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CIYIbattery

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Battery Proposal

PV Application

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About Us

CIYI Battery factroy which produced the NI-FE, NI-CD and Silver Zinc Battery were established since 1954 years, with more than 800 workers, as a military factory in China, we are supplying the batteries to China Railway, China Military and some Government projects, we are also cooperating with Pakistan, Iran, Indonesia, South Korea, South Africa etc company for the some military and government projects with our good quality, competitive price, professional solution, etc.so far we have exported to more than 100 countries and districts around the world.

Ciyi Battery is equipped with professional research and development institution,quality testing center, advanced production technology and equipment. Now, Our CiyiBattery is compatible with global standards of IEC,ISO,CE,UL,KS,etc.

It have a good reputation for proven quality batteries for the last 60 years, now we can produce 9 series battery to meet the different applications, such as solar and wind energy storage, telecommunication system, UPS systems, Emergency lighting, Power plants ,e-bikes, e-cars, railway, air craft, etc.

Ciyibattery, brings you not only reliable battery and technology supports, but also supplying a professional solution for some special projects, such as whole solar system projects, with excellent service and real value you shall expect and enjoy.

Compared with most other Chinese battery manufacturers, Ciyibattery can really supply customers with reliable & valuable battery solutions for various applications. Further we have a strong capability and excellent sales team to work together with our customers.

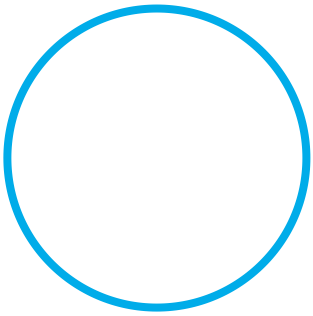
Who we are

As one of the leading and professional manufacturer of the NI-FE, NI-CD and Silver-Zinc Battery since 1954 years, Qualified suppliers for Chinese Government, Military, Railway, Pakistan Military, Iran Government and Railway System, Indonesia Government projects, etc.

What we do

- Professional proposal for customer's requirements
- Reliable Quality and Competitive price
- On-Time Service
- Responsility for our customer

Summary of Products



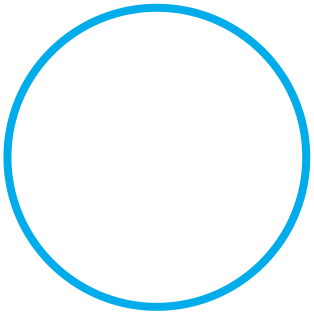
Nickel Iron Battery

PV Application

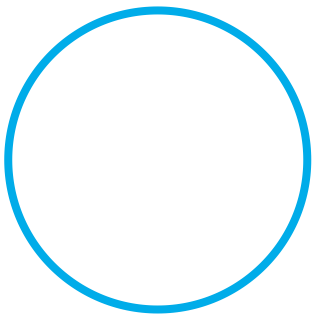
Nowadays, more and more countries and governments have paid special attentions on environmental protection and actively promoted the application of green energy. The CYNF series Ni-Iron batteries manufactured by Zhuhai CiYi Battery Co., Ltd are specially designed for photovoltaic and renewable energy applications under critical and harsh circumstances. CiYi Ni-Fe battery CYNF series has the characteristics of low operation cost, low self-discharge, long cycling life, environmental-friendly etc. They can withstand deep discharge, wide temperature variations, mechanical & electrical abuses and still show excellent and reliable performance over a long period. The operation life of CYNF series solar Ni-Fe batteries is 30-40 Years, the working temperature range can be -40°C to 60°C, which is also the longest life battery for the PV system.

Alkaline NI-CD Battery

DC Power and Railway Application



CiYi nickel-cadmium rechargeable batteries are characterized by excellent electrical performance, ultra-long cycle life, strong construction, wide temperature range, good resistance to overcharge and over-discharge, low self-discharge, high reliability, easy maintenance and so on. So far, Ciyi nickel-cadmium rechargeable batteries are divided into low (CYL series), medium(CYM), high(CYH) and ultra high (CYX) discharge rate which are widely applicable for DC power supply of UPS system, AGV, aviation, oil & gas industry (Emergency Lighting on Offshore Platforms, Cathodic Protection for Pipelines), Substation stand-by power application, Railway and light train application (locomotive engine) etc.

