

# DBX-Power AGM Battery

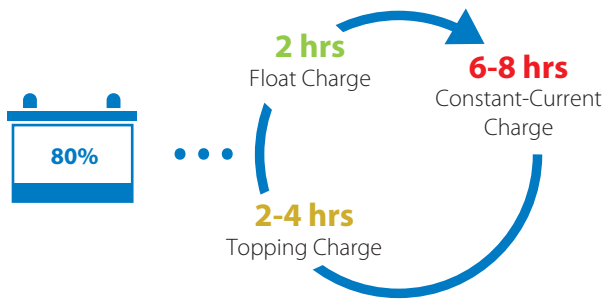
## Care, Safety & Best Practices



The following best practices apply to the **DBX-Power** AGM batteries **ONLY**. For any maintenance or care information for the older batteries, please refer to the "Dustbane Battery Care & Maintenance for AGM Batteries"

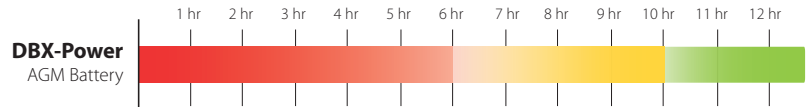
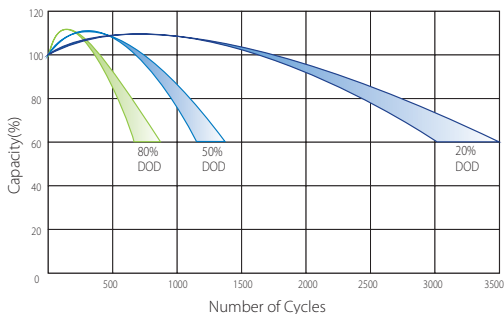
### Optimizing Charging Conditions to Extend Service Life of Your DBX-Power AGM Batteries

The **DBX-Power** batteries use the constant current charge method. The charge time is 10-12 hours. Batteries are charged in three stages: the *constant-current charge* stage, the *topping charge* stage, and the *float charge* stage.



During the first stage, the bulk of the charge is applied. The battery will charge to about 70% in 6 to 8 hours, while the remaining 30% is filled during the topping charge stage, which lasts for 2-4 hours. The topping charge continues the charge, but at a lower charge current. All these stages are essential for the well-being of the battery. Opportunity charging – a quick charge for a few hours – will deprive the battery from the topping charge stage. Although this topping stage might seem unnecessary, it gives a break to the battery – like a little rest after a good meal. Continually depriving the battery from this topping stage, will cause it to eventually lose its ability to accept a full charge. Lastly, the float charge maintains the battery at full charge until the charger is unplugged, for a maximum of 14 hours.

### Cycle Life in Relation to Depth of Discharge



### Depth of discharge

A single cycle occurs when the battery is charged and then discharged. The lower the depth of discharge, the greater the cycle life. The **DBX-Power Series** battery is designed for the cleaning industry and can easily deliver more than 600 cycles at 80% DOD.



#### Wear PPE

**ALWAYS** wear the proper personal protective equipment (PPE), such as goggles and protective gloves when working around batteries.



#### Prevent Accidental Shorting

**NEVER** wear jewellery when working on or near batteries or battery chargers.  
**NEVER** place metal objects on top of the battery. Metal contact can cause the battery to short circuit.



#### Be Mindful

**ALWAYS** make sure that the charger is off before connecting or disconnecting batteries to the charger.  
**ALWAYS** disconnect the negative (ground) cable first when replacing the batteries to prevent sparks. **ALWAYS** connect the negative cable last when installing batteries.



#### Inspect Regularly

Check for damaged cables or connectors. **REPLACE** any battery that has signs of damage to the terminals, case or cover.



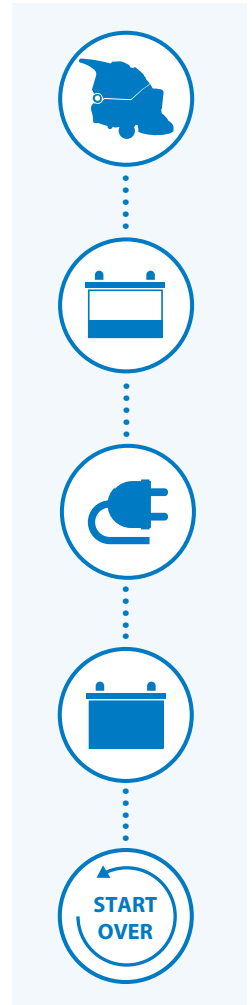
#### Do Not Attempt To Open This Battery

