



Powerstar X series battery



Powerstar Inc. introduces a new eXtreme duty VRLA cell for our product line- the X series utilizing hawker tm batteries from enersys inc. . This high performance cell is used in our PSRBC7x, PSRBC11x, PSRBC55x replacement battery cartridges.

PS2201, PS6003T, PS6003rm5u, ps1503,1504 UPS or any unit using our 12V 18amp/hr cell.

The X series has the same shape, fit, form and function as our Standard & Premium 'H' series line. No modifications are needed. The PSRBC...x will slip right into your Powerstar UPS

Improved Shelf storage time to 2 years*

-40°C to +80°C operating temperature range

Flame retardant rugged case UL94V-O

Corrosion resistant Brass terminals

Long life >12 year /400 complete cycles

Increased power storage capacity

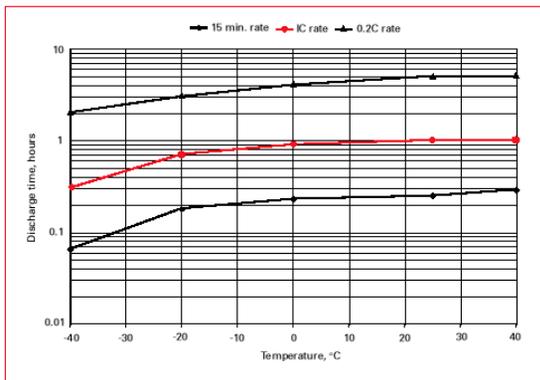
Designed for Shock and Vibration applications

1) **Same Fit and Function-** Any minor dimensional differences will be filled with included padding sent with every PSRBC..x. Quick Connect connectors and harness are included with every PSRBC..x

2) **Improved shelf storage life**, up to 2 years @25°C*, without a freshening charge. (A Freshening charge resets that "2 year shelf storage countdown"). This storage improvement is due to the Pure Lead /Tin construction and plate purity. Recharge when voltage drops to 12v (~2 years). NOTE: If you need to store cells for longer periods, we offer shipboard/ land based chargers that handle up to 4 packs simultaneously to apply the freshening charge.

3) **Expanded Operating temperature range.** The cell is created using a Pure Lead-tin technology.

Temp.	-20°C	0°C	25°C	40°C	55°C
Capacity @ 15 minute rate	65%	84%	100%	110%	120%



Discharge Capacity reduction due to Temperature

Although the battery may be used at reduced capacity from -40°C to -20°C, it is advised these batteries be installed in temperature regulated areas to obtain the maximum runtime expected of them.

At -40°C, capacity is reduced.

The battery will perform with:

60% of its 5 hour rated capacity,

30% of its 1 hour capacity or

27% of its 15 minute capacity.

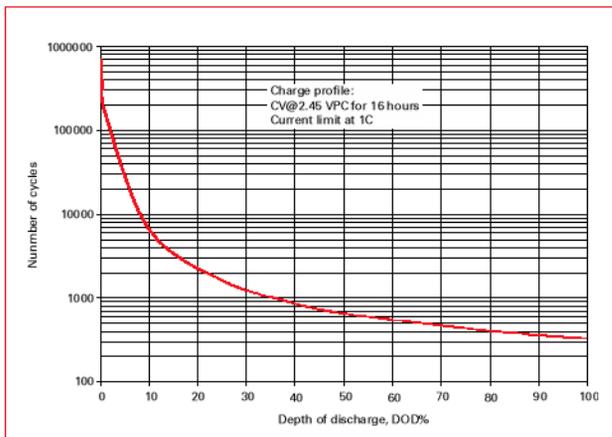
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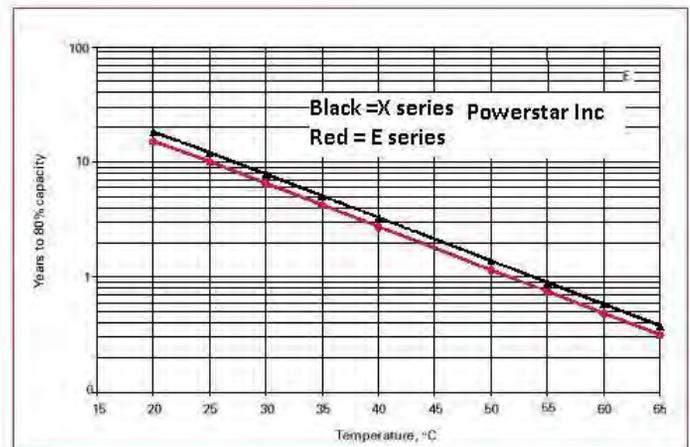
4) High Quality Safe Case The **X** case is UL94V-0 flame retardant non-halogenated plastic. The case is compliant with the German Dioxin Ordinance of 1994. LOI >28%. **UL** component recognized. The cell uses AGM (Absorptive Glass Mat) technology and Valve Regulated Gas Recombinant Lead Acid design. The case and the plate design are engineered for shock and vibration ruggedness. Brass nodes are used for corrosion resistance. The battery is spill proof.

5) Brass Nodes Battery terminals are corrosion resistant brass. Tighten to 50 in-lb. (5.6Nm). All PowerStar Replacement Cartridges come with a new interconnect harness including a Battery/ UPS connector to eliminate the worry from corrosion.

6) Long float Life Life is rated for >12years @25°C or 400 full discharge cycles whichever comes first. These cells are designed to last at least 2X the life of a high quality standard UPS battery. The Pure Lead process again offers the additional life along with the gas recombinant system that captures any off gassing from charging and converts it back to electrolyte. And the cells should last 3-4x the life of lesser quality replacement cells (*Powerstar does not offer these lesser quality cells, but they are out there & we hear about them!*) Note: Cell Life is rated @80% of original capacity.



Life expectancy for Depth of Discharge per cycle. (Powerstar UPS does not fully discharge the pack before it shuts down.) (50-70%)



Battery Float charge Life (in service life) vs. average temperature

7) Increased Capacity. These tests performed @ 25°C with a PS1504 test unit.

Sept 2012 test of PS1504	50% load	100% load
PSRBC7	23.9 minute	6.7 minute
PSRBC7x	27 minute	8.5 minute

Environmental and Transportation

This battery is safe for use in human environments. This battery can be used in hospitals or offices. Case is non-halogenated plastic with no PBB, PBBE, PBBO, PBDPE, PBDPO, TBBA or DBBPE. This battery has been tested to be functional to 88kPa (50,000ft). This battery has been tested to comply with pressure differential test of DOT HMR49 for non-hazardous material, International Civil Aeronautics Organization ICAO, & IATA packing instruction 806 & special provision A67. This battery is **Air Shippable with no restrictions**. The outer packaging requires a label "**NONSPILLABLE**". Battery has been tested to meet CFR49 § 173.159(d). The packaging **does not require DOT hazard warning labels**.