

# VRE D

## Standard Series

ARTS Energy's VRE standard Ni-Cd series are perfectly suited to cycling applications. It is designed for a wide range of applications requiring a high level of robustness.

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

- Electric bicycles, scooters & wheelchairs
- Professional electronic devices
- Lighting equipment
- Military equipment

### Main advantages

- Super high capacity
- Fast charge
- Good storage ability
- Excellent cycling performance

### Technology

- Sintered positive electrode
- Plastic bonded negative electrode

### Temperature range in discharge

- 20°C to + 60°C

### Storage

Recommended: + 5°C to + 25°C

Relative humidity: 65 ± 5 %



Electrical characteristics	
Nominal voltage (V)	1.2
Typical capacity (mAh)*	5100
IEC minimum capacity (mAh)*	4500
IEC designation	KRHR 33/62
Impedance at 1000 Hz (mΩ)	<4

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

Dimensions	
Diameter (mm)	32.15 ± 0.10
Height (mm)	58.2 ± 0.4
Top projection (mm)	1.4 ± 0.4
Top flat area diameter (mm)	5.6 ± 0.1
Weight (g)	150

Dimensions are given for bare cells.

Charge conditions Rate	Time (h)	Temp. (°C)	Charge current (mA)
Fast*	~1	+ 10 to + 40	up to 4500
Standard	16	+5 to + 50	450
Trickle**			110 to 225

\* End of charge cut-off is requested: -dV or dT°C/dt.

\*\* Trickle charge follows fast charge.

Maximum discharge current	
Continuous (A) at + 20°C	40
Peak (A) at + 20°C*	150

\* Peak duration: 0.3 second - final discharge voltage 0.65 volt/cell.

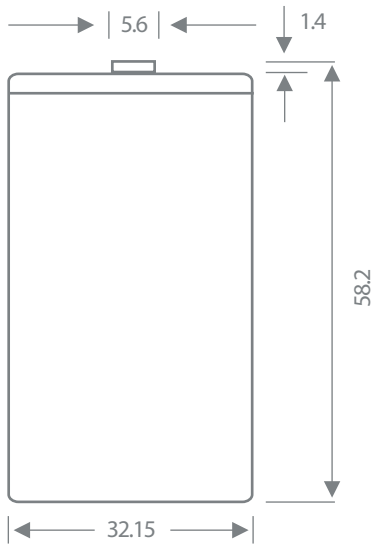


Advanced Rechargeable Technology and Solutions



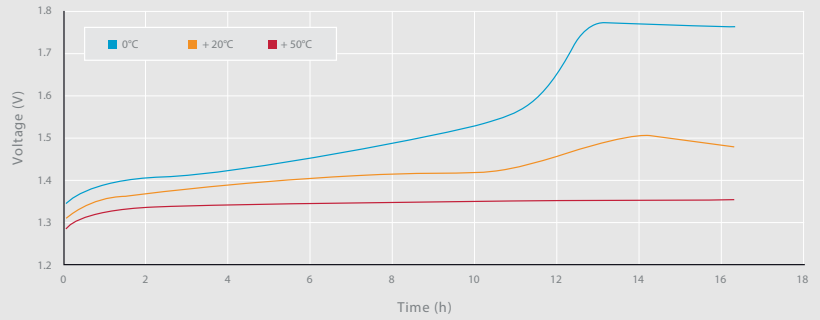
## Typical performances

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

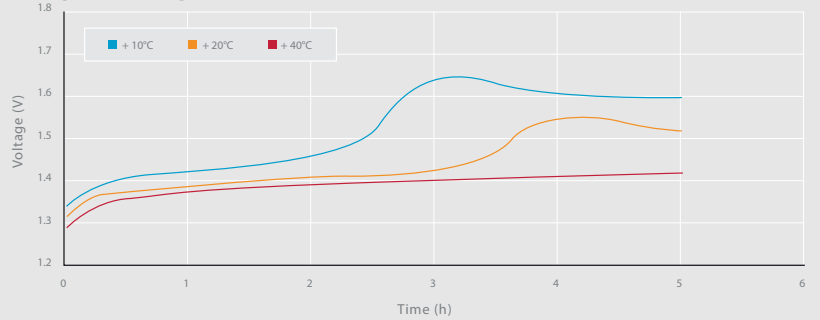


Dimensions are in mm.

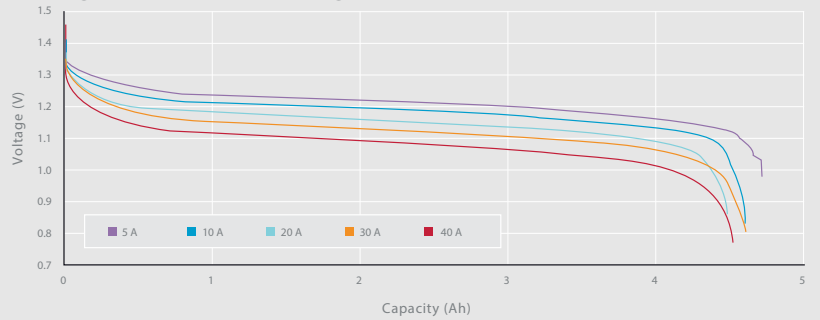
Voltage in normal charge (current 0.1 C)



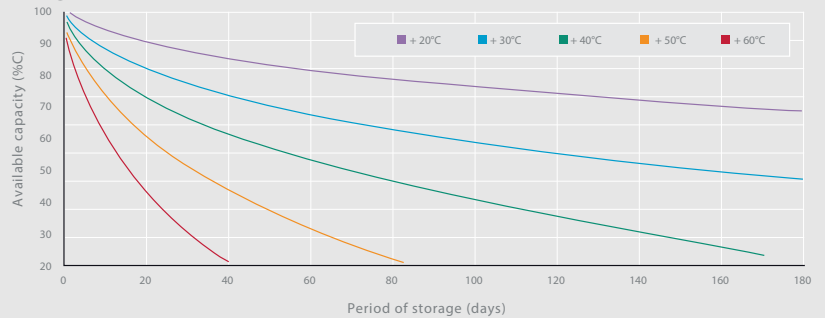
Voltage in fast charge (current 0.3 C)



Discharge at different rates (after charge 0.1 C x 16 hours at +20°C)



Charge retention (between +20°C and +60°C)



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.



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