VHT AA

High Temperature Series

ARTS Energy's VHT high temperature Ni-MH series are perfectly suited to professional applications requiring a battery with an exceptional robustness. It is designed to operate in very demanding environment (from - 40°C to + 85°C).

The VHT AA can be fast charged with a maximum current of C/3, and offers an exceptional life duration. The VHT AA 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, ARTS Energy provides custom-designed and standardized battery packs.

For your battery design and system needs, please contact ARTS Energy'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)*	1150
IEC minimum capacity (mAh)*	1100
IEC designation	HRMT 15/49
Impedance at 1000 Hz (mΩ)	18

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

Dimensions	
Diameter (mm)	13.9 ± 0.1
Height (mm)	48.9 ± 0.3
Top projection (mm)	0.8 ± 0.2
Top flat area diameter (mm)	5.6
Weight (g)	24

Dimensions are given for bare cells.

Charge conditions Rate	Time (h)	Temp. (°C)	Charge current (mA)
Fast*	3	- 40 to + 85	370

* Charge termination required.

Maximum discharge current	
Continuous (A) at + 20°C	3.3
Peak (A) at + 20°C*	36

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

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Temperature range in discharge

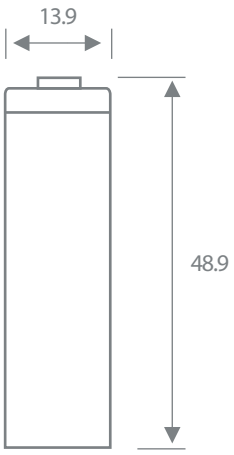
- 40°C to + 85°C (C/10 discharge current)
- 20°C to + 85°C (C/4 discharge current)

Storage

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

Typical performances

For graphs shown, C is the IEC_5 capacity.

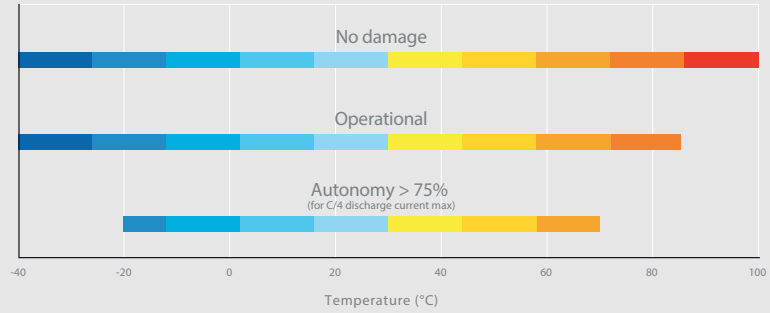


Dimensions are in mm.

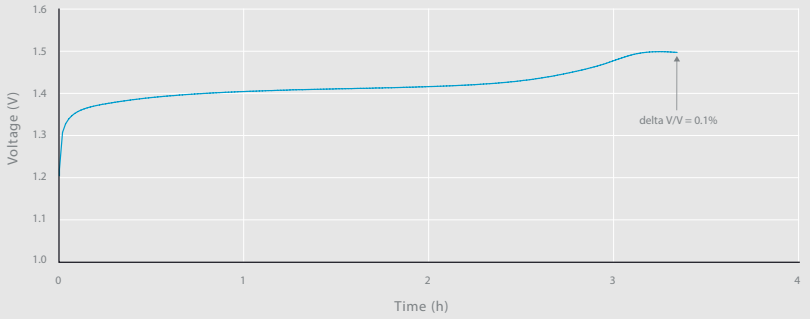
Data are given for single cells. Please consult ARTS Energy for utilization of cell outside this specification.

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

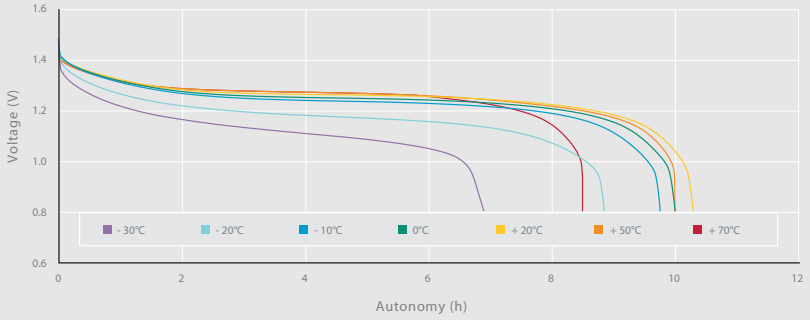
Electrical performances at different temperatures



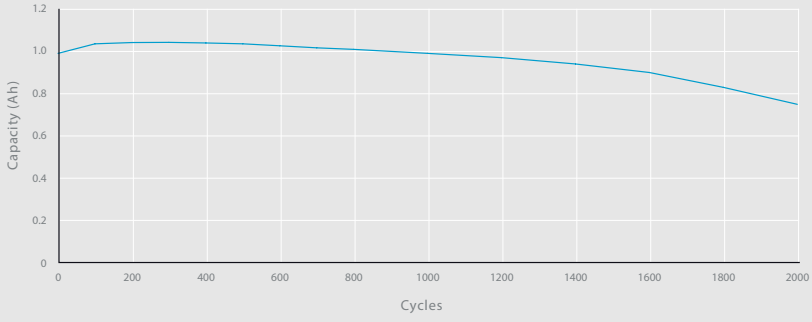
End of charge cut-off - charge at C/3



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



Charge at C/3 - discharge at 0.7 A



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