

High Temperature Series

Nickel-Metal Hydride

VHT Cs



Saft's Ni-MH VHT range has been specially designed to fit the emergency lighting and power back-up requirements. The VHT Cs allows to operate until + 55°C and offer a 4 years life time with an average temperature up to + 50°C.

The VHT Cs cell is designed to accept low current permanent charge (down to C/100) or intermittent charge at very high temperature (up to + 55°C). The VHT Cs allows a significant reduction in the energy consumption of luminaires.

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

- Emergency lighting
- Back-up systems
- Photovoltaic systems

Main advantages

- Excellent charge efficiency at high temperatures
- Permanent charge at low current (C/100)
- Intermittent charge
- Superior storage retention

Technology

- Foam positive electrode
- Metal-hydride negative electrode

Temperature range in discharge

- 20°C to + 55°C

Electrical characteristics

Nominal voltage (V)	1.2
Typical capacity (mAh)*	2200
IEC minimum capacity (mAh)*	2000
IEC designation	HRMT 23/43
Impedance at 1000 Hz (mΩ)	5

* 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)	48

Dimensions are given for bare cells.

Charge conditions

Rate	Time (h)	Temp. (°C)	Charge current (mA)
Standard	16	- 20 to + 55	200
Permanent	-	- 20 to + 55	20 to 100
Intermittent	-	- 20 to + 55	Consult Saft

Maximum discharge current

Continuous (A) at + 20°C	15
Peak (A) at + 20°C*	130

* Peak duration: 0.3 second - final discharge voltage 0.65 volt/cell. Below 0°C, a cut-off voltage in charge is required (Consult Saft)



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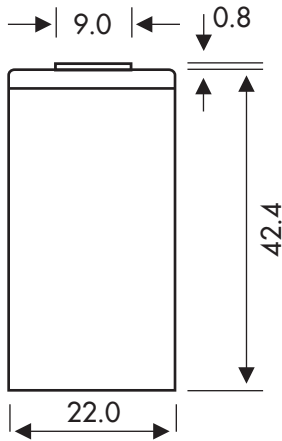
Storage

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

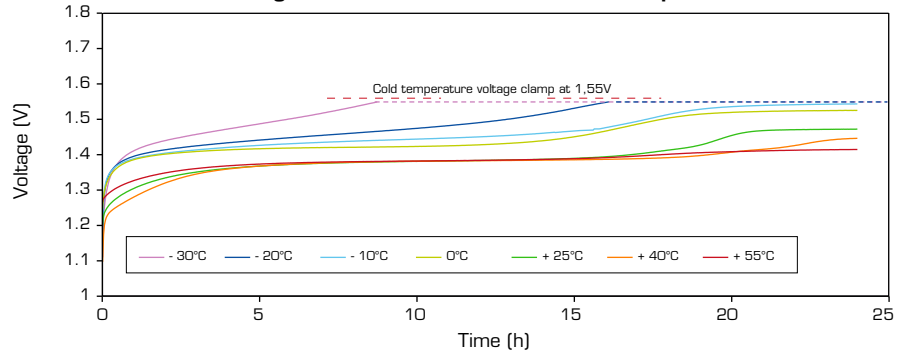
Typical performances

For graph shown, C is the IEC₅ capacity.

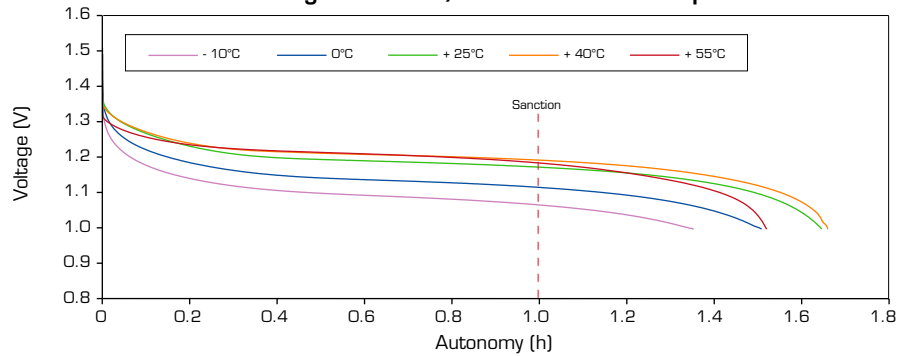
Dimensions in mm.



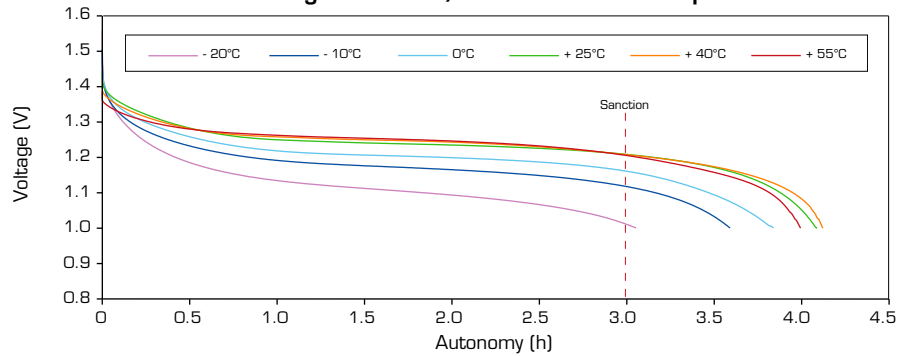
Charge 24h at C/20 at different temperature



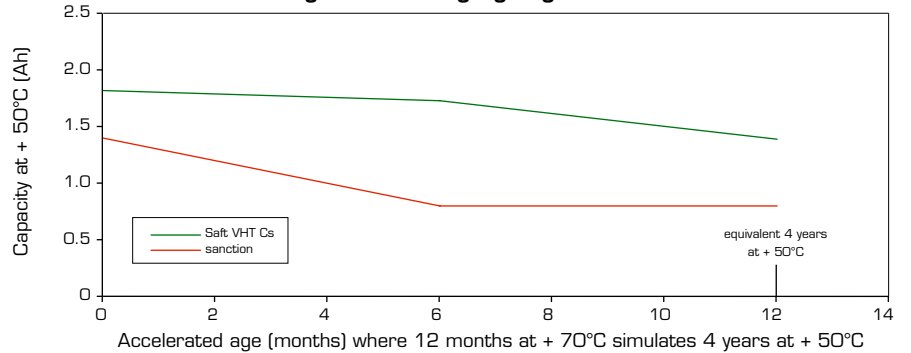
Discharge at 0.6C at different temperature after charge 24h at C/20 at different temperature



Discharge at C/4 at different temperature after charge 24h at C/20 at different temperature



Evolution of capacity at + 50°C during accelerating ageing test at + 70°C



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