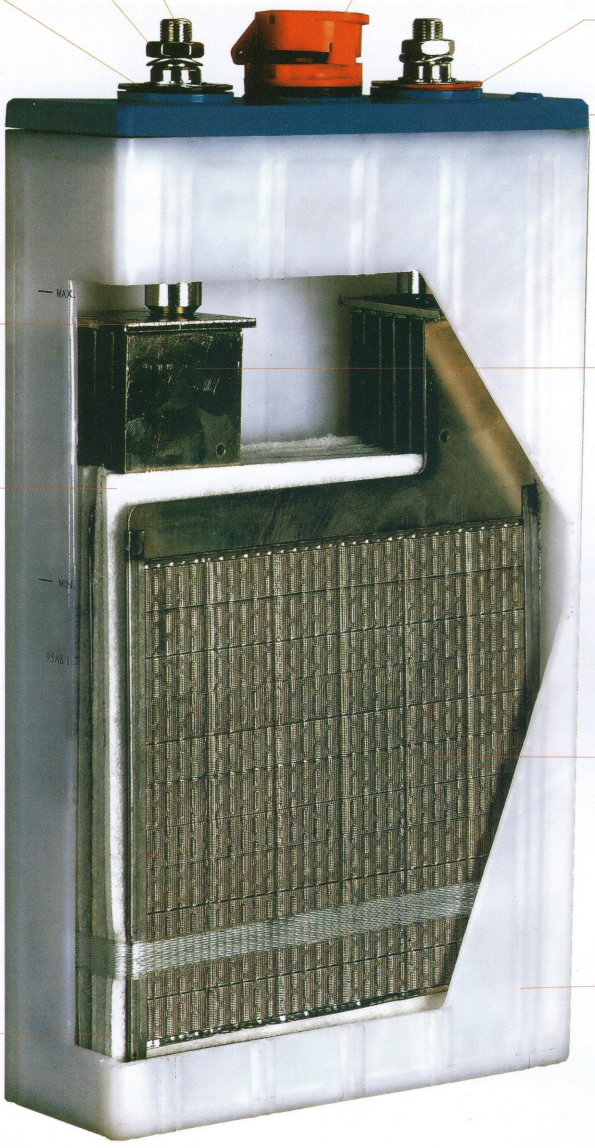


Silver Zinc Battery

Military Application

Aircraft Ag-Zn (silver-zinc) battery manufactured by Zhuhai Ciyi Battery Co., Ltd., with the characteristics of high power density, high specific energy, low internal resistance, long service life, strong mechanical property, wide operation ambient temperature range, are mainly used as on board emergency starting power supply or on board back up power supply on the plane.

Product Structure



Detail Introduction of NI-FE Battery

Advantages

- Designed life of the battery 30-40 years.
- Varta Technology and Equipment.
- Total Enviroment Protection
- Wide working temperature from -20°C to +60°C
- Pocket Technology on the positive plate make the battery high strength, high expansion resistance
- Slurry Technology on the negative plate make the battery light weight and better low temperature perfomrance
- No Sudden Death Risk
- High Reliability and Safety
- Over 3000 cycles life at 50% DOD
- 10CA high peak discharge current

With UL, CE, ISO, KS, IEC certificates

Packing Method

- Capacity range: 10ah to 1250AH
- Nominal Voltage: 1.2V
- Each cell has a nominal voltage of 1.2 volts. No matter the size of the cell, all Nickel Iron cells are 1.2volts.

To make a battery, you add cells together until you get the voltage you require.

Example: 12 Volts = 10 x 1.2volt cells 24 Volts = 20 x 1.2volt cells

48 Volts = 40 x 1.2volt cells

The advantage of making a battery up from individual cells is that if one cell fails, you replace that cell.

You can add to your battery bank at any time with Nickel Iron batteries if you need to store more power. This cannot be done with lead acid batteries without reducing the life of the new batteries.

12 Volts = 10 x 1.2volt cells

24 Volts = 20 x 1.2volt cells

48 Volts = 40 x 1.2volt cells

Application Fields

- Wind Power Generation
- Photovoltaic power Generation
- UPS Back-up Power Systems
- Lighting
- Metallurgy
- Telecommunication
- Railway Rolling Stocks

Search + traffic analytics

NI-FE Battery List

Model	Nominal Voltage (V)	Rate Capacity (AH)	MAX. Dimension(mm)			Dry weight (kg)	Wet weight (kg)	Terminal	Container Material
			L	W	H				
CYNF10	1.2	10	38	84	128	0.6	0.7	M6	PP/MBS
CYNF20	1.2	20	32	113	223	1	1.2	M6	PP/MBS
CYNF30	1.2	30	68	134	245	1.7	2.55	M10X1	PP/MBS
CYNF40	1.2	40	68	134	245	2.1	2.85	M10X1	PP/MBS
CYNF50	1.2	50	68	134	245	2.5	3.2	M10X1	PP/MBS
CYNF60	1.2	60	68	134	245	3.2	3.6	M10X1	PP/MBS
CYNF70	1.2	70	80	141	370	3.8	5.7	M10X1	PP/MBS
CYNF80	1.2	80	80	141	370	4	5.8	M10X1	PP/MBS
CYNF90	1.2	90	80	141	370	4.2	6	M10X1	PP/MBS
CYNF100	1.2	100	80	141	370	4.5	6.2	M10X1	PP/MBS
CYNF120	1.2	120	80	141	370	5	6.5	M10X1	PP/MBS
CYNF130	1.2	130	80	141	370	5.3	6.5	M10X1	PP/MBS
CYNF140	1.2	140	92	141	365	6	8	M16X1.5	PP
CYNF150	1.2	150	106	164	345	7	9	M20	PP/MBS
CYNF180	1.2	180	106	164	345	7.5	10	M20	PP/MBS
CYNF200	1.2	200	106	164	345	8	11	M20	PP/MBS
CYNF250	1.2	250	100	170	450	11	13.5	M20	PP
	1.2	250	138	276	420	13	18.5	2xM16	PP/MBS
CYNF300	1.2	300	138	276	450	14.5	20.5	2xM16	PP/MBS
CYNF350	1.2	350	138	276	450	16	21	2xM16	PP/MBS
CYNF400	1.2	400	138	276	450	17	23	2xM16	PP/MBS
	1.2	400	176	161	535	18	37.5	2xM20	MBS
CYNF450	1.2	450	138	276	450	19.5	24.5	2xM16	PP/MBS
CYNF500	1.2	500	138	276	490	20	27	2xM16	PP
CYNF600	1.2	600	176	291	510	27	37.5	2xM20	MBS
CYNF700	1.2	700	176	291	510	29	39	2xM20	MBS
CYNF800	1.2	800	186	398	570	39	59	3xM20	MBS
CYNF900	1.2	900	186	398	570	41	60	3xM20	MBS
CYNF1000	1.2	1000	186	398	570	44	61	3xM20	MBS
CYNF1100	1.2	1100	186	398	570	46	63	3xM20	MBS
CYNF1200	1.2	1200	186	398	570	49	66	3xM20	MBS

