulated technology, the RL seriesbattery 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: more than 18 years
- Polarity sign: symmetrical and more clear
- Low self-discharge rate: ≤3 % per month
- High recommbination 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 strenth 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**

		Capacity	We	ight					Dim	nensior	า			Internal	Short Circuit	
Model	Voltage	C <sub>10</sub>			Terminal Type	Ler	ngth	Wid	th	He	ight	Total	Height	Resistance	Current	Terminal Position
	(V)	(Ah)	Lbs	Kg		mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)	
RL2200	2	200	30.87	14	F10	171	6.73	111	4.37	366	14.41	366	14.41	0.80	2650	G
RL2200S	2	200	30.87	14	F10	171	6.73	111	4.37	240	9.45	245	9.65	0.78	2500	G
RL2250	2	250	35.28	16	F10	171	6.73	110	4.33	366	14.41	366	14.41	0.76	2800	G
RL2300	2	300	41.90	19	F10	171	6.73	150	5.91	365	14.37	366	14.41	0.72	2910	G
RL2350	2	350	47.41	21.5	F10	171	6.73	150	5.91	365	14.37	366	14.41	0.70	3200	Н
RL2400	2	400	57.33	26	F10	211	8.31	176	6.93	329	12.95	366	14.41	0.67	3400	Н
RL2450	2	450	61.74	28	F10	211	8.31	176	6.93	329	12.95	366	14.41	0.65	3630	Н
RL2500	2	500	67.25	30.5	F10	242	9.53	172	6.77	329	12.95	366	14.41	0.62	4210	Н
RL2500S	2	500	68.36	31	F10	208	8.19	240	9.45	239	9.41	244	9.61	0.61	4000	Н
RL2600	2	600	81.59	37	F10	302	11.89	175	6.89	328	12.91	366	14.41	0.60	5080	Н
RL2650	2	650	88.20	40	F10	302	11.89	175	6.89	328	12.91	366	14.41	0.60	5200	Н
RL2750	2	750	101.4	46	F10	411	16.18	175	6.89	327	12.87	368	14.49	0.62	6050	J
RL2800	2	800	110.3	50	F10	411	16.18	175	6.89	327	12.87	368	14.49	0.60	6370	J
RL21000	2	1000	136.7	62	F10	475	18.70	175	6.89	327	12.87	368	14.49	0.55	6850	J
RL21200	2	1200	145.53	66	F10	475	18.70	175	6.89	327	12.87	368	14.49	0.53	7830	J
RL21500	2	1500	211.7	96	F10	401	15.79	352	13.86	338	13.31	383	15.08	0.50	10200	К
RL22000	2	2000	278.9	126.5	F10	490	19.29	349	13.74	338	13.31	383	15.08	0.40	13380	L
RL22500	2	2500	308.7	140	F10	490	19.29	349	13.74	338	13.31	383	15.08	0.33	18100	L
RL23000	2	3000	425.6	193	F10	712	28.03	351	13.82	338	13.31	383	15.08	0.30	23150	L
HS2-500R	2	500	67.25	30.5	F10	241	9.49	172	6.77	331	13.03	366	14.41	0.62	4300	Н

<sup>\*</sup> HS battery:

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





# **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 seriesbattery 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 Telcommunication, EPS applications.

# **Product Features**

- Capacity range: 200Ah—3000Ah
- Voltage class: 2V
- Long design life: more than 20 years
- Polarity sign: symmetrical and more clear
- Low self-discharge rate: ≤3 % per month
- High recommbination 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 strenth 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**

	Nominal Voltage	Capacity	We	ight	TiI				Dim	nension	า			Internal Resistance	Short Circuit Current	
Model					Terminal Type	Ler	ngth	Wid	th	He	ight	Total	Height	Resistance	Ourrent	Terminal Position
	(V)	(Ah)	Lbs	Kg		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	Н
RL2500L	2	500	70.56	32	F10	242	9.53	172	6.77	329	12.95	366	14.41	0.62	4200	Н
RL2600L	2	600	90.41	41	F10	302	11.89	175	6.89	328	12.91	365	14.37	0.6	5100	Н
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	К
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
HS2-500LR	. 2	500	70.56	32	F10	241	9.49	172	6.77	331	13.03	366	14.41	0.62	4200	Н

<sup>\*</sup> HS battery:

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

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# **FT Series**

# Summary

FT (Front Terminal) Series is specially designed for telecom use with 10+ 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—185Ah
- Voltage class:12V
- Long design life (25 °C): 10+ years
- $\hfill \blacksquare$  Low self-discharge rate :  $\leqslant$  3%/month
- Good high rate discharge performance
- $\hfill \blacksquare$  High sealed reaction efficiency :  $\geqslant 99\%$
- 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**

	Nominal Voltage	Capacity	We	ight					Dim	nensior	ı			Internal	
Model	voltago	O <sub>10</sub>			Terminal Type	Ler	ngth	Wid	th	Не	ight	Total	Height	Resistance	Terminal Position
	(V)	(Ah)	Lbs	Kg		mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	
FT12-55	12	55	39.69	18	F11	291	11.46	106	4.17	222	8.74	230	9.06	6.5	Е
FT12-90	12	90	58.43	26.5	F11	563	22.11	114	4.49	188	7.40	188	7.40	5.8	Е
FT12-100	12	100	66.15	30	F14/F8	507	19.96	111	4.37	236	9.29	238	9.37	5.5	Е
FT12-100A	12	100	63.95	29	F14/F8	507	19.96	111	4.37	236	9.29	238	9.37	5.5	Е
FT12-100S	12	100	68.36	31	F9	410	16.14	109	4.29	285	11.22	293	11.54	5.5	Е
FT12-105	12	105	71.66	32.5	F8	507	19.96	111	4.37	236	9.29	236	9.29	5.0	Е
FT12-110	12	110	72.77	33	F9	410	16.14	109	4.29	285	11.22	293	11.54	4.8	Е
FT12-150	12	150	95.92	43.5	F9	565	22.24	110	4.33	288	11.34	297	11.69	4.3	Е
FT12-160	12	160	180.0	49	F9	565	22.24	110	4.33	288	11.34	297	11.69	4.2	E
FT12-160A	12	160	103.6	47	F9	565	22.24	110	4.33	288	11.34	296	11.65	4.2	Е
FT12-180	12	180	114.7	52	F9	560	22.05	125	4.92	316	12.44	316	12.44	4.0	E
FT12-185	12	185	123.5	56	F9	560	22.05	125	4.92	316	12.44	316	12.44	4.0	E
FT12-260	12	260	132.3	60	F10	694	27.32	132	5.20	311	12.24	311	12.24	3.5	Е
FT12-100L	12	110	72.77	33	F9	394	15.51	109	4.29	285	11.22	285	11.22	4.8	Е
FT12-185L	12	185	132.3	60	F9	560	22.05	125	4.92	316	12.44	316	12.44	4.0	Е

