

Super High Energy Series

Nickel-Metal Hydride

VH Cs 3200 XL

Saft has upgraded its Ni-MH Cs range with the VH Cs 3200 XL offering +30% more life duration than the previous version. This cell is ideally suited for cordless power tool applications requiring a fast charge and a high discharge rate (40A), as well as energy applications thanks to its excellent capacity of 3200 mAh.

To meet customers' requirements, Saft provides custom-designed and standardized battery systems including electronic monitoring units.

For your battery design and system needs, please contact Saft's engineers.

Applications

- Cordless power tools
- Professional appliances
- Professional flashlights
- Personal electric vehicles
- Radio control models
- Vacuum cleaners

Main advantages

- Super high capacity
- Excellent cycling performance
- High mid-discharge voltage
- Extended storage capability

Technology

- Foam positive electrode
- Metal-hydride negative electrode
- Innovative mechanical closure process

Temperature range in discharge

- 10°C to + 40°C



Electrical characteristics

| | |
|----------------------------|-----------|
| Nominal voltage (V) | 1.2 |
| Typical capacity (mAh)* | 3200 |
| IEC rated capacity (mAh)* | 3000 |
| IEC designation | HRX 23/43 |
| Impedance at 1000 Hz (m Ω) | <4 |

* Charge 16 h at C/10, discharge at C/5.

Dimensions

| | |
|-----------------------------|-------------|
| Diameter (mm) | 22.0 ± 0.05 |
| Height (mm) | 42.7 ± 0.2 |
| Top projection (mm) | 0.8 ± 0.2 |
| Top flat area diameter (mm) | 9.0 min |
| Weight (g) | 58 |

Dimensions are given for bare cells.

Charge conditions

| Rate | Time (h) | Temp. (°C) | Charge current (mA) |
|----------|-----------------------|------------|---------------------|
| Fast | 1-2 | 0 to + 35 | up to 3000 |
| Standard | 16 | 0 to + 40 | 300 |
| Topping | (after a main charge) | | 200 to 300 |
| Trickle* | (after topping) | | 80 to 100 |

End of charge cut-off is requested: dT/dt recommended, -dV acceptable.

Maximum discharge current

| | |
|--------------------------|-----|
| Continuous (A) at + 20°C | 40 |
| Peak (A) at + 20°C* | 150 |

* Peak duration: 0.3 second - final discharge Voltage 0.6 Volt/Cell.



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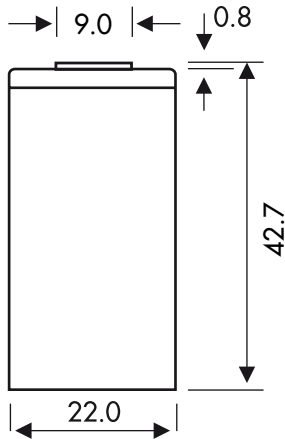
Storage

Recommended: + 5°C to + 25°C
Relative humidity: 65 ± 5 %

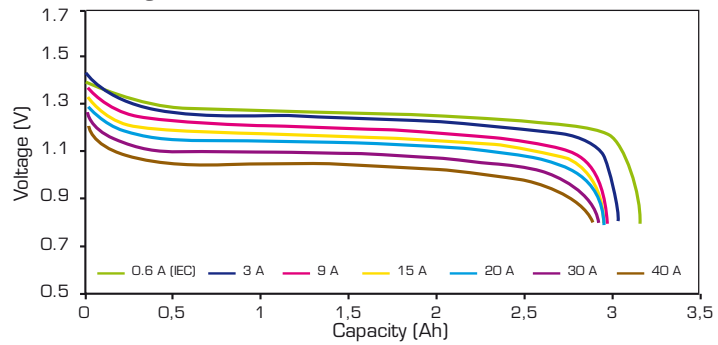
Typical performances

For graphs shown, C is the IEC₅ capacity.

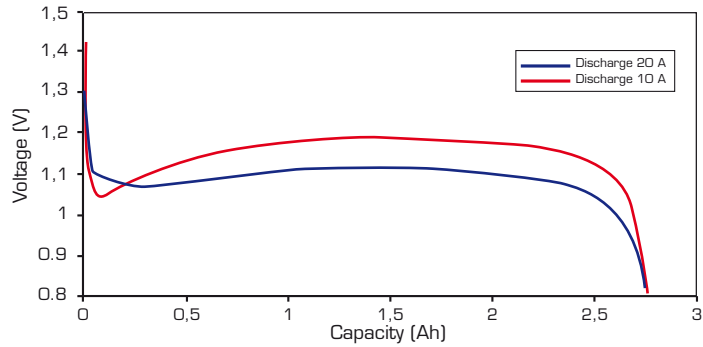
Dimensions are in mm.



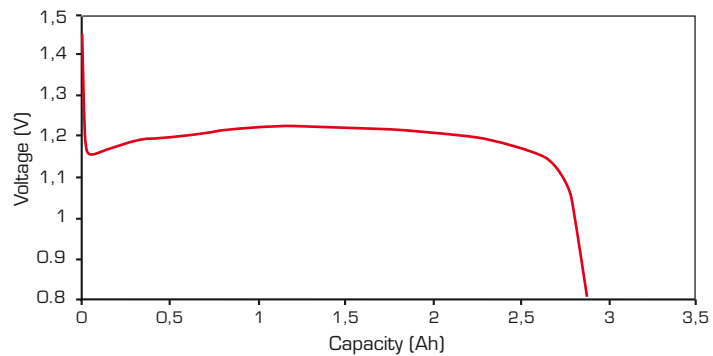
Discharge at different discharge rates at room temperature after charge 2h24 at C/2



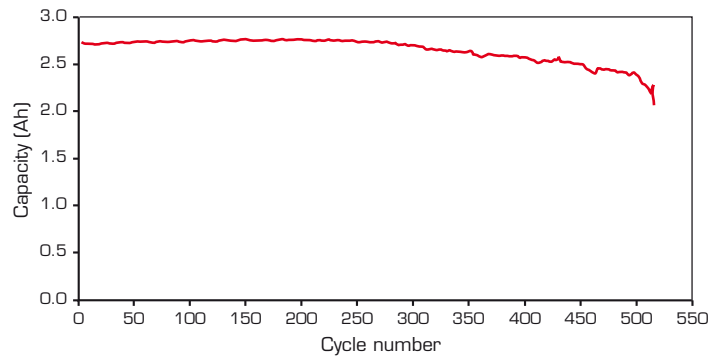
Discharge at different discharge rates at -10°C after charge at C



Discharge at 5A at -20°C after charge at C



Capacity evolution during cycling at room temperature (Discharge at 10A after fast charge for a 18V battery pack)



Data are given for single cells.
Please consult Saft for any use of this cell in other conditions than those given in this data sheet.

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DOC N°11116-2-0309

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Published by the Communication Department

Saft S.A. Stock capital 31.944.000 €

RCS Bobigny B 383 703 873

Designed by Soyouzgraphic.com



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