Detail Introduction of NI-CD Battery

CIYI Nickel-Cadmium Rechargeable battery can be divided into four different models according to difference applications and also discharging current :

Low discharge rate series (CYL Series): CYL10AH to CYL1200AH

Medium discharge rate series: CYM10AH to CYM1200AH

High discharge Rate series: CYH20AH to CYH800AH

Ultra high discharge rate series: CYX10AH to CYX250AH

CYL, CYM, CYH series is made by Pocket plate, which have the properties of rigid construction, excellent discharge performance to over charge and over discharge, low self-discharge, High Reliability and easy maintenance.

CYL Series

Low discharge rate NI-CD battery (CYL) Series is suitable for the application, that discharging current is lower than 0.5ItA, designed for general purpose and standby applications, such as lighting on the train,operation of circuit break, UPS, telecommunication,operation of communication equipments on a ship lighting and air conditioner control on a train,etc.

CYM Series

Medium discharge rate NI-CD battery (CYM) Series is applicable for those, that the discharging current is between 0.5ItA to 3.5ItA, and working time between 30 minutes to 5 hours, such as railway DC power sources, UPS (Over 30mins), Gas Turbine control, Auxiliary power source for power stations, chemical plants, oil refineries, iron

CYH Series

High discharge rate NI-CD battery (CYH Series) is applicable for those, that discharging current is between 3.5ItA to 7ItA, suitable for High discharge rate application, such as UPS (Up to 30 mins), Switchgear tripping and closing,engine starting, Control of DC motor, water treatment plants etc.

CYX Series

Ultra High Discharge rate NI-CD Battery (CYX series) is made by sintered type battery plate, which have the properties of rigid construction, small internal resistance, long service life, resistance to over charge and discharge, wide operation temperature (-40°C to +60°C), High reliability ,Ultra high discharge rate , which is applicable for those, that discharging current is between (7ItA to 10ItA), the peak current can be 30 ItA, etc, such as the usage in the filed of military, aviation,railway vehicles, AGV, electric power system, boat, internal-combustion engine, Switchgear Tripping and Closing etc.

Low Discharge Rate NI-CD Battery List

Model	Nominal Voltage (V)	Rate Capacity (AH)	Max Dimensions (mm)			Dry weight (kg)	Wet weight (Kg)	Terminal	Container Material
			L	W	H				
CYL10	1.2	10	38	84	128	0.6	0.7	M6	PP
CYL20	1.2	20	32	113	223	1	1.2	M6	PP
CYL30	1.2	30	68	134	245	1.7	2.55	M10X1	PP
CYL40	1.2	40	68	134	245	2.1	2.85	M10X1	PP
CYL50	1.2	50	68	134	245	2.5	3.2	M10X1	PP
CYL60	1.2	60	68	134	245	3.2	3.6	M10X1	PP
CYL70	1.2	70	80	141	370	3.8	5.7	M10X1	PP
CYL80	1.2	80	80	141	370	4	5.8	M10X1	PP
CYL90	1.2	90	80	141	370	4.2	6	M10X1	PP
CYL100	1.2	100	80	141	370	4.5	6.2	M10X1	PP
CYL120	1.2	120	80	141	370	5	6.5	M10X1	PP
CYL150	1.2	150	106	164	345	7	9	M20	PP
CYL180	1.2	180	106	164	345	7.5	10	M20	PP
CYL200	1.2	200	106	164	345	8	11	M20	PP
CYL230	1.2	230	164	167	345	9.5	13	M20	PP
CYL250	1.2	250	100	170	450	11	13.5	M20	PP
			138	276	420	13	18.5	2xM16	
CYL300	1.2	300	138	276	450	14.5	20.5	2xM16	PP
CYL350	1.2	350	138	276	450	16	21	2xM16	PP
CYL400	1.2	400	138	276	450	17	23	2xM16	PP
CYL450	1.2	450	138	276	450	19.5	24.5	2xM16	PP
CYL500	1.2	500	138	276	490	20	27	2xM16	PP
CYL600	1.2	600	176	291	510	27	37.5	2xM20	MBS
CYL700	1.2	700	176	291	510	29	39	2xM20	MBS
CYL800	1.2	800	186	398	570	39	59	3xM20	MBS
CYL900	1.2	900	186	398	570	41	60	3xM20	MBS
CYL1000	1.2	1000	186	398	570	44	61	3xM20	MBS
CYL1100	1.2	1100	186	398	570	46	63	3xM20	MBS
CYL1200	1.2	1200	186	398	570	49	66	3xM20	MBS
CYL1250	1.2	1250	186	398	570	49	68	3xM20	MBS

