

High Temperature Series

Nickel-Metal Hydride

VHT F

Saft's Ni-MH VHT F has been specially designed for professional applications requiring a battery with an exceptional robustness. The VHT F benefits from the latest technical improvements of Saft's Ni-MH technology, and is designed to operate in very demanding environments (from - 40°C to + 85°C).

The VHT F can be fast charged with a maximum current of C/3, and offers an exceptional life duration. The VHT F delivers a huge number of full or partial cycles: 2000 full cycles and even 5000 cycles with 50% DOD (Depth Of Discharge).

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

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

Applications

- Photovoltaic systems
- Renewable energy storage
- Tracking
- Underwater applications
- Robotics
- Professional electronics

Main advantages

- Very large temperature range (- 40°C to + 85°C)
- Excellent charge and discharge efficiency at very low and very high temperature
- Fast charge (3h)
- Very high cycle life
- Superior robustness

Technology

- Foam positive electrode
- Plastic bonded metal-hydride negative electrode



Electrical characteristics

Nominal voltage (V)	1.2
Typical capacity (mAh)*	11000
IEC minimum capacity (mAh)*	10000
IEC designation	HRMT 33/91
Impedance at 1000 Hz (mΩ)	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)	215

Dimensions are given for bare cells.

Charge conditions

Rate	Time (h)	Temp. (°C)	Charge current (mA)
Fast*	3	- 30 to + 60	3000
Permanent		- 30 to + 60	100 to 500

* Charge termination required.

Maximum discharge current

Continuous (A) at + 20°C	30
Peak (A) at + 20°C*	130

* Peak duration: 0.3 second - final discharge voltage 0.65 volt/cell.



saft

Temperature range in discharge

- 40°C to + 85°C (C/10 discharge current)
- 20°C to + 85°C (C/4 discharge current)

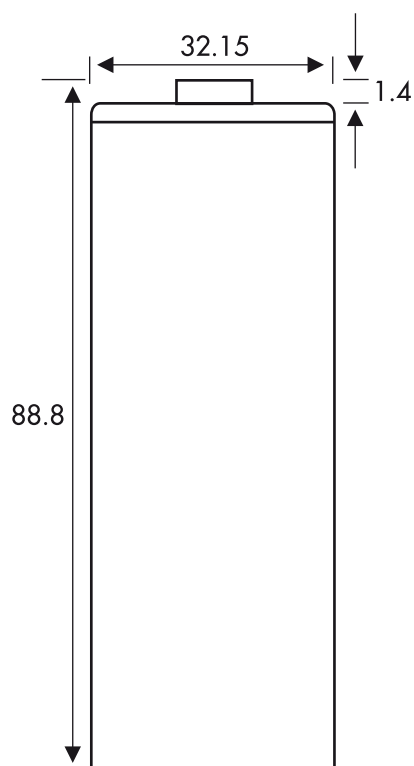
Storage

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

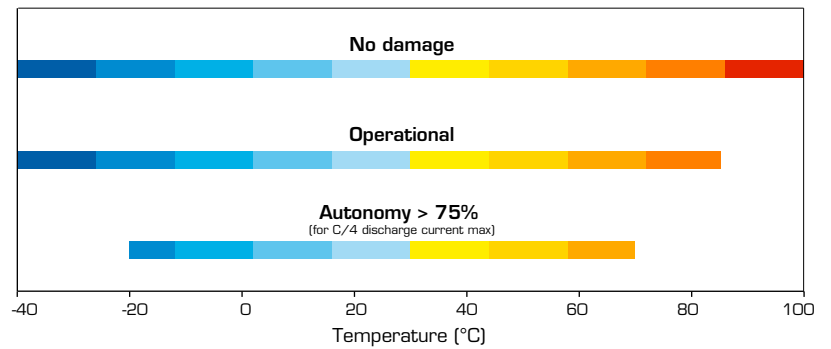
Typical performances

For graph shown, C is the IEC₅ capacity.

