

SUPER HIGH ENERGY SERIES

Nickel-Metal Hydride

VH F

Saft continues the extension of the Super High Power series with the upgraded Ni-MH F cell, VH F.

This cell, designed to fit electric bikes as well as hybrid vehicles, is also very well adapted for any application where cycling and energy are required, such as gardening equipments.

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

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



Applications

- Electric bicycles and scooters
- Hybrid vehicles
- Lawn and gardening equipments
- Military electronics
- Professional video cameras

Main advantages

- Super high capacity
- Quick and fast charge
- Extended cycle life
- Improved storage ability

Technology

- Foam positive electrode
- Metal-hydride negative electrode

Temperature range in discharge

0°C to +40°C

Storage

Recommended: +5°C to +25°C

Relative humidity: 65 ± 5%

Data are given for single cell.

Please consult Saft for utilization of cell outside this specification.

Electrical characteristics

Nominal voltage (V)	1.2
Typical capacity (mAh) at C/5	13500
Minimum capacity (mAh) at C/5	12500
IEC designation	HR 33/62
Impedance at 1000 Hz (mΩ)	<5

Dimensions

Diameter (mm)	32.15 ± 0.10
Height (mm)	89.1 ± 0.4
Projection (mm)	1.4 ± 0.4
Flat area diameter (mm)	5.6
Weight (g)	250

Dimensions are given for bare cells.

Charge conditions

Rate	Time (h)	Temp. (°C)	Charge current (mA)
Fast	3 to 4	-5 to +35	5000 to 4000
Quick	5 to 6	-5 to +40	3000 to 2500
Standard	15	-5 to +40	1350
Trickle*		-5 to +40	600 to 130

End of charge cut-off is requested: -dV or dT°C/dt

* Trickle charge follows quick or normal charge and depends on pack configuration

The maximum battery temperature recommended during charge is +45°C

Maximum discharge current

Continuous (A) at +20°C	40
Peak (A) at +20°C*	100

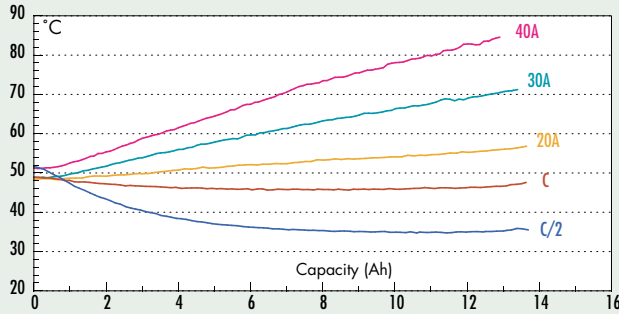
* Peak duration: 0.2 s-cell voltage (0.7)

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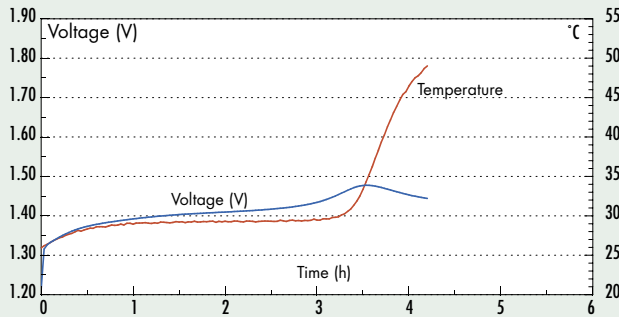
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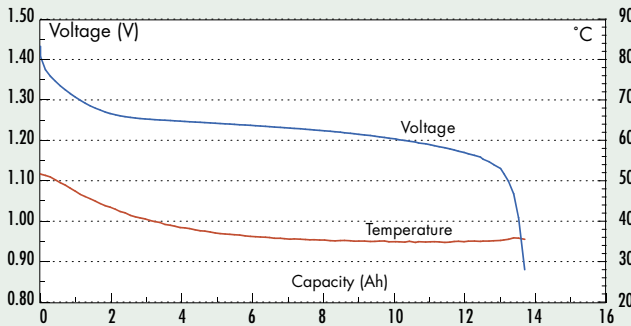
Temperature at different discharge rate after charge 4h 12mn at 4A and no rest



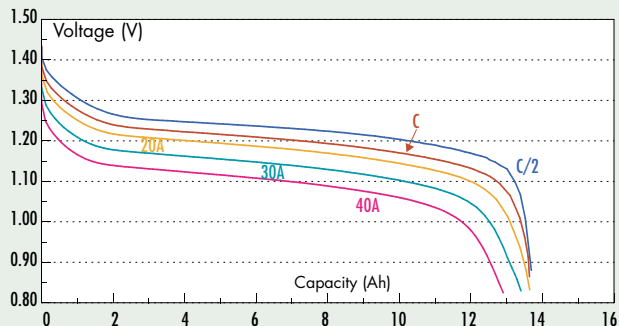
Voltage in charge 4h 12mn at 4A



Voltage in discharge at C/2 after charge 4h 12mn at 4A and no rest

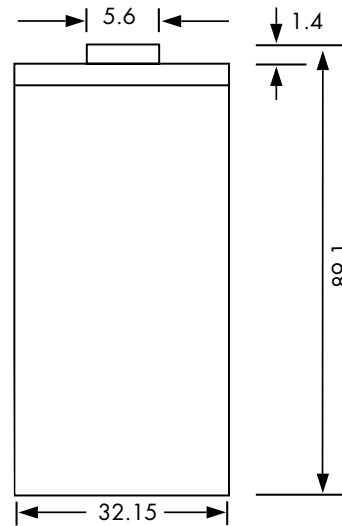


Voltage in discharge at different rate after charge 4h 12mn at 4A and no rest



Typical performances

For graphs shown, C is the IEC₅ capacity



Saft
Portable Battery Group
Headquarters
 12, rue Sadi Carnot
 93170 Bagnolet - France
 Phone +33 (0)1 49 93 19 18
 Fax +33 (0)1 49 93 19 68
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www.saftbatteries.com

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