

# PowerShell® with Extended Life Battery Getting Started Guide



**Z<sup>2</sup>**  
™  
by Breas

# Battery Warnings and Cautions

The *PowerShell* comes with a removable *Lithium Ion Battery*. Careful attention must be paid to the warnings and cautions described below relating to the *Battery*. Misusing the *Battery* may cause the *Battery* to get hot, rupture, ignite and cause serious injury.

## ⚠ **WARNINGS:**

- Do not place the *Battery* in fire or heat the *Battery*.
- Do not install the *Battery* backwards so that the polarity is reversed.
- Do not connect the positive terminal and the negative terminal of the *Battery* to each other with any metal object (such as wire).
- Do not carry or store the *Battery* together with necklaces, hairpins, or other metal objects.
- Do not pierce the *Battery* with nails, strike the *Battery* with a hammer, step on the *Battery* or otherwise subject it to strong impacts or shocks.
- Do not solder onto the *Battery*.
- Do not expose the *Battery* to water or salt water, or allow the *Battery* to get wet.
- Do not disassemble or modify the *Battery*. The *Battery* contains safety and protection devices which, if damaged, may cause the *Battery* to generate heat, rupture or ignite.
- Do not place the *Battery* on or near fires, stoves or other high-temperature locations. Do not place the *Battery* in direct sunlight, or use or store the *Battery* inside cars in hot weather. Doing so may cause the *Battery* to generate heat, rupture or ignite. Using the *Battery* in this manner may also result in a loss of performance and a shortened life expectancy.
- Immediately discontinue use of the *Battery* if, while using, charging or storing the *Battery*, the *Battery* emits an unusual smell, feels hot, changes color, changes shape or

appears abnormal in any other way. Contact the Breas Medical Service Center at 1-855-436-8724 if any of these problems are observed.

- Do not place the **Battery** in microwave ovens, high-pressure containers, or on induction cookware.
- In the event that the **Battery** leaks and the fluid gets into one's eye, do not rub the eye. Rinse well with water and immediately seek medical care. If left untreated the battery fluid could cause damage to the eye.
- Only charge the **Battery** with the supplied Breas Medical **PowerShell** and the supplied Breas Medical **Power Supply**. Do not use any other removeable battery charger, AC adapter, or other device to charge the **Battery**.
- Do not attach the **Battery** directly to a vehicle cigarette lighter or to the **Power Supply** plug.
- Do not continue charging the **Battery** if it does not recharge within the specified charging time. Doing so may cause the **Battery** to become hot, rupture or ignite.
- Remove the **Battery** from the **PowerShell** if the **Z2** is not likely to be used for some time. Do not use the **Battery** to power any device other than the **Z2**.
- Only use or charge the **Battery** within the operating temperature, humidity and altitude conditions specified in the Technical Specifications section of this User Guide.
- Only store or transport the **Battery** within the storage and transport temperature and humidity conditions specified in the Technical Specifications section of this User Guide.

 **CAUTION:**

- When the **Battery** is worn out, insulate the terminals with adhesive tape or similar materials before disposal.

# Welcome!

The **PowerShell** is an integrated battery carrier that unifies everything you need for a great night of sleep without cords. Please read the entire **Z2™ User Guide** for complete instructions on using the **Z2 CPAP**. The **PowerShell** is also fully compatible with the **Z1® CPAP** system.

## Package Contents:



PowerShell with  
Neoprene Sleeve



Extended Life  
Battery with Shuttle

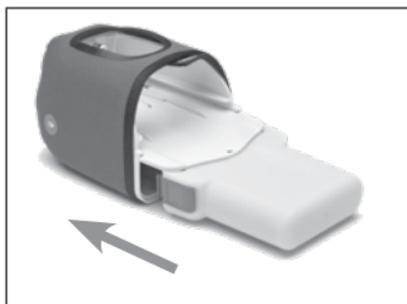
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**⚠ WARNING:** The **Z2** must only be used with the optional Breas Medical **PowerShell** with Breas Medical **Battery** (or the Breas Medical **Power Supply**). **DO NOT** use any other power source with the **Z2**.

# Instructions for Use

**1.** Slide the battery into the lower bay of the **PowerShell** until you hear the shuttle click indicating the battery has locked into place.

**NOTE:** The **Battery** can be removed from the **PowerShell** by pressing the two blue buttons on the **Battery Shuttle** and sliding the **Battery** out.



**2.** Slide the **Z2** all the way into the upper bay of the **PowerShell**. You will hear the **Z2** click indicating that it has locked into place. The **Z2** will power on in standby mode. The display will read 0.0.

**CAUTION:** Insert the **Z2** carefully ensuring the power barrel connector slides into the power input on the **Z2**.



**NOTE:** The **Z2** can be removed from the **PowerShell** by pressing the two [▶] symbols on the sides of the **PowerShell** and sliding the **Z2** out.

**NOTE:** Remove the **Battery** from the **PowerShell** when the **Z2** is not in use, unless the **Power Supply** is plugged into the **PowerShell** to charge the **Battery**. Otherwise the **Z2** and **PowerShell** will drain the battery completely within 2-3 days.



3. Connect one end of the CPAP tube to the round end of the tube adapter. Insert the other end of the tube adapter into the outlet of the **Z2** as shown.

Connect the other end of the CPAP tube to the mask. Ensure all connections are tight to avoid air leaks.

If you are using a **Qtube** and **HME**, the order of pieces are as follows: **PowerShell**, tube adapter, 8" tube, **Qtube**, 4' tube, **HME**, mask.