Medium Discharge Rate NI-CD Battery

Model	Nominal Voltage (V)	Rate Capacity (AH)	Max Dimension (mm)			Dry Weight (kg)	Wet Weight (kg)	Terminal	Container Material
			L	W	H				
CYM10	1.2	10	48	81	245	1.2	1.5	M10	MBS
CYM20	1.2	20	68	134	245	1.6	2.5	M10X1	PP
CYM30	1.2	30	70	134	285	2	3.6	M10X1	PP
CYM40	1.2	40	70	134	285	3	4	M16	PP
CYM50	1.2	50	70	134	285	3.5	4.2	M16	PP
CYM60	1.2	60	80	141	370	4.7	6.3	M16	PP
CYM70	1.2	70	80	141	370	4.8	6.4	M16	PP
CYM75	1.2	75	80	141	370	5	6.5	M16	PP
CYM80	1.2	80	106	164	345	5.5	8	M20	PP
CYM80	1.2	80	80	141	370	5.5	6.5	M16	PP
CYM85	1.2	85	106	164	345	5.6	8.5	M20	PP
CYM100	1.2	100	106	164	345	7	9	M20	PP
CYM120	1.2	120	106	164	345	7.2	9.5	M20	PP
CYM140	1.2	140	92	141	365	6.5	8	M16X1.5	PP
CYM150	1.2	150	164	167	345	9	12	M20	PP
CYM200	1.2	200	138	276	420	13.5	19.5	2XM16	PP
CYM250	1.2	250	138	276	450	15	22	2XM16	PP
CYM300	1.2	300	138	276	450	17.5	22.5	2XM16	PP
CYM346	1.2	346	162	200	450	18.5	24	2XM16	PP
CYM350	1.2	350	138	276	450	20	25	2XM16	PP
CYM380	1.2	380	138	276	490	21	26	2XM16	PP
CYM400	1.2	400	138	276	490	22	27	2XM16	PP
CYM500	1.2	500	176	291	510	28	40	2XM20	MBS
CYM600	1.2	600	176	291	510	30	42	2XM20	MBS
CYM700	1.2	700	186	398	570	42	58	3XM20	MBS
CYM800	1.2	800	186	398	570	45	60	3XM20	MBS
CYM900	1.2	900	186	398	570	47	62	3XM20	MBS
CYM1000	1.2	1000	186	398	570	50	65	3XM20	MBS
CYM1200	1.2	1200	186	398	570	52	66	3xM20	MBS
CYM1250	1.2	1250	186	398	570	54	68	3xM20	MBS

High Discharge Rate NI-CD Battery List

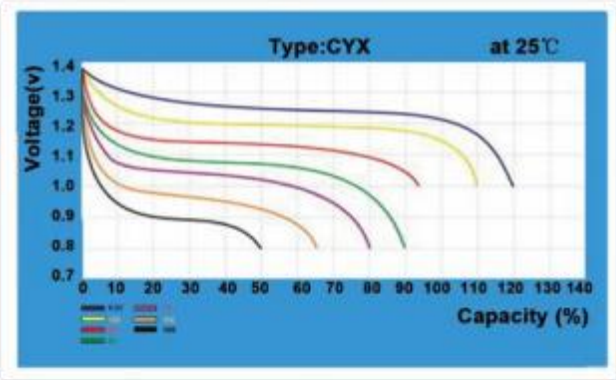
Model	Nominal Voltage (V)	Rate	Max Dimension (mm)			Dry. weight (kg)	Wet Weight (kg)	Terminal	Container Material
			L	W	H				
CYH10	1.2	10	48	81	245	1.5	1.8	M10	MBS
CYH20	1.2	20	68	134	245	2.4	3	M10	PP
CYH30	1.2	30	70	134	285	3	4	M16	MBS
CYH40	1.2	40	80	141	370	4	6	M10X1	PP
CYH50	1.2	50	80	141	370	4.6	6.2	M10X1	PP
CYH60	1.2	60	80	141	370	5	6.5	M10X1	PP
CYH70	1.2	70	106	164	345	6.5	9	M20	PP
CYH80	1.2	80	106	164	345	7.5	9.5	M20	PP
CYH100	1.2	100	164	167	345	9	13	M20	PP
CYH120	1.2	120	164	167	345	10.5	14	M20	PP
CYH150	1.2	150	138	276	420	14.5	19.5	2XM16	PP
CYH180	1.2	180	138	276	420	18	20	2XM16	PP
CYH250	1.2	250	276	138	490	22	30	2XM16	PP
CYH250	1.2	250	176	291	510	25	35	2XM20	MBS
CYH300	1.2	300	176	291	510	27.5	37	2XM20	MBS
CYH350	1.2	350	186	398	570	32	54	3XM20	MBS
CYH400	1.2	400	186	398	570	36	56	3XM20	MBS
CYH500	1.2	500	186	398	570	40	59	3XM20	MBS
CYH600	1.2	600	186	398	570	32	54	1.5XM20	MBS
CYH700	1.2	700	186	398	570	36	56	3XM20	MBS
CYH800	1.2	800	186	398	570	40	59	3XM20	MBS

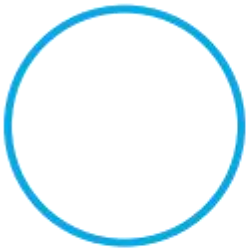
Ultra High Discharge Rate NI-CD Battery List

