

Super High Energy Series

Nickel-Metal Hydride

VH F XP



The VH F XP cell is especially designed to meet any application where power and long autonomy are required, such as personal electric vehicles, and professional appliances. The suffix "XP" stands for eXtended Power and illustrates the higher power capability of the VH F XP.

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

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

Applications

- Electric bicycles
scooters and wheelchairs
- Professional lighting
- Audio equipments
- Vacuum cleaners

Main advantages

- Super high capacity
- Fast charge ability
- Good storage ability
- Excellent cycling performance

Technology

- Foam positive electrode
- Metal-hydride negative electrode

Temperature range in discharge

- 10°C to + 40°C

Storage

Recommended: + 5°C to + 25°C

Relative humidity: 65 ± 5 %

Electrical characteristics

Nominal voltage (V)	1.2
Typical capacity (mAh)*	15300
IEC minimum capacity (mAh)*	14500
IEC designation	HRH 33/91
Impedance at 1000 Hz (mΩ)	2.5

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

Dimensions

Diameter (mm)	32.15 ± 0.10
Height (mm)	88.8 ± 0.4
Top projection (mm)	1.4 ± 0.4
Top flat area diameter (mm)	5.6
Weight (g)	252

Dimensions are given for bare cells.

Charge conditions

Rate	Time (h)	Temp. (°C)	Charge current (mA)
Fast	3-4	0 to + 35	up to 5000
Standard	16	0 to + 40	1500
Trickle*	(after a topping)		300 to 400
Topping	(after a main charge)		500 to 1500

End of charge cut-off is requested: dT°C/dt recommended.

* Trickle charge follows fast charge.

Maximum discharge current

Continuous (A) at + 20°C	50
Peak (A) at + 20°C*	180

* Peak duration: 0.3 second - final discharge voltage 0.6 volt./cell.

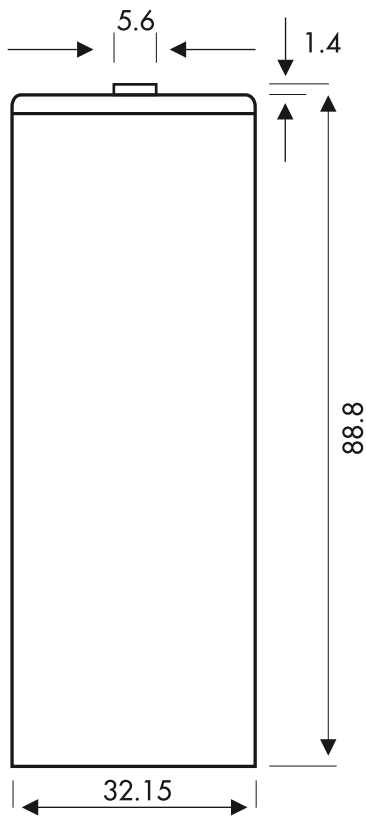


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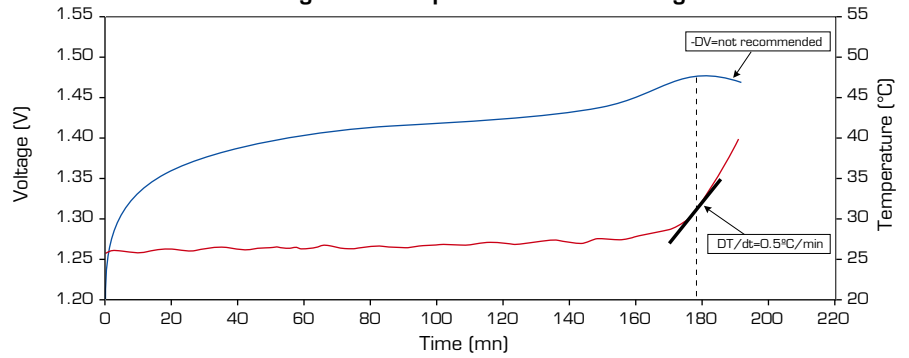
Typical performances

For graphs shown, C is the IEC₅ capacity.

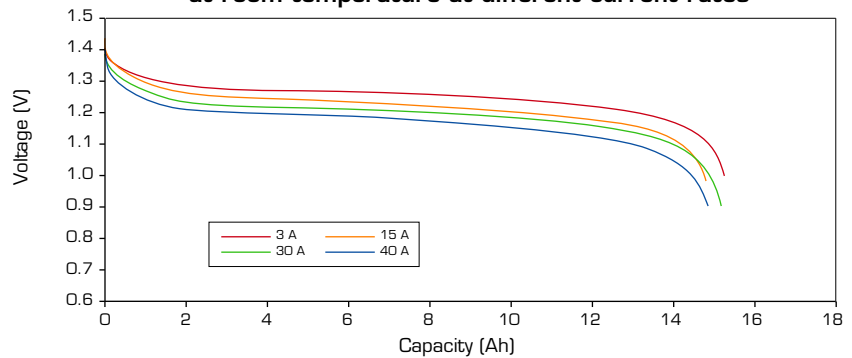
Dimensions in mm.



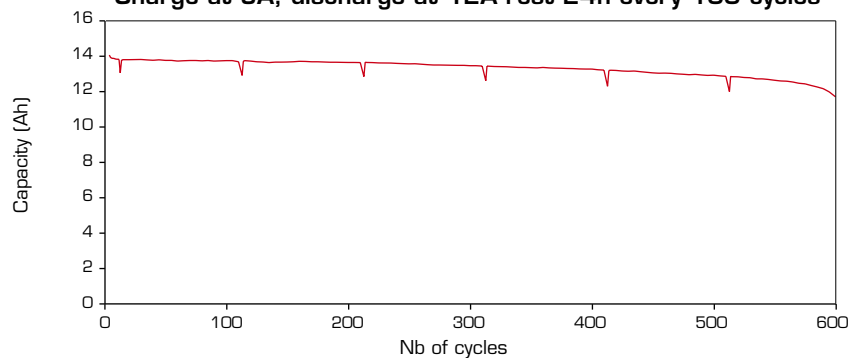
Voltage and temperature at 5A charge



Discharge curves at room temperature at different current rates



Cycling at room temperature Charge at 5A, discharge at 12A rest 24h every 100 cycles



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.

Saft

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