4. Push the start/stop button (⏻) to initiate therapy. Push this button a second time to stop therapy.

Alternatively, the **Z2 Auto** features an **Auto On/Off** which starts therapy when you place the mask on your face and start to breathe and stops therapy when the mask is removed.



**NOTE:** It is recommended that you fully charge the battery prior to each use. Instructions on how to charge the battery follow in this guide.

## Charging the Battery

**1.** With both the **Z2** and the **Battery** fully inserted into the **PowerShell**, plug the **Power Supply** into the **PowerShell** as shown and into a power outlet.



**⚠ WARNING:** Only charge the **Battery** with the supplied Breas Medical **PowerShell** and the supplied Breas Medical **Power Supply**. Do not use any other battery charger, AC adapter, or other device to charge the **Battery**.

**⚠ CAUTION:** Make sure your **Battery** is fully charged before commencing CPAP therapy using the **PowerShell**. The battery life of a fully charged **Extended Life Battery** in the **PowerShell** is typically 8.9 hours or longer, after which treatment will terminate.

**2.** Ensure the **Z2** is in standby mode (display reads 0.0). The **Battery** will not charge unless the **Z2** is in standby mode. The **Battery** status indicator on the **Z2** will flash when the **Battery** is charging. The number of solid bars indicates the current level of charge. The battery status indicator will stop flashing when the **Battery** is fully charged.



| Number of Solid Bars | Charge Remaining |
|----------------------|------------------|
| 1                    | 10-35%           |
| 2                    | 35-63%           |
| 3                    | 63-90%           |
| 4                    | 90-100%          |

Typically it will take 12 hours to fully charge the battery. After a few minutes, the back light of the display will turn off. This is to conserve power. It does not indicate that the battery is fully charged.

**NOTE:** The *PowerShell* will not charge the battery at the same time as you are using your *Z2* for treatment.

## Trouble Shooting Tips

### Battery is not charging

1. Disconnect the *Z2* from the *Battery* and the power supply.
2. If you squeeze the arrows on the sides of the *PowerShell*, you should feel the *Z2* release.
3. Reassemble the *Z2* and the battery to the *PowerShell* and to the power supply. When reassembling, make sure you hear the components click together and see that the DC plug (silver cylinder in the bottom of *PowerShell*) goes into the hole in the *Z2*.
4. Make sure to fully charge the *Battery* for 12 hours after use.
5. The battery icon on the *Z2* screen will stop flashing and all bars will be solid.

**NOTE:** Battery icon starts showing 4 bars at 90% charge. Wait for battery icon on *Z2* LCD screen to stop flashing.

## Battery Losing Its Charge Between Trips

If you are not traveling on a regular basis, your battery may discharge completely between trips. It is recommended that every few weeks you fully charge your battery to maintain a charge on it. When it is fully charged, remove from *PowerShell* and store it separately so it does not drain the battery charge.

### To Release Z2 from PowerShell

Press and hold the 2 blue arrow buttons at the bottom of the grey sleeve of the *PowerShell* while simultaneously pulling up on the Z2.



### To Release Overnight Battery from PowerShell

Press and hold the 2 blue buttons on the white cap of the battery, and with even pressure, pull up at the same time.

## Using the DC Mobile Adapter

Your *PowerShell* Battery can be charged with the *DC Mobile Adapter* using most automobile charging systems. The amount of time will vary, depending on the voltage delivered by the car battery. Some cars chargers only work while the car is running. Ideally the Mobile Adapter would be used while the car was being driven during the day, so the battery will be charged for the night.

We cannot guarantee the mobile adapter will function with all cars.

**NOTE:** Your *DC Mobile Adapter* cannot be used to run your Z2.

## **Minimum Voltage Needed to Charge your Z2**

12 volts.

## **Battery Life**

The battery life varies depending on the altitude and pressure setting of the unit. Higher altitudes and higher pressures will use more battery life.

Temperature can also be a factor. Colder weather will use more battery life. The battery is designed to be used in temperatures between 41° F and 95° F.

Do not charge the battery in temperatures above 80°F.

# PowerShell with Extended Life Battery Specifications

Longevity (typical operating time)\*

| Z-Breathe Setting | Treatment Pressure    | Operating Time |
|-------------------|-----------------------|----------------|
| 3                 | 20 cmH <sub>2</sub> O | 8.9 hours      |

\* Results reflected were obtained via bench testing under simulated operating conditions at the highest machine settings. Actual run time may vary due to machine settings, machine pressure and personal breathing. Lower pressures will result in longer battery operating times.

|                                   |  |
|-----------------------------------|--|
| Capacity                          | 99.4 Watt-hours  |
| Lifetime                          | approximately 300 charge/<br>discharge cycles  |
| Shelf life                        | Batteries are shipped with<br>between 30% and 50% of<br>rated capacity, providing a<br>minimum of 6 months shelf<br>life when stored at 25°C. If<br>storage temperature exceeds<br>25°C over a 6-month period<br>then shelf life will be reduced<br>and the battery should be<br>recharged periodically. |
| Storage and transport temperature | -4°F to +140°F (-20°C to<br>+60°C)   |
| Storage and transport humidity    | 10–95% Relative Humidity,<br>Non-Condensing  |
| Battery Technology                | Lithium Ion Battery Pack,<br>4S2P  |
| Weight                            | Approx. 15.5 oz (440g)   |
| Charging                          | Battery charges when Z2 is in<br>standby mode.   |

Designed and assembled in the United States of America.

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