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# **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**

		Capacity	We	ight					Dim	nensior	ı			Internal	Short Circuit	
Model	Voltage	*C <sub>20</sub> /C <sub>10</sub>			Terminal Type	Len	gth	Wid	th	Hei	ght	Total H	Height	Resistance	Current	Terminal Position
	(V)	(Ah)	Lbs	Kg		mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)	
EV12-10	12	12	8.49	3.85	F1/F2	151	5.94	98	3.86	95	3.74	101	3.98	15	640	F
EV12-12	12	12	9.26	4.2	F1/F2	151	5.94	98	3.86	95	3.74	101	3.98	13	660	F
EV12-14	12	14	9.92	4.5	F1/F2	151	5.94	98	3.86	99	3.90	104	4.09	12	700	F
EV12-18	12	20	13.01	5.9	F3	181	7.13	77	3.03	167	6.57	167	6.57	14	900	D
EV12-22	12	24	13.67	6.2	F3	181	7.13	77	3.03	167	6.57	167	6.57	14	1100	D
EV12-24	12	25	15.44	7.0	F18	182.5	7.19	78.5	3.09	170	6.69	170	6.69	10	1100	F
EV12-24B	12	25	15.44	7.0	F20	181	7.13	77	3.03	170	6.69	170	6.69	10	1100	F
EV12-26	12	26	19.40	8.8	F3/F13	166	6.54	175	6.89	125	4.92	125	4.92	10	900	D
EV12-33	12	33	22.49	10.2	F7 / F11	195	7.68	130	5.12	159	6.26	180	7.09	9	1150	С
EV12-45	12	45	32.19	14.6	F4/F11	198	7.80	166	6.54	171	6.73	171	6.73	7.5	1250	D
EV12-55	12	55	39.69	18.0	F11/F15	229	9.02	138	5.43	210	8.27	235	9.25	7	1160	D
EV12-60	12	60	44.10	20.0	F11/F15	260	10.24	168	6.61	180	7.09	185	7.28	6.5	1450	С
EV12-75	12	75	51.82	23.5	F11/F15	260	10.24	169	6.65	210	8.27	235	9.25	6	1750	С
EV12-80	12	80	52.92	24.0	F5 /F11	350	13.78	167	6.57	180	7.09	183	7.20	5.5	1840	С
EV12-90	12	90	66.15	30.0	F5/F12	307	12.09	169	6.65	210	8.27	235	9.25	4.8	2150	D
EV12-110	12	110	70.56	32.0	F5/F12	328	12.91	172	6.77	222	8.74	222	8.74	4.8	2300	С
EV12-150	12	150	103.6	47.0	F5/F12	483	19.02	170	6.69	240	9.45	240	9.45	4	2950	С
EV12-200	12	200	137.8	62.5	F10/F16	522	20.55	240	9.45	219	8.62	223	8.78	3.8	3750	С
EV12-240	12	240	152.1	69.0	F10/F16	522	20.55	240	9.45	219	8.62	223	8.78	3.7	4300	С
EV6-180	6	180	61.74	28.0	F12	306	12.05	168	6.61	222	8.74	227	8.94	2.5	3000	Α
EV6-200	6	200	66.15	30.0	F12	322	12.68	178	7.01	226	8.90	231	9.09	2.4	3100	Α
EV6-205	6	205	63.95	29.0	F22	260	10.24	180	7.09	245	9.65	264	10.39	2.5	2800	В
EV6-210	6	210	70.56	32.0	F12	322	12.68	178	7.01	226	8.90	231	9.09	2.2	3200	Α
EV6-225	6	225	70.56	32.0	F14	260	10.24	180	7.09	263	10.35	282	11.10	2	2950	В
EV6-335	6	335	105.8	48.0	F14	295	11.61	178	7.01	346	13.62	364	14.33	1.8	3250	В
EV8-170	8	170	76.07	34.5	F14	260	10.24	182	7.17	295	11.61	314	12.36	3.2	2450	С
EV8-200	8	200	83.79	38.0	F14/F22	260	10.24	182	7.17	295	11.61	314	12.36	3	2650	С

#### \*Notice

 $C_{20}$ : The battery capacity <33Ah is at 20-hr rate.  $C_{10}$ : The battery capacity  $\ge$ 33Ah is at 10-hr rate.





# **Summary**

HR (High Rate) series is especially designed for heavy load discharge applications with 5 to 10 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: 4.5Ah-240Ah
- Voltage class:6V/12V
- Long design life (25 °C):5 years(≤28Ah) 10 years(>28Ah)
- 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 reisistance
- 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).

