Elite Generator Solutions

Delkor®

HIGH QUALITY UPS & INVERTER BATTERIES

COMPLETE PROTECTION AGAINST REDUCTION OF SULPHURIC ACID

Preventing electrolyte losses by returning liquid to the reservoir.

LONGER LIFETIME

Longer life minimising vibration which reduces battery lifetime.

APPLICATIONS

Our batteries offer a versatile range of uses and can be applied to a number of specialists products.

- INDUSTRIAL BACKUP
- SMALL WIND ENERGY SITES
- UPS BACKUP & LIGHTING
- SMALL SOLAR APPLICATION SITES

THE DELKOR CALCIUM BATTERY IS A GENERAL PURPOSE SEMI-SEALED BATTERY WITH A DESIGN LIFE UP TO 3 TO 5 YEARS IN STANDBY SERVICE.

Delkor batteries uses a specially alloyed calcium-lead, which leads to extremely low levels of "electrolyte disease". Therefore there is no need to supplement distilled water if the charging system remains error-free. Special liquid-gas separators keep the electrolyte inside.

An electrolyte is any substance containing free ions that behaves as an electrically conductive medium. These separators are also used between the positive and negative plates of a lead acid battery to prevent a short circuit through physical contact. No filler caps are required therefore there is no electrolyte contamination, over-watering or damage in use.

Unique wrought lead-calcium grid design means less internal corrosion and efficient current conductivity for more power and longer life. It also cuts gassing, resists overcharge, heat and thermal runaway.

FEATURES

- Complete protection against reduction of sulphuric acid
- Preventing electrolyte losses by collecting and returning liquid to the reservoir
- High durability achieved by adoption of special wrought lead calcium grids
- Low resistance envelope separator

NS40

NS60

NS70

1150K

MODEL	TERMINAL TYPE	TERMINAL TYPE	NOMINAL CAPACITY (20hr/Ah)	WEIGHT (Approx. kg)	RESERVE CAPACITY (Minutes)	HEIGHT (mm)	LENGTH (mm)	WIDTH (mm)
NS40	12	SAE Post	35	9.54	52	230	200	135
NS60	12	SAE Post	45	11.52	75	230	240	135
NS70	12	SAE Post	65	16.86	110	230	265	190
1150K	12	Nut	105	26.19	180	240	335	175

CONSTANT POWER DISCHARGE CHARACTERISTICS UNITS: WATTS (25°C) @ 1.67 VOLTS PER CELL

BATTERY TYPE	7 Min	10 Min	15 Min	20 Min	30 Min	45 Min	60 Min	90 Min	2 Hr	3 Hr	5 Hr	8 Hr	10 Hr
NS40	918	798	654	498	396	270	198	144	120	84	60	39.6	32.4
NS60	1146	996	822	648	510	384	294	204	168	120	78	49.8	41.4
NS70	1722	1500	1140	870	708	498	420	276	234	186	114	73.8	60.6
1150K	1998	1698	1398	1182	912	696	558	414	354	580	180	116.4	96

TERMS AND RATINGS

Reserve Capacity Minutes

(RCM), also referred to as reserve capacity (RC), is a battery's ability to sustain a minimum stated electrical load; it is defined as the time (in minutes) that a lead-acid battery at 80°F (27°C) will continuously deliver 25 amperes before its voltage drops below 10.5 volts.

The Hydrometer

The Hydrometer measures the density, and therefore indirectly, the amount of sulphuric acid in the electrolyte. A low reading means that sulphate is bound to the battery plates and that the battery is discharged. Upon recharge of the battery, the sulphate returns to the electrolytes.

CLAMPING OPTIONS

Batteries typically have different types of terminals. In past years, the most common design was the SAE Post, consisting of two lead posts in the shape of truncated cones, positioned on the top of the battery, with slightly different diameters (to ensure correct polarity).

SAE POST & WING NUT

1150K NUT

SAE POST

PACKAGING OPTIONS

Convenient battery boxes are supplied with each unit for ease of carrying as well as stacking of batteries.

NS40

NS70

1150K

CHARGING INSTRUCTIONS

The battery is an energy storage reservoir. When energy is removed from the battery, it must be put back by recharging. The amount of energy to be put back depends on how much was taken out. The time it will take depends on the ampere out of the charger used. Delkor batteries have a built-in state-of-charge indicator to show how much energy is left in the battery. A green coloured ball or black coloured ball may be visible in the indicator. The indicator is also used to determine how long the battery should be recharged as follows:

INDICATOR COLOUR	BLACK	GREEN
State-of-Charge	Below 50%	Above 70%
Minimum Charge Time	24 Hours	8 Hours

- Temperature during charge: 15.5°C to 26.6°C
- Recommended charging ampere: 0.1C; Therefore 0.1 x 100A/h (1150K) = 10Amps charging

HOW TO HANDLE AND STORE BATTERIES

- Batteries should be stored in cool, dry (27°C) places and out of direct sunlight (make sure the battery is fully charged)
- Delkor batteries are tightly sealed to prevent acid leakage. However, tilting the battery to an angle of 45 degrees can cause acid to leak through the vents on the sides. Therefore, batteries should always be stored in their upright positions. Prevent placing any aqueous or solid (i.e. conductors) bodies on top of the battery
- UN2794 "United Nations Committee of Experts on transport of dangerous goods defines the batteries as wet, filled with acid and electric storage
- It is extremely dangerous to use tools, such as hammers, on the battery terminals when connecting cables to the mounted battery
- When storing the battery for long periods of time, check the voltage of the battery every six months. If the voltage (OCV) drops below 12.5V, recharge the battery before placing it back in storage
- Check the hydrometer periodically on stored batteries. If one or two of the indicators appear black, immediately recharge the respective lot

Elite Generator Solutions

World-Class Diesel Generators Systems

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