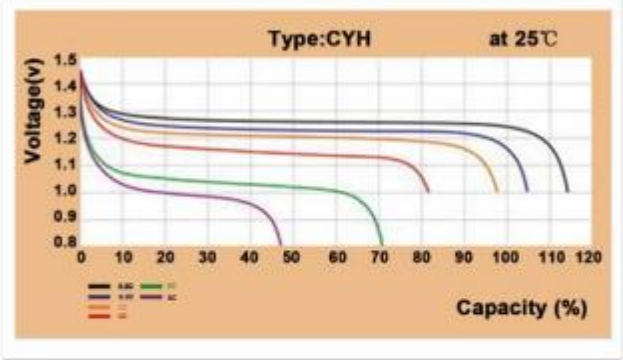
Model	Nominal Voltage (V)	Rate Capacity (AH)	Max Dimension (mm)			Dry Weight (kg)	Wet Weight (kg)	Terminal	Casing Material
			L	W	H				
CYX10	1.2	10	29	81	218	0.89	1.05	M10	PA
CYX20	1.2	20	36.5	81.5	244	1.15	1.3	M10	AS
CYX30	1.2	30	42.5	81.5	255	1.428	1.65	M10	AS
CYX30-(3)	1.2	30	36.5	80.5	235	1.3	1.5	M10	PA
CYX35	1.2	35	36	81	237	1.21	1.6	M10	PA
CYX40	1.2	40	42.5	81.5	255	1.538	1.75	M10	AS
CYX40-(4)	1.2	40	49	81.5	244	1.65	1.85	M10	ABS
CYX40-(2)	1.2	40	66.5	81	175	1.69	1.9	M10	PA
CYX50	1.2	50	49	81.5	244	1.81	2	M10	AS
CYX60	1.2	60	62	138.5	267	3.59	4.5	M16	ABS
CYX60-(3)	1.2	60	50	80.5	250	2.55	2.8	M10	PA
CYX70	1.2	70	70	134	285	3.5	4.5	M16	PP
CYX80	1.2	80	62	138.5	267	4.21	5.1	M16	ABS
CYX80-(2)	1.2	80	70	134	285	4.2	5.2	M16	PP
CY80-(4)	1.2	80	74.5	81	243	2.65	3.1	M12	PA
CYX90	1.2	90	74.5	81	243	3.01	5.3	M12	PA
CYX90-(2)	1.2	90	70	134	285	4.35	3.4	M16	PP
CYX100	1.2	100	70	134	285	4.65	5.5	M16	PP
CYX100-(2)	1.2	100	62	138.5	267	4.22	5	M16	ABS
CYX120	1.2	120	79	140.7	367	6.2	7.5	M16X3	PP
CYX120-(2)	1.2	120	62	138.5	267	4.3	5	M16	PP
CYX120-(3)	1.2	120	70	134	285	5.2	6	M16	PP
CYX140	1.2	140	79	140.7	367	6.7	7.9	M16X3	PP
CYX140-(2)	1.2	140	107	165	348	6.8	8.8	M20	PP
CYX170	1.2	170	79	140.7	367	6.58	7.6	M16X3	PP
CYX170-(2)	1.2	170	107	165	348	7.95	9.7	M20	PP
CYX190	1.2	190	79	140.7	367	7.5	8.5	M16X3	PP
CYX190-(2)	1.2	190	107	165	348	8.5	10.2	M20	PP
CYX200	1.2	200	107	165	348	9.3	10	M20	PP
CYX200-(2)	1.2	200	71	137	432	8.3	11	M20	PP
CYX210	1.2	210	107	165	348	10.85	12.5	M20	PP
CYX220	1.2	220	107	165	348	11.35	13	M20	PP
CYX230	1.2	230	107	165	348	11.4	13	M20	PP
CYX240	1.2	240	107	165	348	11.5	13.1	M20	PP
CYX250	1.2	250	107	165	348	11.7	13.3	M20	PP

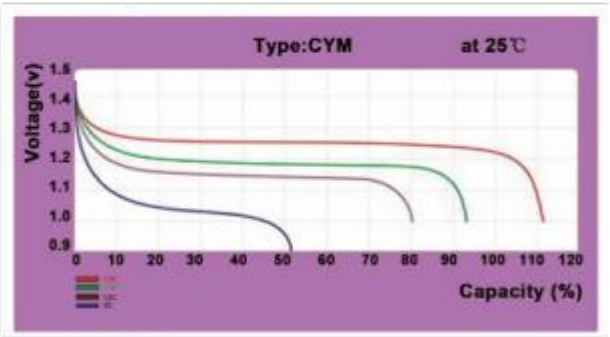
Discharging Curves (Battery is fully charged at 20°C±5°C)