 $* \ \mathsf{HS} \ \mathsf{battery} \\ :$ 

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



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# **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**

	Watts/cell	Nominal Voltage	Capacity	Wei	ght					Dim	ension				Internal	Short Circuit Current	
Model	@15min (1.67Vpc)					Terminal Type	Ler	ngth	Wi	dth	He	ight	Total	Height	Resistance	Garront	Terminal Position
	(1.07 VPC)	(V)	(Ah)	Lbs	Kg		mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)	
HR6-16W	16	6	4.5	1.59	0.72	F1/F2	70	2.76	47	1.85	101	3.98	107	4.21	25	223	Α
HR6-18W	18	6	5	1.65	0.75	F1/F2	70	2.76	47	1.85	101	3.98	107	4.21	20	251	Α
HR6-20W	20	6	5.3	1.76	8.0	F1/F2	70	2.76	47	1.85	101	3.98	107	4.21	18	278	Α
HR6-22W	22	6	5.5	1.76	0.8	F1/F2	70	2.76	47	1.85	101	3.98	107	4.21	18	306	Α
HR6-28W	28	6	7.5	2.65	1.2	F1/F2	151	5.94	34	1.34	94	3.70	100	3.94	11	390	С
HR6-32W	32	6	8	2.87	1.3	F1/F2	151	5.94	34	1.34	94	3.70	100	3.94	10	445	С
HR6-36W	36	6	9	2.98	1.35	F1/F2	151	5.94	34	1.34	94	3.70	100	3.94	10	450	С
HR6-850W	850	6	225	72.77	33	F14	243	9.57	188	7.40	275	10.83	275	10.83	2.5	3850	С
HR12-16W	16	12	4.5	3.09	1.4	F1/F2	90	3.54	70	2.76	101	3.98	107	4.21	35	225	С
HR12-18W	18	12	5	3.53	1.6	F1/F2	90	3.54	70	2.76	101	3.98	107	4.21	35	250	С
HR12-20W	20	12	5.3	3.75	1.7	F1/F2	90	3.54	70	2.76	101	3.98	107	4.21	30	275	С
HR12-20WB	21	12	5.8	4.08	1.85	F1/F2	151	5.94	50	1.99	95	3.74	101	3.98	25	270	F
HR12-22W	22	12	5	3.64	1.65	F1/F2	90	3.54	70	2.76	101	3.98	107	4.21	25	280	С
HR12-28W	28	12	7.5	4.85	2.2	F1/F2	151	5.94	65	2.56	94	3.70	100	3.94	19	390	F
HR12-32W	32	12	8	5.25	2.38	F1/F2	151	5.94	65	2.56	94	3.70	100	3.94	18	440	F
HR12-36W	36	12	9	5.80	2.63	F1/F2	151	5.94	65	2.56	94	3.70	100	3.94	18	450	F
HR12-48W	45	12	14	9.26	4.2	F1/F2	151	5.94	98	3.86	94	3.70	100	3.94	12	660	F
HR12-70W	70	12	18	12.35	5.6	F3/F13	181	7.13	77	3.03	167	6.57	167	6.57	14	860	F
HR12-75W	75	12	18	12.35	5.6	F3/F13	181	7.13	77	3.03	167	6.57	167	6.57	13	880	D
HR12-80W	83	12	22	13.67	6.2	F3/F13	181	7.13	77	3.03	167	6.57	167	6.57	12	900	D
HR12-88W	90	12	22	14.33	6.5	F3/F13	181	7.13	76	2.99	166	6.54	166	6.54	10	920	D
HR12-96W	100	12	26	17.86	8.1	F13	166	6.54	175	6.89	125	4.92	125	4.92	8	950	D
HR12-104W	105	12	28	18.96	8.6	F13	166	6.54	175	6.89	125	4.92	125	4.92	8	980	D
HR12-125W	125	12	33	22.49	10.2	F11	195	7.68	130	5.12	159	6.26	180	7.09	9	930	С
HR12-150W	150	12	40	28.67	13	F11	198	7.80	166	6.54	171	6.73	171	6.73	8	1100	D
HR12-200W	208	12	55	39.69	18	F11	229	9.02	138	5.43	210	8.27	235	9.25	6.8	1350	С
HR12-240W	246	12	65	46.31	21	F11	350	13.78	167	6.57	180	7.09	183	7.20	6.5	1650	С
HR12-280W	280	12	75	54.68	24.8	F11	260	10.24	169	6.65	210	8.27	235	9.25	6	1850	С
HR12-350W	340	12	90	63.95	29	F12	306	12.05	169	6.65	210	8.27	235	9.25	5.5	2100	С
HR12-450W	450	12	120	83.79	38	F12	407	16.02	177	6.97	225	8.86	225	8.86	4	3000	С
HR12-580W	586	12	150	103.6	47	F5/F12	340	13.39	173	6.81	280	11.02	285	11.22	4.4	3100	С
HRL12-380W	380	12	100	70.56	32	F12	328	12.91	172	6.77	222	8.74	227	8.94	4.2	2350	С
HRL12-380WS	378	12	100	69.46	31.5	F12	306	12.05	169	6.65	210	8.27	235	9.25	4	2550	С
HRL12-570W	568	12	150	103.6	47	F12		19.02		6.69	240	9.45	240	9.45	4	2950	С
HRL12-570WS	570	12	150	99.20	45	F12		13.39		6.81	280	11.02	285	11.22	4.4	2900	С
HRL12-650W	682	12	200	137.8	62.5	F10	522	20.55	240	9.45	219	8.62	240	9.45	3.8	3850	E
HRL12-780W	780	12	240	164.3	74.5	F10	522	20.55	240	9.45	219	8.62	240	9.45	3.6	4200	E
HS12-240W	240	12	65	48.95	22.2	F11		13.78				6.93	181	7.13	6	1700	С
HS12-380W	390	12	100	70.56	32	F12	339	13.35	173	6.81	217	8.54	222	8.74	4.2	2400	С

#### \*Notice

 $C_{20}$ : The battery capacity <33Ah is at 20-hr rate.  $C_{10}$ : The battery capacity  $\geqslant$ 33Ah is at 10-hr rate.



# **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):5 years(≤28Ah)

10 years(>28Ah)

- 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 reisistance
- 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.