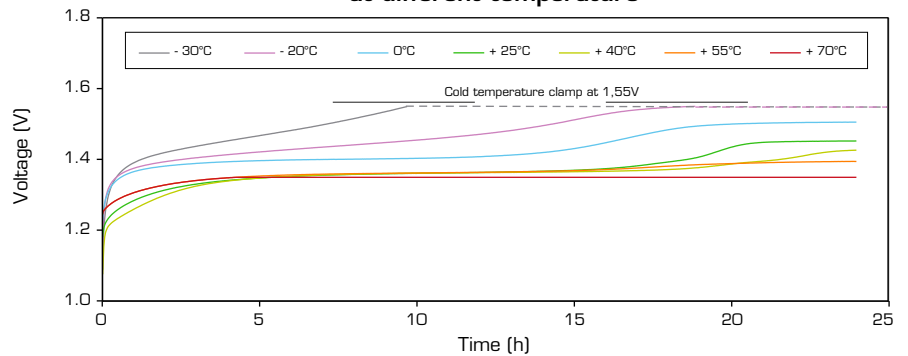
Dimensions in mm.



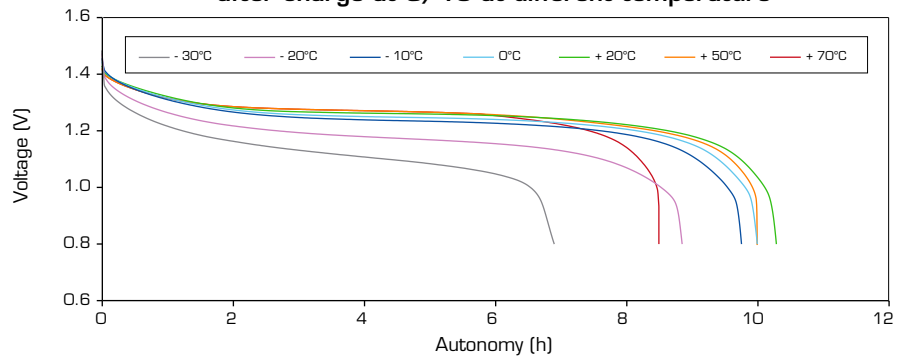
Electrical performances at different temperature



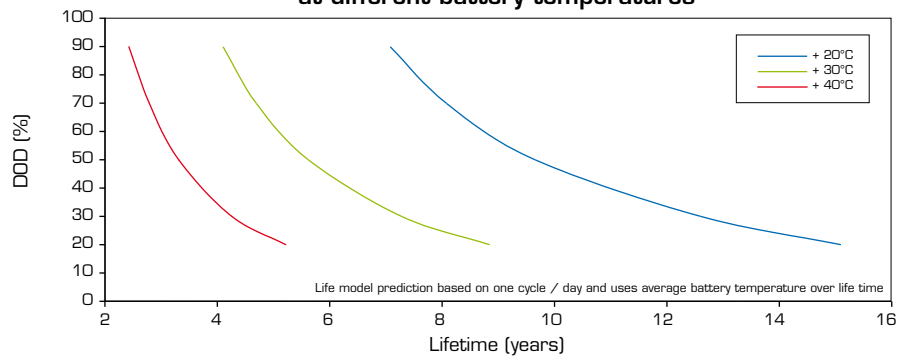
Charge 24h at C/20 at different temperature



Discharge at C/10 at different temperature after charge at C/10 at different temperature



Life duration vs. depth of discharge at different battery temperatures



Saft

Specialty Battery Group

12, rue Sadi Carnot
93170 Bagnole - France
Tel.: +33 (0)1 49 93 19 18
Fax: +33 (0)1 49 93 19 68
Email: rbs.info@saftbatteries.com

www.saftbatteries.com

DOC N°11140-2-0311

Data in this document are subject to change without notice and become contractual only after written confirmation by Saft.

Photo credits: Saft

Published by the Communication Department

Saft SAS Stock capital 31.944.000 €

RCS Bobigny B 383 703 873

Designed by Soyouzgraphic



SAFT