ARTS Energy's VH XP super high energy Ni-MH series are perfectly suited for applications requiring high power, high energy density and robustness. The « XP » stands for e**X**tended **P**ower and illustrates the higher power capability of the series.

The VH D 9500 XP contains aqueous electrolyte, an important safety feature as it is non-flammable.

This is key reason why the VH D 9500 XP 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.

ELECTRICAL CHARACTERISTICS	
Nominal voltage (V)	1.2
Typical capacity (mAh)*	9500
IEC minimum capacity (mAh)*	9000
IEC designation	HRH 33/62
Impedance at 1000 Hz (mΩ)	3

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

DIMENSIONS	
Diameter (mm)	32.15 ± 0.1
Height (mm)	58.2 ± 0.4
Top projection (mm)	1.4 ± 0.4
Top flat area diameter (mm)	5.6
Weight (g)	161

Dimensions are given for bare cells.

CHARGE CONDITIONS	Temp. (°C)	Current
Fast	0 to + 40	5A 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
	10 to +40	50A max
	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

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

NI-MH

VH D 9500 XP

Super High Energy series

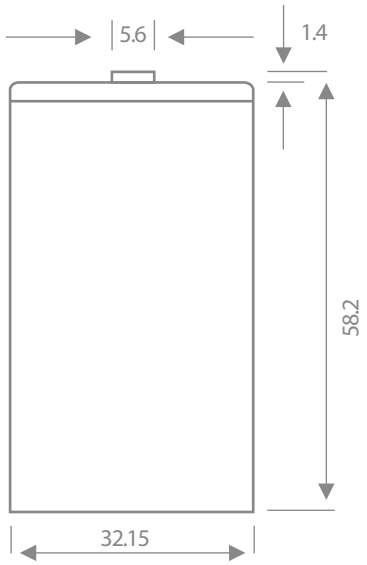
VH D 9500 XP

Super High Energy series

STORAGE

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

TYPICAL DIMENSIONS



Typical dimensions (mm). Without tube.

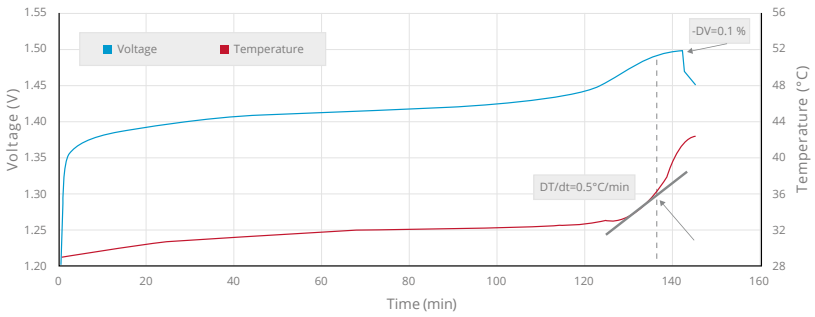
The operation of the battery must strictly be in accordance with ARTS Energy technical recommendations, to obtain the performances stated by ARTS Energy.

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

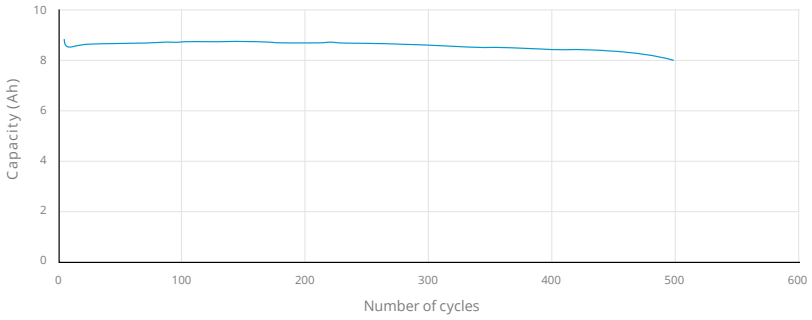
Data in this document is subject to change without notice and become contractual only after written confirmation by ARTS Energy.

For graphs shown, C is the IEC_5 capacity.

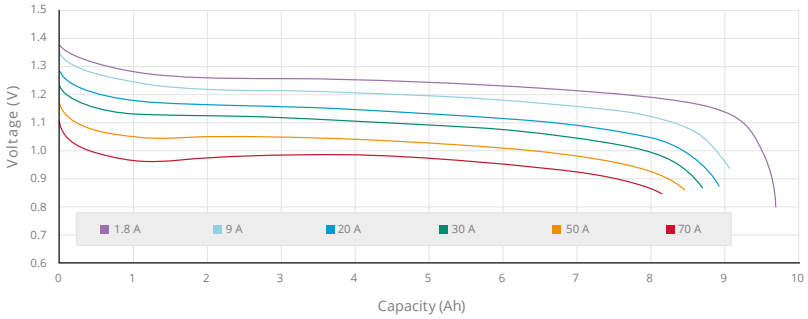
Voltage and temperature during charge at 4 A



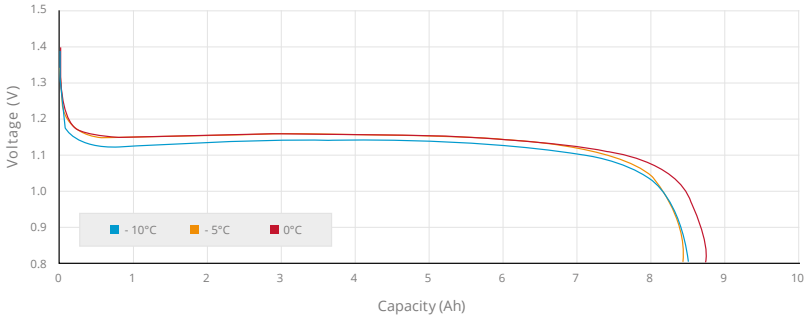
Capacity change during cycling (charge 4.5 A, discharge 9 A)



Discharge at different rates, after charge 2h24 at 4.5 A



Discharge at 9 A at different temperatures, after fast charge at 4 A



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