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# **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

		Capacity	We	eight					Dim	iensio	n			Internal	Short Circuit	
Model	Voltage	*C <sub>20</sub> /C <sub>10</sub>			Terminal Type	Ler	ngth	Wid	th	Не	ight	Total	Height	Resistance	Current	Terminal Position
	(V)	(Ah)	Lbs	Kg	Турс	mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)	FOSILIOIT
DC12-26	12	26	17.86	8.1	F3/F13/T24	166	6.54	175	6.89	125	4.92	125	4.92	10.0	900	D
DC12-26S	12	26	18.30	8.3	F7/F11	165	6.50	126	4.96	174	6.85	174	6.85	11.5	850	D
DC12-28	12	28	18.96	8.6	F3/F13	166	6.54	175	6.89	125	4.92	125	4.92	9.0	950	D
DC12-28S	12	28	19.40	8.8	F7/F11	165	6.50	126	4.96	174	6.85	174	6.85	10.0	880	D
DC6-180	6	180	58.43	26.5	F12	306	12.05	168	6.61	222	8.74	227	8.94	3.0	3330	Α
DC6-200	6	200	63.95	29	F16/F14	322	12.68	178	7.01	226	8.90	247	9.72	2.5	3700	Α
DC6-200S	6	200	66.15	30	F12	260	10.24	180	7.09	247	9.72	252	9.92	2.5	3510	В
DC6-225S	6	225	70.56	32	F14	243	9.57	188	7.40	275	10.83	275	10.83	2.0	3980	В
DC12-40	12	40	28.67	13	F4/F11	198	7.80	166	6.54	171	6.73	171	6.73	8.0	1000	D
DC12-55	12	55	39.69	18	F15/F11	229	9.02	138	5.43	210	8.27	235	9.25	7.0	1100	С
DC12-65	12	65	46.31	21	F5/F11	350	13.78	167	6.57	180	7.09	183	7.20	6.5	1500	С
DC12-75	12	75	51.82	23.5	F15/F11	260	10.24	169	6.65	210	8.27	235	9.25	6.5	1720	С
DC12-75A	12	75	50.72	23	F15/F11	260	10.24	169	6.65	210	8.27	235	9.25	6.0	1720	С
DC12-80	12	80	52.92	24	F5/F11	350	13.78	167	6.57	180	7.09	183	7.20	6.0	1840	С
DC12-80A	12	80	50.05	22.7	F5/F11	350	13.78	167	6.57	180	7.09	183	7.20	6.5	1700	С
DC12-90	12	90	62.84	28.5	F15/F12	306	12.05	169	6.65	210	8.27	235	9.25	5.2	1940	С
DC12-90A	12	90	62.84	28.5	F15/F12	306	12.05	169	6.65	210	8.27	235	9.25	5.7	1850	С
DC12-30A	12	100	66.15	30	F5/F12	328	12.03	172	6.77	222	8.74	222	8.74	5.0	2100	С
		100	63.95	29		328	12.91	172	6.77	222	8.74	222	8.74	5.0	2150	
DC12-100A	12				F5/F12	306					8.27		9.25			C
DC12-100S		100	63.95	29	F15/F12		12.05	169	6.65	210		235		4.8	2150	_
DC12-120	12	120	77.18	35	F5/F12	407	16.02	177	6.97	225	8.86	225	8.86	4.5	2220	С
DC12-120A	12	120	74.97	34	F5/F12	407	16.02	177	6.97	225	8.86	225	8.86	4.5	2220	С
DC12-120S	12	115	70.56	32	F5/F12	328	12.91	172	6.77	222	8.74	222	8.74	4.2	2130	С
DC12-134	12	134	91.51	41.5	F5/F12	340	13.39	173	6.81	280	11.02	285	11.22	4.5	2480	С
DC12-145	12	145	97.02	44	F5/F12	340	13.39	173	6.81	280	11.02	285	11.22	4.5	2630	С
DC12-150	12	150	98.12	44.5	F5/F12	483	19.02	170	6.69	240	9.45	240	9.45	4.2	2780	С
DC12-150A	12	150	96.36	43.7	F5/F12	483	19.02	170	6.69	240	9.45	240	9.45	4.5	2600	С
DC12-160	12	160	110.3	50	F16/F12	530	20.87	209	8.23	214	8.43	219	8.62	4.5	2960	Е
DC12-180	12	180	116.9	53	F16/F12	530	20.87	209	8.23	214	8.43	219	8.62	4.0	3330	E
DC12-200	12	200	132.3	60	F16/F10	522	20.55	240	9.45	219	8.62	240	9.45	4.0	3700	Е
DC12-200A	12	200	130.1	59	F16/F12	522	20.55	240	9.45	219	8.62	240	9.45	4.0	3430	E
DC12-225A	12	225	141.1	64	F16/F12	522	20.55	240	9.45	219	8.62	240	9.45	3.8	3980	E
DC12-260	12	260	163.2	74	F14	520	20.47	268	10.55	220	8.66	225	8.86	3.5	4810	E
FT12-55D	12	55	39.69	18	F11	291	11.46	106	4.17	222	8.74	230	9.06	6.0	1460	E
FT12-90D	12	90	58.43	26.5	F6/F11	563	22.17	114	4.49	188	7.40	188	7.40	5.8	2350	E
FT12-100D	12	100	66.15	30	F14/F8	508	20.00	111	4.37	236	9.26	236	9.29	5.2	2400	E
FT12-100AD	12	100	63.95	29	F14/F8	508	20.00	111	4.37	236	9.29	236	9.29	5.5	2400	E
FT12-100SD	12	110	68.36	31	F9		16.14	109	4.29	285	11.22	294	11.57	4.8	2850	E
FT12-105D	12	105	71.66	32.5	F14/F8		20.00	111	4.37	236	9.29	236	9.29	5.0	2400	E
FT12-110D	12	110	72.77	33	F9		16.14		4.29	285	11.22	294	11.57	4.8	2850	Е
FT12-150D	12	150	95.92	43.5	F9		22.24		4.33	288	11.34	296	11.65	4.3	3250	Е
FT12-160D	12	150	108.0	49	F9		22.24		4.33	288	11.34	296	11.65	4.2	3550	E
FT12-160AD	12	160	101.4	46	F9		22.24		4.33	288	11.34	296	11.65	4.2	3550	E
FT12-180D	12	180	114.7	52	F9	560	22.05	125	4.92	316	12.44	316	12.44	4.0	4150	E
FT12-185D	12	185	123.5	56	F9	560	22.05	125	4.92	316	12.44	316	12.44	4.0	4250	E
FT12-100LD	12	110	72.77	33	F9	394	15.15	109	4.29	285	11.22	285	11.22	4.8	2850	Е
FT12-185LD	12	185	132.3	60	F9	560	22.05	125	4.92	316	12.44	316	12.44	4.0	4250	E

#### \*Notice

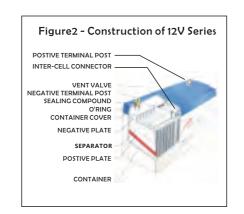
 $C_{20}$ : The battery capacity <33Ah is at 20-hr rate.  $C_{10}$ : The battery capacity  $\geqslant$ 33Ah is at 10-hr rate.



