

# High Temperature Series

## Nickel-Metal Hydride

### VHT Cs

Saft's Ni-MH VHT Cs has been specially designed for professional applications requiring a battery with an exceptional robustness. The VHT Cs 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 Cs can be fast charged with a maximum current of C/3, and offers an exceptional life duration. The VHT Cs 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)*	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)
Fast*	3	- 40 to + 85	670

\* Charge termination required

#### 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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### Temperature range in discharge

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

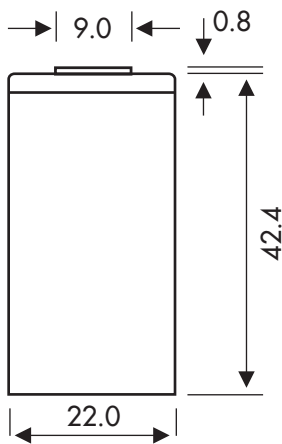
### Storage

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

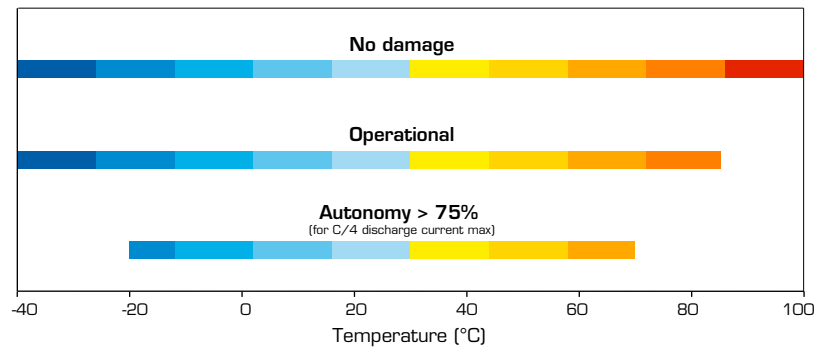
### Typical performances

For graph shown, C is the IEC<sub>5</sub> capacity.

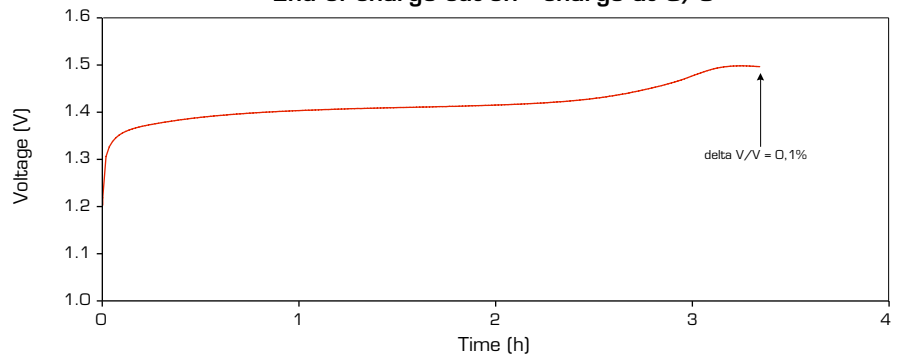
Dimensions in mm.



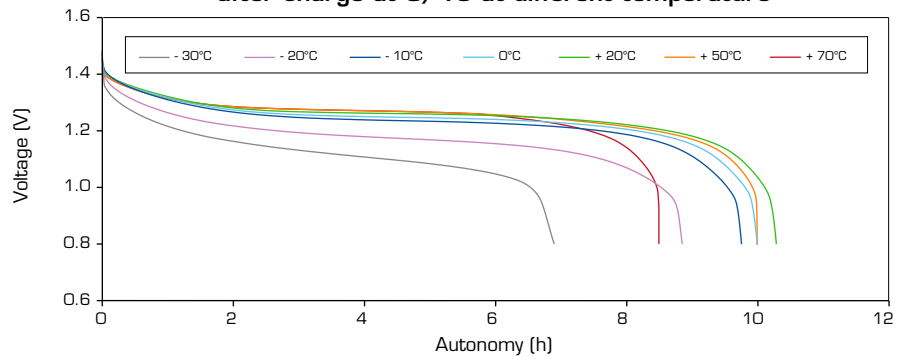
### Electrical performances at different temperature



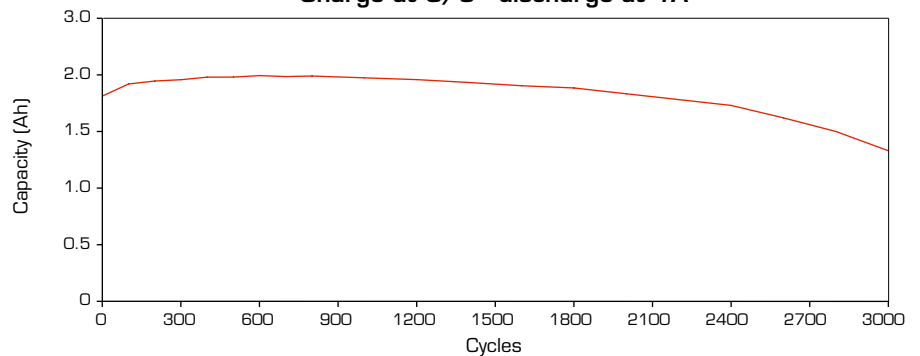
### End of charge cut-off - charge at C/3



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



### Charge at C/3 - discharge at 1A



### Saft

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