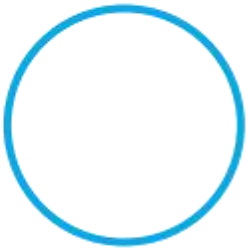
Norminal Volatage 1.2V/Cell

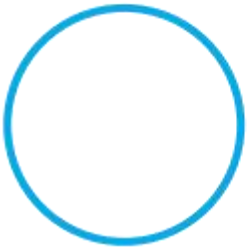


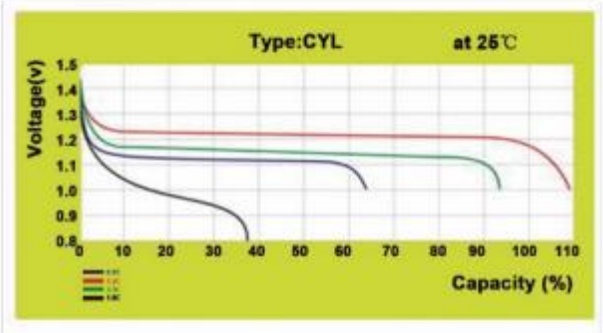












Nickel-Cadmium sintered aircraft battery

Model	Nominal Voltage (V)	Rated Capacity (Ah)	Max Dimension (mm)			Wet Weight (kg)	Electrolyte Volume (mL)	Terminal	Container Material	International Model
			L	W	H					
CYX5.5	1.2	5.5	56	24	118	0.26	18	M5	Nylon	KX5.5P
CYX15	1.2	15	58	33	175	0.7	16	M8	Nylon	KX15P
CYX16	1.2	16	58	33	175	0.72	16	M8	Nylon	KX16P
CYX18	1.2	18	62	35	162	0.75	18	M8	Nylon	KX18P
CYX25	1.2	25	81	29	218	1.1	24	M10	Nylon	KX25P
CYX27	1.2	27	80	35	180	1.06	24	M10	Nylon	KX27P
CYX28	1.2	28	81	29	217	1.1	24	M10	Nylon	KX28P
CYX36	1.2	36	81	37	239	1.65	40	M10	Nylon	KX36P
CYX40	1.2	40	80	35	235	1.57	40	M10	Nylon	KX40P
CYX40-(6)	1.2	40	81	43	217	1.57	41	M10	Nylon	KX40P
CYX40-(8)	1.2	40	81	42	265	1.57	48	M10	Nylon	KX40P
CYX43	1.2	43	81	37	239	1.68	43	M10	Nylon	KX43P

Nickel-Cadmium sintered aircraft battery bank

Model	Nominal Voltage (V)	Rated Capacity (Ah)	Max Dimension (mm)			Wet Weight (kg)	Electrolyte Volume (mL)	Terminal	Container Material	International Model
			L	W	H					
20CYX5.5	24	5.5	300	175	123	8	160	M5	Stainless Steel	VP65K
20CYX15	24	15	297	168	207	17.8	320	M8		VP160KH
20CYX16	24	16	376	126	183	17.5	320	M8		VP160KM
20CYX18	24	18	305	260	178	19	360	M8		
20CYX25	24	25	370	176	229	26.3	480	M10		HKBH-25-Y3
20CYX25(Mi)	24	25	474	210	243	28	490			
20CYX25B	24	25	312	239	300	29	400			
20CYX25C	24	25	342	187	230	25	340			
20CYX27	24	27	413	210	220	29	480			VHP270KH-3
20CYX28	24	28	480	194	269	30.5	480			
20CYX28B	24	28	357	199	226	28	490			
20CYX36	24	36	413	210	268	37	800			VP400KH
20CYX36B	24	36	304	274	257	37	800			
20CYX36G	24	36	452	223	295	39.5	850			
20CYX36JW	24	36	452	223	295	58	800			
20CYX40	24	40	413	210	268	37.2	800			V040KH
20CYX40A	24	40	424	210	268	37.2	800			
20CYX40C	24	40	424	210	268	37.2	800			
20CYX40D	24	40	417	210	268	37.2	800			
20CYX40E	24	40	413	210	268	37.2	800			
20CYX40F	24	40	302	274	263	37	800			
20CYX40G	24	40	485	268	315	39.5	850			
20CYX40K	24	40	417	226	226	40	850			
20CYX40H	24	40	304	299	263	37.2	800			
20CYX40-(5)	24	40	456	182	280	45	880			
20CYX40-(5)-A	24	40	480	200	335	50	850			
20CYX40-(6)	24	40	496	176	229	38	820			HKBH-40-Y3
20CYX40-(8)	24	40	279	331	290	43.5	960			
20CYX43	24	43	413	210	268	37.2	860			VHP430KH-3
20CYX43(A)	24	43	302	272	263	37.2	860			

Low maintenance Nickel-Cadmium Battery for Railway

Model	Nominal Voltage (V)	Rated Capacity (Ah)	Max Dimension (mm)			Wet Weight (kg)	Electrolyte Volume (mL)	Terminal	Container Material	International Model
			L	W	H					
CYL40-(4)	1.2	40	144	53	246	3	800	M10	ABS	KL40P
CYL100-(2)	1.2	100	139	79	362	6.5	1700	M16	ABS	KL100P
CYL100-(4)	1.2	100	140	79	378	7	1900	M10	ABS	KL100P
CYL300	1.2	300	171	136	451	24	4000	M16	Iron	KL300
CYL300-(4)	1.2	300	277	139	450	22	6500	M16	PP	KL300P
CYM100-(3)	1.2	100	140	79	362	7	1700	M16	ABS	KM100P
CYM120-(4)	1.2	120	141	90	363	7.3	1900	M16	PP	KM120P
CYX100-(12)	1.2	100	138	61	266	5.3	1000	M16	PP	KX100P
CYX120-(12)	1.2	120	139	79	295	5	1000	M16	PP	KX120P
CYX140	1.2	140	166	106	350	10.5	1500	M16	PP	KX140P
CYX140-(12)	1.2	140	139	79	361	8.7	1700	M20	PP	KX170P
CYX170	1.2	170	166	106	350	10.7	1500	M20*1.5	PP	KX170P
CYX170-(5)	1.2	170	139	79	361	7.6	1950	M16*1.5	PP	KX170P
CYX170-(12)A	1.2	170	139	79	361	6.8	1500	M16	PP	KX170P
CYX170-(12)B	1.2	170	166	106	350	8.9	1700	M20	PP	KX170P
CYX210-(12)	1.2	210	166	106	350	110	1700	M20*1.5	PP	KX210P
10CY40	12	40	240	200	287	28	7000	M10	ABS	