	Nominal Voltage	Capacity C <sub>10</sub>	We	ight					imens	ions				Internal	Short Circuit	
Model	voltage	O <sub>10</sub>			Terminal Type	Ler	ngth	Wid	th	Не	ight	Total I	Height	Resistance	Current	Terminal Position
	(V)	(Ah)	Lbs	Kg		mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)	
DC2-200	2	200	30.87	14	F10	171	6.73	111	4.37	366	14.41	366	14.41	0.80	2650	G
DC2-250	2	250	35.28	16	F10	171	6.73	111	4.37	366	14.41	366	14.41	0.76	2800	G
DC2-300	2	300	41.90	19	F10	171	6.73	150	5.91	365	14.37	365	14.37	0.72	2910	G
DC2-350	2	350	47.41	21.5	F10	171	6.73	150	5.91	365	14.37	365	14.37	0.70	3200	Н
DC2-400	2	400	57.33	26	F10	211	8.31	176	6.93	329	12.95	366	14.41	0.67	3400	Н
DC2-450	2	450	61.74	28	F10	211	8.31	176	6.93	329	12.95	367	14.45	0.65	3630	Н
DC2-500	2	500	67.25	30.5	F10	242	9.53	172	6.77	329	12.95	366	14.41	0.62	4210	Н
DC2-600	2	600	81.59	37	F10	302	11.89	175	6.89	328	12.91	365	14.41	0.63	5080	Н
DC2-650	2	650	88.20	40	F10	302	11.89	175	6.89	328	12.91	365	14.41	0.61	5200	Н
DC2-750	2	750	101.4	46	F10	411	16.18	175	6.89	327	12.87	368	14.49	0.60	6050	J
DC2-800	2	800	110.3	50	F10	411	16.18	175	6.89	327	12.87	368	14.49	0.60	6370	J
DC2-1000	2	1000	136.7	62	F10	479	18.86	175	6.89	327	12.87	368	14.49	0.55	6850	J
DC2-1200	2	1200	156.6	71	F10	479	18.86	175	6.89	327	12.87	368	14.49	0.53	7830	J
DC2-1500	2	1500	211.7	96	F10	401	15.79	352	13.86	338	13.31	383	15.08	0.50	10200	K
HSD12-65	12	65	46.31	21	F11	350	13.78	169	6.65	176	6.93	181	7.13	6	1600	С
HSD12-80	12	80	46.31	21	F11	350	13.78	169	6.65	176	6.93	181	7.13	6	1600	С
HSD12-100	12	100	66.15	30	F12	328	12.91	173	6.81	217	8.54	222	8.74	4.5	2300	С
HSD12-120S	12	115	70.56	32	F12	328	12.91	173	6.81	217	8.54	222	8.74	4.1	2400	С
HSD2-500	2	500	67.25	30.5	F10	241	9.49	172	6.77	331	13.03	366	14.41	0.6	4260	Н

#### **SLA BATTERY CONSTRUCTION**





# **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 60 254-2(IEC 254-1) standards, with die-casted positive grid and patented active material formula. The OPzS batteries offer 2200 cycles design life in 80%DOD at 25 °C.

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

# **Product Features**

- Capacity range: 100Ah 3000Ah
- Voltage : 2V
- Cycle life:>2200 at 80% DOD
- Self discharge rate ≤ 5%/month;
- High charge acceptance performance;
- Wide operation temperature: -40 $^{\circ}$ C ~ 70 $^{\circ}$ 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

	Nominal Voltage	Capacity	Dry Weight	Wet Weight					Dim	nensior	n			Internal	Short Circuit	
Model	voltage	O <sub>10</sub>	Worgin	Worgin	Terminal Type	Ler	ngth	Wid	th	He	ight	Total	Height	Resistance	Current	Terminal Position
	(V)	(Ah)	(Kg)	(Kg)		mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)	
OPzS2-200	2	200	13.3	17.6	F10	103	4.06	206	8.11	355	13.98	410	16.14	0.95	3410	G
OPzS2-250	2	250	15.8	21.1	F10	124	4.88	206	8.11	355	13.98	410	16.14	0.76	4000	G
OPzS2-300	2	300	18.5	24.5	F10	145	5.71	206	8.11	355	13.98	410	16.14	0.70	4550	G
OPzS2-350	2	350	20.5	26.7	F10	124	4.88	206	8.11	471	18.54	526	20.71	0.65	4850	G
OPzS2-420	2	420	24.5	33.6	F10	145	5.71	206	8.11	471	18.54	526	20.71	0.58	5400	G
OPzS2-490	2	490	28.0	38.7	F10	166	6.54	206	8.11	471	18.54	526	20.71	0.50	6000	G
OPzS2-600	2	600	34.4	46.4	F10	145	5.71	206	8.11	646	25.43	701	27.60	0.45	6200	G
OPzS2-770	2	770	45.4	58.6	F10	254	10.00	210	8.27	471	18.54	526	20.71	0.31	6440	G
OPzS2-800	2	800	47.6	64.3	F10	191	7.52	210	8.27	646	25.43	701	27.60	0.35	6800	Н
OPzS2-1000	2	1000	57.8	78.0	F10	233	9.17	210	8.27	646	25.43	701	27.60	0.28	7900	Н
OPzS2-1200	2	1200	68.0	91.8	F10	275	10.83	210	8.27	646	25.43	701	27.60	0.23	8200	Н
OPzS2-1500	2	1500	83.5	113.5	F10	275	10.83	210	8.27	796	31.34	851	33.50	0.21	8500	Н
OPzS2-2000	2	2000	112.8	153.4	F10	399	15.71	214	8.43	772	30.39	827	32.56	0.17	9300	I
OPzS2-2500	2	2500	140.4	190.9	F10	487	19.17	212	8.35	772	30.39	827	32.56	0.13	10300	J
OPzS2-3000	2	3000	166.7	226.8	F10	576	22.68	212	8.35	772	30.39	827	32.56	0.11	10700	J

