

# ARTS

## ENERGY

ARTS Energy's VH super high energy Ni-MH series are perfectly suited for applications requiring high power, high energy density and robustness. Additionally, the VH series can be fast charged (1C).

The VH AA 1500 contains aqueous electrolyte, an important safety feature as it is non-flammable.

This is key reason why the VH AA 1500 are not considered as a dangerous goods and can be transported by air without any transportation constraints (no homologation tests for transportations, no restrictions for packaging and transportation).

To meet customers' requirements, ARTS Energy provides custom-designed and standardised battery packs.

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

### APPLICATIONS

- Robots / Unmanned Vehicles
- Medical
- Devices used or carried inside planes
- Professional electronics

### MAIN BENEFITS

- High energy density
- High power
- Superior robustness
- Safe, no transportation constraints

### TECHNOLOGY

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



#### ELECTRICAL CHARACTERISTICS

Nominal voltage (V)	1.2
Typical capacity (mAh)*	1500
IEC minimum capacity (mAh)*	1400
IEC designation	HRM 15/49
Impedance at 1000 Hz (mΩ)	< 20

\* 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)	4.0 ± 0.2
Weight (g)	26

Dimensions are given for bare cells.

#### CHARGE CONDITIONS

	Temp. (°C)	Current
Fast	0 to +40	1C max
Topping (after fast charge)	0 to +40	Consult ARTS Energy
Trickle (after topping)	0 to +40	Consult ARTS Energy
Charge below 0°C	-40 to 0	Consult ARTS Energy

End of Fast charge cut-off: dT°C/dt recommended / -dV acceptable: consult ARTS Energy for optimisation

#### DISCHARGE CONDITIONS

	Temp. (°C)	Current
	0 to +40	3C max
	-10 to +40	1C max
	-20 to +40	C/4 max
	-40 to +40	C/20 max

#### CYCLING CONDITIONS

	Cycling	Life duration
	Full cycles (100% DOD)	> 500 cycles

## NI-MH

# VH AA 1500

## Super High Energy series

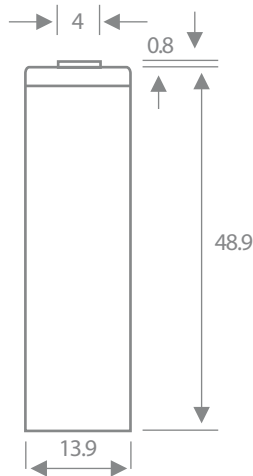
# VH AA 1500

## Super High Energy series

### STORAGE

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

### TYPICAL DIMENSIONS



Typical dimensions (mm). Without tube.

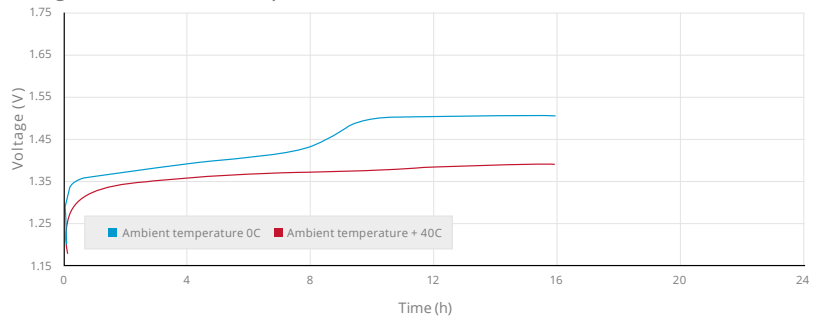
The operation of the battery must strictly be in accordance with ARTS Energy technical recommendations, to obtain the performances stated by ARTS Energy.

Data is given for single cells. Please consult ARTS Energy for utilisation of cells outside specification.

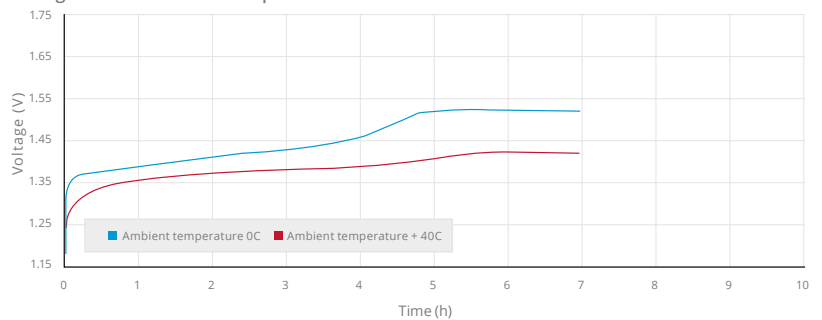
Data in this document is subject to change without notice and become contractual only after written confirmation by ARTS Energy.

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

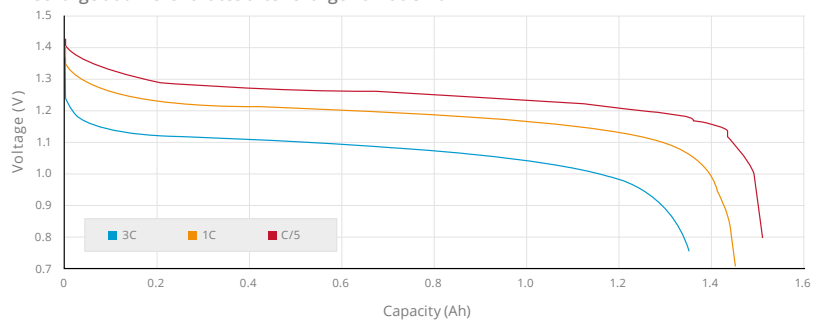
Charge at C/10 at different temperatures



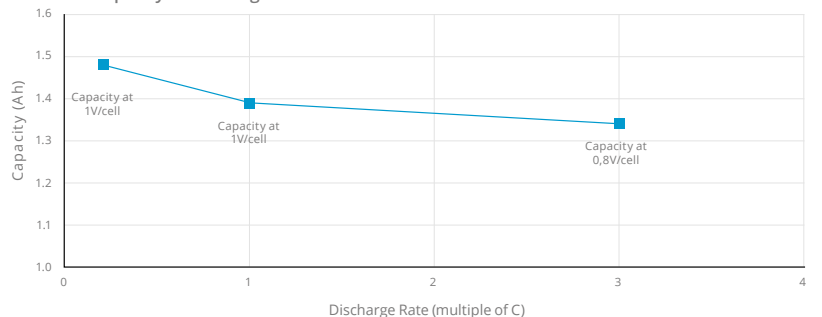
Charge at C/5 at different temperatures



Discharge at different rates after charge 16 h at C/10



Available capacity after charge 16 h at C/10



10, rue Ampère  
Zone Industrielle - 16440 Nersac, France  
Tél. +33(0)5 45 90 35 52 /35 53  
contact@arts-energy.com

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RCS Angoulême 792 635 013  
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