Nickel-Cadmium battery for Metro,light rail,motor train set

Model	Nominal Voltage (V)	Rated Capacity (Ah)	Max Dimension (mm)			Wet Weight (kg)	Electrolyte Volume (mL)	Terminal	Container Material	International Model
			L	W	H					
CYX50-(2)	1.2	50	84	74	240	2.6	350	M12	PP	KX50P
CYX50-(4)	1.2	50	80	74	240	2.6	350	M12	PP	KX50P
CYX60-(12)	1.2	60	138	61	266	3.4	350	M16	PP	KX60P
CYX100-(9)	1.2	100	138	61	266	3.3	350	M16	PP	KX100P
CYX120-(12)	1.2	120	139	79	295	5.3	400	M16	PP	KX120P
CYX140	1.2	140	166	106	350	10.5	1500	M16	PP	Kx140P
CYX140-(12)	1.2	140	139	79	361	8.9	1000	M16	PP	KX140P
CYX160	1.2	160	122	115	309	7.2	1000	M16	PP	KX160P
CYX160-(4)	1.2	160	122	115	309	7.2	1000	M16	PP	KX160P
CYX170	1.2	170	166	106	350	10.7	1500	M20*1.5	PP	KX170P
CYX170-(12)B	1.2	170	166	106	350	8.9	1500	M20	PP	KX170P
CYX180	1.2	180	122	115	309	7.4	900	M12	PP	KX180P
CYX210	1.2	210	166	106	350	11.7	1500	M20	PP	KX210P
CYX210-(12)	1.2	210	166	106	350	11.7	1500	M20*1.5	PP	KX210P
CYX230	1.2	230	166	106	350	11.7	2500	M20*1.5	PP	KX230P

Common Trouble and Trouble Shootings of NI-CD battery

Troubles	Possible Cause	Trouble Shootings
There is no voltage of the battery pack	the linking parts are loosened	Tighten or replace the linking part
	The battery is fully discharged	Recharge the battery pack in strict accordance with CIYI battery's instructions and check the insulations
there is no voltage of the single cell	Short-circuit,Open Circuit or no electrolyte inside the cell	Check the reasons after cleaning the cell, replace with the qualified electrolyte for the cell
	The cell is fully discharged	Recharge the cell in strict accordance with CIYI Battery's instructions
Electrolyte Leakage	The electrolyte level is too high	Clean the cell surface and carry out the charge-discharging ycles, then adjust the electrolyte level between the mina and max line level
	The vent plug is loosened or damaged	Tighten or replace the vent plug
	The cells are overcharged under high temperature. The charging voltage is too high or the charging current is too large	Dissemble and clean the cell, ensure the installation room is well ventilated. Stop charging immediately, when the temperature ofcell is very high, Check the circuit and adjust the charging voltage accordingly.
	Terminal Pole and vent plug is not well sealed	Tighten the nut or replace the defective sealing spare parts
Excessive water consumption	There is electrolyte leakage because of the broken battery container or defective vent plug	Check and replace the defective cell or vent plug
	Excessive overcharged or charged under high temperature	check the charging voltage and charging system

Troubles	Possible Cause	Trouble Shootings
The initial charging voltage is extremly high	Electrolyte is too little	Refill the distrilled water,then adjust the electrolyte level before the end of charging process
	The electrolyte level is too low to cover the cell plate	Refill the distrilled water,then adjust the electrolyte level accordingly
	The Cell is charged or discharged improperly	Charge or discharge the cell in strict accordance with CIYI Battery's instructions
	Short circuit or slight short circuit occurs in the interior of the cell	Replace the defective cell
	Carbonate content in the electrolyte is too high	Replace the electrolyte with qualityed ones.
	The cell is charged under too high or too low temperature	Keep the charging temperature within the range of 15°C to 30°C
	Memory Effect	Do the charge-discharge cycle to recover the cell capacity in accordance with CIYI battery's instructions
The charge voltage is lower than 1.56V/cell before the end of the charge	Normal capacity loss after a long time service (capacity lower than 70% of norminal capacity)	Replace the defective cell with qualified new ones
	The Calibration of instrument is inaccurate	Check and adjust the ampere meter and voltemeter
	The separator is damaged, because the cell is overcharged exclusively or work under high temperature	Replace the defective cell with qualified new ones
Cell container swells	The vent plug is blocked up	Clean the vents plug to make it smooth or replace it with new vent plug
	Plates bulge because of imporper usage	As Principle, ignor it when there is no influence on oerpation, otherwise replace it with qualified new battery
Connectors heat abnormally or net strike fire	The tight nuts are loosened	Check if the wave washer(or spring washer) are intact or not, change the defective washer with qualified ones, then tighten the nuts properly in accordance with Ciyi battery's instructions
The open voltage of battery pack is lower than N*1.27V (N means the numbers of cell series connected)	The cell capacity is lower than the nominal capacity	Carry out charge-discharge cycle and check the cell capacity
	There is short-circuit between the cells	Dissemble and clean the cell, then recharge it in accordance with CIYI battery's instructions
	The electrolyte is too little	Refill the distrilled water,then adjust the electrolyte level before the end of charging process
	The joint parts is disconnected	Tighten the nut
	Improper series connection	Check the wiring to shoot the troubles on series connection, then charge and discharge the cells in accordance with CIYI Battery's instructions
	Several cell is damaged	Replace the defective cell with qualified new ones
There is corrosion on the metallic linking parts	Acidic atomshere	Keep the cells away from the acidic source
	Lack of lubricating oil	Clean and lubricate the metallic linking parts of the cell properly
	The nickel plated coating of the metallic linking parts is damaged	Replace the Damaged Metallic linking parts
	There is green or black substance on the metallic linking parts	Soak the metallic linking parts with 3% -50% boracic liqor, then clear it