# Main Parameters of Flooded Tubular Traction Battery

Model	Capacity C <sub>s</sub>		D	imension		Weight
iviodei	(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

	Capacity C₅		ום	mension		Weight
Model	(Ah)	Length	Width	Height	Total Height	(Kg)
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
			198		505	43. 5
9 PzS 810	810	174		475		
10 PzS 900	900	192	198	475	505	47. 5
0.0.000	200	47	100	545	575	10.0
2 PzS 230	230	47	198	545	575	13. 0
3 PzS 345	345	65	198	545	575	18.5
4 PzS 460 5 PzS 575	460 575	83 101	198 198	545 545	575 575	24. 0 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
10 F23 1230	1250	192	196	370	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	137 155	198 198	685 685	715 715	52. 0
8 PzS 1120 9 PzS 1260	1120	174				59. 5
10 PzS 1400	1260 1400	192	198 198	685 685	715 715	67. 5 73. 5
10 F23 1400	1400	192	190	003	713	73.3
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 P-P 64	64	45	150	262	202	F 0
2 PzB 64	64	45	158	262	292	5. 0
3 PzB 96 4 PzB 128	96 128	61	158	262	292	7.0
		77	158	262	292	8. 5
5 PzB 160	160	93	158	262	292	10.5
6 PzB 192 7 PzB 224	192 224	109 125	158	262 262	292 292	12. 5 14. 5
7 PzB 224 8 PzB 256	224	125	158 158	262	292	14. 5
0 F ZD Z00	200	141	100	202	292	10.5
2 PzB 84	84	45	158	328	358	6. 5
2 PZB 84 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
	294		158	328	358	18. 5
7 PzB 294	794	125				

# Main Parameters of Flooded Tubular Traction Battery

	Capacity C₅		D	imension		Weight		
Model	(Ah)	Length	Width	Height	Total Height	(Kg)		
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		
25 .2 00								
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		
	735	109			713	41. 0		
7 PzB 735			158	683				
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		

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# **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 ( C<sub>10</sub>): 45Ah 3000Ah
- Voltage: 2V/12V
- Floating design life: 20 years at 25°C
- Cycle life(2V): >2000 at 80% DOD and 6000 at 25% DOD
- Self discharge rate ≤ 2%/month;
- High charge acceptance performance;
- Wide operation temperature: -40°C ~ 70°C
- Storage life:After fully charged, it can be storaged about 2years at 20°C
- Good deep discharge recovery performance.
- Electrolyte: gel electrolyte uses imported silica, special tenichnics 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**

	Nominal Voltage	Capacity	We	ight	Terminal			Internal							
Model	vollago	O <sub>10</sub>			Terminal Type	Ler	Length		Width		Height		Height	Resistance	Terminal Position
	(V)	(Ah)	Lbs	Kg		mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	
OPzV2-200	2	200	37.04	16.8	F10	103	4.06	206	8.11	355	13.98	390	15.35	0.60	G
OPzV2-250	2	250	45.2	20.5	F10	124	4.88	206	8.11	355	13.98	390	15.35	0.57	G
OPzV2-300	2	300	54.02	24.5	F10	145	5.71	206	8.11	355	13.98	390	15.35	0.55	G
OPzV2-350	2	350	62.84	28.5	F10	124	4.88	206	8.11	471	18.54	506	19.92	0.42	G
OPzV2-420	2	420	72.77	33	F10	145	5.71	206	8.11	471	18.54	506	19.92	0.38	G
OPzV2-490	2	500	84.89	38.5	F10	166	6.54	206	8.11	471	18.54	506	19.92	0.35	G
OPzV2-600	2	600	102.5	46.5	F10	145	5.71	206	8.11	646	25.43	681	26.81	0.33	G
OPzV2-770	2	770	123.5	56	F10	210	8.27	254	10.00	471	18.54	506	19.92	0.31	G
OPzV2-800	2	800	138.9	63	F10	191	7.52	210	8.27	646	25.43	681	26.81	0.30	Н
OPzV2-1000	2	1000	169.8	77	F10	233	9.17	210	8.27	646	25.43	681	26.81	0.27	Н
OPzV2-1200	2	1200	202.9	92	F10	275	10.83	210	8.27	646	25.43	681	26.81	0.25	Н
OPzV2-1500	2	1500	242.6	110	F10	275	10.83	210	8.27	796	31.34	831	32.72	0.23	Н
OPzV2-2000	2	2000	330.8	150	F10	399	15.71	214	8.43	772	30.39	807	31.77	0.22	ı
OPzV2-2500	2	2500	419.0	190	F10	487	19.17	212	8.35	772	30.39	807	31.77	0.20	J
OPzV2-3000	2	3000	496.1	225	F10	576	22.68	212	8.35	772	30.39	807	31.77	0.19	J
OPzV12-45	12	45	40.79	18.5	F11	260	10.24	169	6.65	210	8.27	235	9.25	13.0	С
OPzV12-60	12	60	50.72	23	F11	260	10.24	169	6.65	210	8.27	235	9.25	12.0	С
OPzV12-80	12	80	66.15	30	F12	328	12.91	172	6.77	222	8.74	227	8.94	10.0	С
OPzV12-100	12	100	79.38	36	F12	407	16.02	177	6.97	225	8.86	225	8.86	8.0	С
OPzV12-120	12	120	101.2	45.9	F12	483	19.02	170	6.69	240	9.45	240	9.45	7.5	С
OPzV12-140	12	140	118	53.5	F12	530	20.87	209	8.23	214	8.43	219	8.62	7.0	С
OPzV12-160	12	160	125.7	57	F12	530	20.87	209	8.23	214	8.43	219	8.62	6.5	С
OPzV12-180	12	180	146.6	66.5	F10	522	20.55	240	9.45	219	8.62	240	9.45	6.0	С
OPzV12-200	12	200	161	73	F14	520	20.47	268	10.55	220	8.66	225	8.86	5.0	С