If a battery is opened, it loses its pressure and the plates become oxygen contaminated.  
**THE WARRANTY WILL BE VOIDED IF THE BATTERY IS OPENED.**



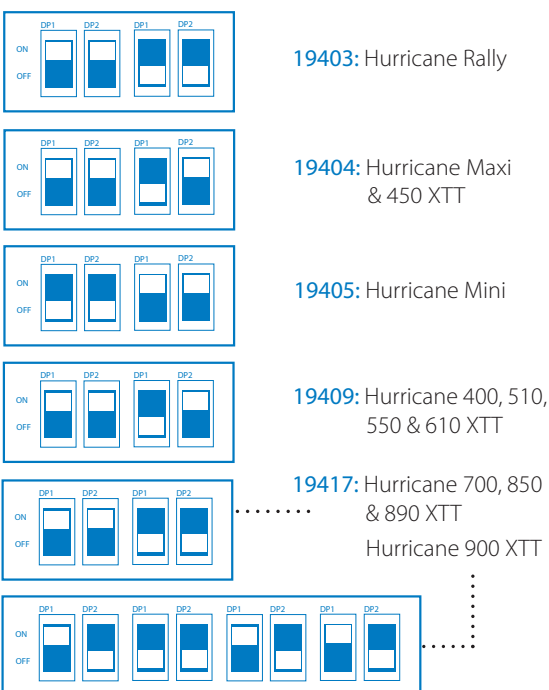
## Proper Charging Guidelines

- In order to maximize the life of the **DBX-Power** battery, the batteries should only be charged after a minimum of 20 minutes of usage.
- Let machine rest for 1 hour before and after charging to avoid damaging/reducing battery life.
- Opportunity charging of the **DBX-Power** battery is NOT recommended.
- **DBX-Power Series** batteries can be charged overnight without any risks of overcharging. The onboard charger will automatically shut off once the batteries are fully charged (max 14 hours).
- We recommend using 60% to 80% of power before recharging is carried out. Discharging of less than 50% and not recharging 100% will result in stress on the battery and reduce battery life.
- Avoid battery overdischarge, especially when battery series connection is used. The depth of discharge will affect your battery cycle life. The harder the battery has to work to recharge, the shorter its life expectancy.
- There are a number of factors that will affect the length of cyclic service. The most significant are depth of discharge, ambient temperature, discharge rate, and the manner in which the battery is recharged. Generally speaking, the most important factor is depth of discharge.
- Do not leave your **DBX-Power** battery in a low state of charge for extended period of time. Charge a discharged battery as soon as possible.
- Avoid charging at temperatures above 120°F or ambient, whichever is higher.
- The charge voltage should be reduced with increased temperature. Temperature compensation is required when the temperature of the battery is expected to be less than 10°C / 50°F or more than 30°C / 85°F during long periods of time. The recommended temperature compensation for **DBX-Power** batteries is -4 mV / Cell (-24 mV /°C for a 12V battery).
- Never put a new battery in a pack which has 50 or more cycles or mix a **DBX-Power** battery with any other type of batteries. Either replace with all new or use good used batteries.



## Setting Up the Onboard Charger

\*If you are using a **DBX-Power** battery, the following adjustments to the DIP switches are required :



## Storage

Even when your floor equipment is turned off, there still may be a drain on the battery. Over time, they will drain a battery to voltages too low to start the equipment. It could even continue to drain to the point of damaging the battery. Follow these simple steps to considerably extend the life of the battery.

- Always store batteries fully charged.
- Because of the use of lead-calcium grids, AGM batteries can be stored during long periods of time without requiring a recharge.
- The rate of self-discharge is less than 2% per month at 25°C. The self-discharge doubles for every increase in temperature by 10°C. Depending on storage temperature and the state of charge when put into storage, batteries can usually sit for 8 to 12 months and start most equipment. Charge the batteries at least once every 6 months if they are stored at 25°C.
- Store your battery in a cool, dry location. Avoid extreme hot and cold temperature.
- Do not store directly on a concrete surface.
- No watering is required for AGM batteries.

\*Dustbane assumes no obligation if the specific instructions on the maintenance, use and adjustments to the DIP switch are not respected. Any negligence and misuse could result in the cancellation of the warranty.