Introduction of Silver-Zinc Battery

Construction

Siver-Zinc battery has a silver oxide anode and zinc cathode, with the electrolyte of saturated potassium hydroxide and zinc oxide.

Advantages

It has the properties of small volume, light weight, large capacity, high specific energy and power, low self-discharge and steady discharge voltage, etc.

Application

It can be used as lighting, telecommunication, starting, powering, stand power for aircraft, precision instruments and remote measuring.

Silver-Zinc Rechargeable Battery

Model	Nominal Voltage (V)	Rated Capacity (Ah)	Max Dimension (mm)			Wet Weight (kg)	Electrolyte Volume (mL)	Terminal	Container Material	Application
			L	W	H					
CY-15XYG45-(3)	22.5	45	34	131	224	17	1875	M10	Stainless Steel	Aviation
CY-15XYG45-(3)A	22.5	45	512	131	218	18.3	1875	M10		
CY-15XYG45-(3)G	22.5	45	434	131	227	17.9	1875	M10		
CY-15XYG55	22.5	55	412	131	218	20	2025	M10		
CY-16XY25	24	25	230	168	130	7.5	720	M6		
CY-16XYG28	24	8	175	127	130	3.8	352	M6		
CY-XYG40	1.5	40	80	35	178	0.84	143	M8	Polysulfone	underwater ordnance
CY-XYG85	1.5	85	81	48	183	1.45	200	M8		
CY-XYG110	1.5	110	80	51	237	2.1	270	M16	Nylon	
CY-XYG110-(1)	1.5	110	80	50.5	237	2.11	270	M16	Polysulfone	
CY-XYG120	1.5	120	80	68	184	1.86	326	M8		
CY-XYG200	1.5	200	91	62	314	3.7	500	M14	Nylon	
CY-6XYG20	9	20	118	57	160	2.1	270	M6		
CY-2XYG80	3	80	78	70	245	3.07	440	M8/M14	Polysulfone	
CY-2XYG83	3	83	73	68.5	282	3.07	440	M8/M14		
CY-XY230*	1.5	230	91.5	64	64	3.7	625	M10	Nylon	Pressure-Proof
CY-XY600*	1.5	600	121	103	103	10.5	1450	M14		
CY-XY800*	1.5	800	116	98.2	98.2	12.8	1625	M10		
CY-XY1100*	1.5	1100	148	139	139	15.3	1900	M10		
CY-XY20	1.5	20	41	39	120	0.36	47	M6		instrumentation
CY-XY25	1.5	25	41	39	120	0.38	45	M6		
CY-XY50	1.5	50	56	53	160	0.93	135	M6		
CY-XY100	1.5	100	81	48	183	1.5	270	M8		
CY-XY150	1.5	150	80	51	237	2.1	270	M14		
CY-XYG45-(3)	1.5	45	57	53	160	0.95	125	M10		
CY-XYG45-(3)G	1.5	45	57	53	160	0.95	125	M10		
CY-XYG55	1.5	55	57	53	175	0.98	135	M10		
CY-XYG80	1.5	80	60	44	247	1.35	220	M10		
CY-2XY8	3	8	40	39	120	0.38	48	M5		
CY-2XYG8	3	8	41	39	120	0.36	44	M6		

Battery Solution Calculation Methods

1. Parameter of electrical equipment related to Battery

1.1 Electrical equipment data:Nominal output power W (KW); Nominal output voltage U (V); Working Time t (h)
1.2 Output Data of floating charge equipment of battery maximum output voltage U (V)
1.3 Operating ambient factor: T
1.4 Other correction factor: K

2. Number ofcell caculation:

2.1 Non-floating charging condition:Number of cell required=Nominal output system voltage/Singel cell nominal output voltage
2.2 Floating charging condition:Number of cell required= floating charge output voltage/median value single cell floating voltage

3. Battery Capacity Calculation:

3.1 Battery Minimum capacity capacity caculation:
Minimum capacity C1(AH)=Battery discharging current I(A) *Working Time t(h)
Nominal output power W/nominal output voltage U (v)*Working time t(h)
(Note: If output power fall into different group, total capacity is equal to the sum of each group capacity.)
3.2 Safety Factor
3.2.1 Dsicharge rate factor:
High discharge rate battery, actural power is less than nominal output power, please refere to discharge rate factor.K1=1/DOD% at specific discharge rate
3.2.2 Temperature Factor:
When operation temperature excesses routine temperature required, please refer to temperature factory K2=1/DOD% at specific temperature
3.2.3 Aging Factor:
There is aging occurence due to frequent use. Please refer to aging factory K3(1.2~1.3), Under usual condition, please choose 1.25
3.3 Nominal capacity C=C1*K1*K2*K3

4. This rule is only for your reference, we should choose battery model according to actual project.

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