# **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(C<sub>20</sub>): 33Ah—3000Ah
- Voltage class:2V/6V/12V
- Long design life: 12years for 6V/12V18years for 2V
- Low self-discharge rate: ≤2.5 % 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**

	Nominal Voltage	Capacity C <sub>20</sub>	We	ight	<b></b>				Dim	ensior	า			Internal	Short Circuit Current	
Model	ronago	20			Terminal Type	Ler	ngth	Wid	th	Не	ight	Total I	Height	Resistance	Current	Terminal Position
	(V)	(Ah)	Lbs	Kg		mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)	
DG6-100	6	100	36.38	16.5	F14	194	7.64	170	6.69	205	8.07	210	8.27	5	1710	Α
DG6-150	6	150	51.82	23.5	F12	260	10.24	180	7.09	247	9.72	252	9.92	4.5	2370	В
DG6-180	6	180	58.43	26.5	F12	306	12.05	168	6.61	222	8.74	227	8.94	5	2840	Α
DG6-200	6	200	63.95	29	F16/F14	322	12.68	178	7.01	226	8.90	247	9.72	4	3150	А
DG6-200S	6	200	66.15	30	F12	260	10.24	180	7.09	247	9.72	252	9.92	4	3250	В
DG6-225	6	225	70.56	32	F16/F14	322	12.68	178	7.01	226	8.90	247	9.72	4	3465	А
DG6-225S	6	225	67.25	30.5	F14	243	9.57	188	7.40	275	10.83	275	10.83	4	3580	В
DG12-33	12	33	22.49	10.2	F7/F11	195	7.68	130	5.12	159	6.26	180	7.09	9.5	670	С
DG12-40	12	40	29.11	13.2	F4/F11	198	7.80	166	6.54	171	6.73	171	6.73	9	750	D
DG12-55	12	55	37.49	17	F15/F11	229	9.02	138	5.43	210	8.27	235	9.25	8.6	1040	С
DG12-60	12	60	45.20	20.5	F15/F11	260	10.24	169	6.65	210	8.27	235	9.25	8.5	1130	С
DG12-65	12	65	46.31	21	F15/F11	350	13.78	167	6.57	180	7.09	183	7.20	8	1250	С
DG12-70	12	70	49.61	22.5	F15/F11	350	13.78	167	6.57	180	7.09	183	7.20	8	1320	С
DG12-70S	12	70	47.41	21.5	F15/F11	260	10.24	169	6.65	210	8.27	235	9.25	8	1350	С
DG12-75	12	75	51.82	23.5	F15/F11	260	10.24	169	6.65	210	8.27	235	9.25	7	1410	С
DG12-80	12	80	52.92	24	F5/F11	260	10.24	169	6.65	210	8.27	235	9.25	7	1510	С
DG12-90	12	90	62.84	28.5	F15/F12	306	12.05	169	6.65	210	8.27	235	9.25	6.5	1600	С
DG12-100	12	100	66.15	30	F5/F12	328	12.91	172	6.77	222	8.74	222	8.74	7.5	1760	С
DG12-120	12	120	78.28	35.5	F5/F12	407	16.02	177	6.97	225	8.86	225	8.86	5.5	1900	С
DG12-134	12	134	91.51	41.5	F5/F12	344	13.54	173	6.81	280	11.02	285	11.22	5	2120	С
DG12-145	12	145	94.82	43	F5/F12	344	13.54	173	6.81	280	11.02	285	11.22	5	2300	С
DG12-150	12	150	98.12	44.5	F5/F12	483	19.02	170	6.69	240	9.45	240	9.45	6	2460	С
DG12-160	12	160	110.3	50	F16/F12	530	20.87	209	8.23	214	8.43	219	8.62	6	2450	Е
DG12-180	12	180	116.9	53	F16/F12	530	20.87	209	8.23	214	8.43	219	8.62	5.5	2700	E
DG12-200	12	200	132.3	60	F16/F12	522	20.55	240	9.45	219	8.62	240	9.45	5.2	3020	E
DG12-225	12	225	144.4	65.5	F16/F12	522	20.55	240	9.45	219	8.62	240	9.45	4.8	3650	E
DG12-230	12	230	147.7	67	F12	521	20.51	269	10.59	203	7.99	208	8.19	5.5	2750	Е
DG12-260	12	260	163.2	74	F14	520	20.47	268	10.55	220	8.66	225	8.86	5	4460	E

