



RECHARGEABLE SEALED LEAD ACID BATTERY 12V32AH (48V32AH)

Super Energy Density up to 60WH/KG.

Direct Cast-Welding Technology is applied to connect each cell, which makes the battery has lower internal resistance. 1.8C super large discharge current Up to 30 minutes.

Super long cycle life. 50% Depth of discharge is up to 1500 cycles (at 25°C) .

Super performance on High/Low temperature area .

Super fast charging. 30mintues fast charge into 70% nominal Capacity.

Product Application: Electric Scooter

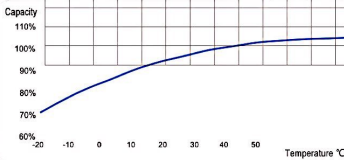
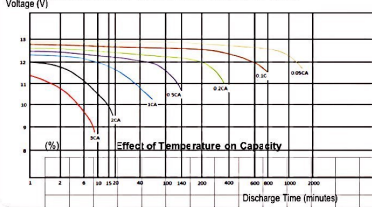
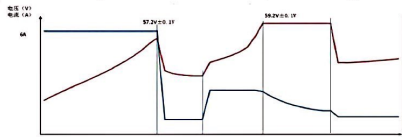
When combining four sets of 12V 32AH batteries in series, you can create a configuration that results in a 48V 32AH setup for an electric scooter.

COMPARISON BETWEEN AMPTEK SUPER GRAPHENE SERIES AND STANDARD BATTERY

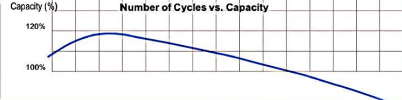
TESTING ITEM	STANDARD BATTERY	SUPER GRAPHENE 12V32AH/20HR	COMPARISON
INITIAL CAPACITY, FOR THE FIRST 3 CYCLES @ 2hr	20.2AH	24AH	18.8% IMPROVED
INITIAL CAPACITY, FOR THE FIRST 20 CYCLES @ 20hr	22AH	32AH	45% IMPROVED
MILEAGE PER FULLY CHARGE @600w MOTOR	60KM	135-142KM	75KM MORE
MILEAGE PER FULLY CHARGE @1500w MOTOR	45KM	88KM	43KM MORE
FAST CHARGING	NOT AVAILABLE	4-10A FAST CHARGING	FAST CHARGE
DISCHARGE TIME @ END-VOLTAGE : 12V	65 MINUTES	90 MINUTES	38% IMPROVED
WATER LOSS RATE	0.1 GRAM / CYCLE	0.06 GRAM/ CYCLE	40% DECREASED
DISCHARGE TIME @ -15 °C	94 MINUTES	112 MINUTES	19% IMPROVED
CYCLE LIFE @ 50% DOD@25 °C	500 CYCLES	1500 CYCLES	200% IMPROVED

SPECIFICATION

Nominal Voltage (V)	12V
Open Circuit Voltage (V/Block)	13.1V - 13.45V
Number of Cells (Per Block)	6 Cells
2h rate (to 1.75V/Cell)	24Ah
3h rate (to 1.75V/Cell)	26Ah
Rated Capacity (Ah, 25°C)	5h rate (to 1.80V/Cell) 27Ah
10h rate (to 1.80V/Cell)	30Ah
20h rate (to 1.85V/Cell)	32Ah
Nominal Weight (Kgs)	Approx. 7.2±0.1 Kgs
Dimension (L X W X H, Total Height. mm)	(181mm±0.5) X (78mm±0.5) X (172mm±0.5), (172mm±0.5)
Container Material	Enhanced ABS
Charge Voltage	13.50V - 13.80V
Float (V/Block)	14.60V - 14.80V
Maximum Discharge Current (A)	150A (5s)
Charge Current (A)	4-10A
Working Temperature(°C)	Operation (maximum): -20°C to 50°C
Storage Temperature(°C)	Operation (recommended): 20°C to 30°C
	-20°C to 50°C

Discharge Curves at Different Discharge Rate (25°C)

Charge Curve for 12V32AH/20HR(4 Blocks/String)


Phase 1: Constant charge current is 4A-10A until charge voltage is gradually rises up to 57.2V±0.1V; keepoff for 5 minutes
 Phase 2: Constant voltage 57.2V±0.1V and constant charge current 2A.
 Phase 3: When charge current drops to 0.6A then turn to 0.2A constant current charge for 90minutes. Temperature compensation rate is 2.5-4.0mV / (°C/°C)


RECOMMENDED SETTING PARAMETERS

Item	48V Battery Bank	60V Battery Bank	72V Battery Bank
Max. Charge Voltage (V)	58.6V-59V	73.3V-73.7V	88.0V-88.4V
Float Charge Voltage (V)	54.8V-55.2V	68.6V-69.0V	82.3V-82.7V
Charge Current (A)	4-10A	4-10A	4-10A
Shifting Current (A)	0.55A-0.6A	0.55A-0.6A	0.55A-0.6A
Temperature Compensation Coefficient (mV/°C/Cell)	2.5~4.0 mV/°C/Cell	2.5~4.0mV/°C/Cell	2.5~4.0mV/°C/Cell
Low-voltage Protection (V)	42V±0.5V	52.5V±0.5V	63V±0.5V
Limited Current (A)	≤25A	≤25A	≤25A
Turn-on Lock Current (A)	≤0.15A	≤0.15A	≤0.15A
Average Current (A)	≤10A	≤10A	≤10A
Electric Motor Power (W)	≤450W	≤600W	≤650W

* All the data and technical curves are for customer's reference only. This information is subject to change without any prior notice.

For More Information, please contact:

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