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	Nominal Voltage	Capacity C <sub>10</sub>	We	ight	T			C	Dimens	ions				Internal Resistance	Short Circuit Current	
Model		010			Terminal Type	Length		Width		Height		Total Height		Resistance	Current	Terminal Position
	(V)	(Ah)	Lbs	Kg		mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)	
DG2-100	2	100	12.35	5.6	F10	171	6.73	72	2.83	206	8.11	211	8.31	1.35	1710	Α
DG2-200	2	200	30.87	14	F10	171	6.73	111	4.37	366	14.41	366	14.41	1.2	2200	G
DG2-250	2	250	38.59	17.5	F10	171	6.73	150	5.91	365	14.37	366	14.41	1.2	2350	G
DG2-300	2	300	41.90	19	F10	171	6.73	150	5.91	365	14.37	365	14.37	1.1	2450	G
DG2-350	2	350	54.02	24.5	F10	211	8.31	176	6.93	329	12.95	367	14.45	1.0	2640	Н
DG2-400	2	400	57.33	26	F10	211	8.31	176	6.93	329	12.95	366	14.41	0.95	2820	Н
DG2-450	2	450	63.95	29	F10	211	8.31	176	6.93	329	12.95	366	14.41	0.92	3000	Н
DG2-500	2	500	67.25	30.5	F10	242	9.53	172	6.77	329	12.95	366	14.41	0.9	3850	Н
DG2-600	2	600	81.59	37	F10	302	11.89	175	6.89	328	12.91	365	14.37	0.85	4250	Н
DG2-650	2	650	88.20	40	F10	302	11.89	175	6.89	328	12.91	366	14.41	0.82	4350	Н
DG2-750	2	750	101.4	46	F10	411	16.18	175	6.89	327	12.87	368	14.49	0.75	5000	J
DG2-800	2	800	110.3	50	F10	411	16.18	175	6.89	327	12.87	368	14.49	0.72	5250	J
DG2-1000	2	1000	136.7	62	F10	475	18.70	175	6.89	327	12.87	365	14.37	0.65	5870	J
DG2-1200	2	1200	167.6	76	F10	475	18.70	175	6.89	327	12.87	365	14.37	0.62	6950	J
DG2-1500	2	1500	211.7	96	F10	401	15.79	352	13.86	338	13.31	383	15.08	0.60	9170	K
DG2-2000	2	2000	278.9	126.5	F10	490	19.29	349	13.74	338	13.31	383	15.08	0.50	11500	L
DG2-2500	2	2500	377.1	171	F10	712	28.03	351	13.82	338	13.31	383	15.08	0.40	15000	L
DG2-3000	2	3000	425.6	193	F10	712	28.03	351	13.82	338	13.31	383	15.08	0.33	19000	L

	Nominal Voltage	Capacity	Weight			Dimensions							Internal	Short Circuit		
	voltage	C <sub>20</sub>			Terminal Type	Length		Width		Не	ight	Total I	Height	Resistance	Current	Termina Position
	(V)	(Ah)	Lbs	Kg		mm	inch	mm	inch	mm	inch	mm	inch	(mΩ@25°C)	(A)	
FT12-55G	12	55	39.69	18	F11	291	11.46	106	4.17	222	8.74	230	9.06	9.0	1250	Е
FT12-90G	12	90	58.43	26.5	F6	563	22.17	114	4.49	188	7.40	188	7.40	8.7	2030	Е
FT12-105G	12	105	71.66	32.5	F8	508	20.00	111	4.37	236	9.29	236	9.29	7.5	2120	Е
FT12-110G	12	110	72.77	33	F9	410	16.14	109	4.29	285	11.22	294	11.57	7.2	2240	Е
FT12-150G	12	150	99.23	45	F9	565	22.24	110	4.33	288	11.34	296	11.65	6.0	2850	Е
FT12-160G	12	160	101.4	46	F9	565	22.24	110	4.33	288	11.34	296	11.65	5.8	3050	Е
FT12-180G	12	180	114.7	52	F9	560	22.05	125	4.92	316	12.44	316	12.44	5.0	3650	E
HSG12-65	12	65	46.31	21	F11	350	13.78	167	6.57	180	7.09	183	7.20	7.5	1280	С
HSG12-80	12	80	52.92	24	F11	350	13.78	167	6.57	180	7.09	183	7.20	6.8	1510	С
HSG12-100	12	100	66.15	30	F12	328	12.91	172	6.77	217	8.54	222	8.74	7.5	1760	С
HSG2-500	2	500	67.25	30.5	F10	241	9.49	172	6.77	331	13.03	366	14.41	0.9	3850	Н

#### \* HS battery

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

# **Certificates**





















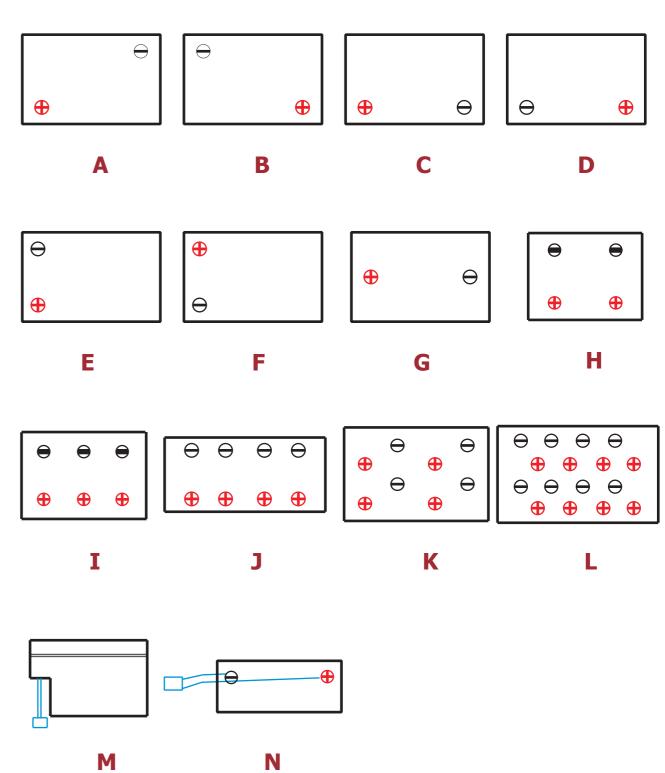
- UL: MH28539
- CE:G4M20206-910-E-16
- ISO9001, ISO14001, OHSAS18001



# **Terminal Drawing:**



# **Post Position:**





# Hengyang Ritar Industrial Park

Hengyang Ritar Power Co., Ltd. is located in Songmu Industrial Park, Hengyang, Hunan Province. The investment or Hengyang Ritar is USD50 million and the land area is 266,680 square meters. Equipped with advanced automatic production lines, Hengyang Ritar Industrial Park has become one of the largest SLA battery manufacturing centers in Asia.

Hengyang is famous for rich resources of non-ferrous metals and nonmetal, known as the lead capital. The foundation of Hengyang manufacturing base has realized the integration of industrial chains. The present annual capacity is 6 million KVAH. www.kesintisizguckaynagi.com







