

ARTS ENERGY

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 standardised battery packs.

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

APPLICATIONS

- Professional electronics
- Professional lighting equipment
- Military equipment

MAIN BENEFITS

- Excellent cycling performance
- High power
- Superior robustness
- Extreme low temperatures (-40°C)

TECHNOLOGY

- Sintered positive electrode
- Plastic bonded negative electrode



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) | 138 |

Dimensions are given for bare cells.

| CHARGE CONDITIONS | Temp. (°C) | Current |
|-----------------------------|------------|---------------------|
| Fast | 0 to +40 | 4,5A 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 is requested: -dV or dT°C/dt

| DISCHARGE CONDITIONS | Temp. (°C) | Current |
|----------------------|------------|---------|
| | 10 to +60 | 40A max |
| | -30 to +60 | 1C max |
| | -40 to +60 | C/2 max |

| CYCLING CONDITIONS | Cycling | Life duration |
|--------------------|------------------------|---------------|
| | Full cycles (100% DOD) | > 1000 cycles |

NI-CD

VRE D
Standard Series

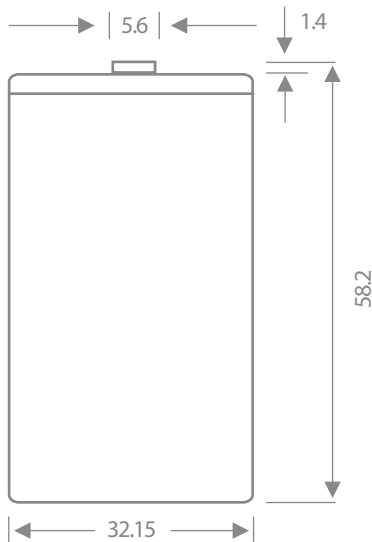
VRE D

Standard Series

STORAGE

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

TYPICAL DIMENSIONS



Typical dimensions (mm). Without tube.

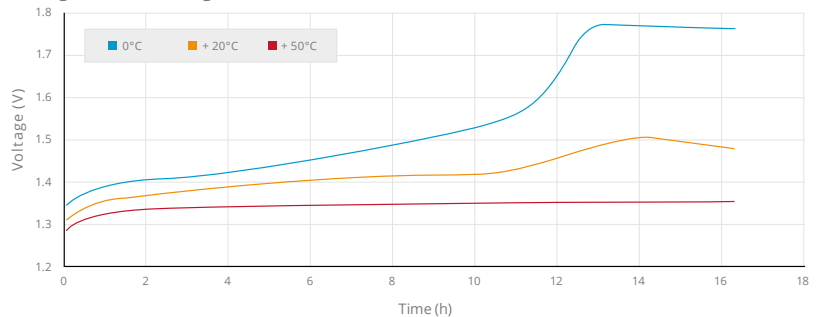
The operation of the battery must strictly be in accordance with ARTS Energy technical recommendations, to obtain the performances stated by ARTS Energy.

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

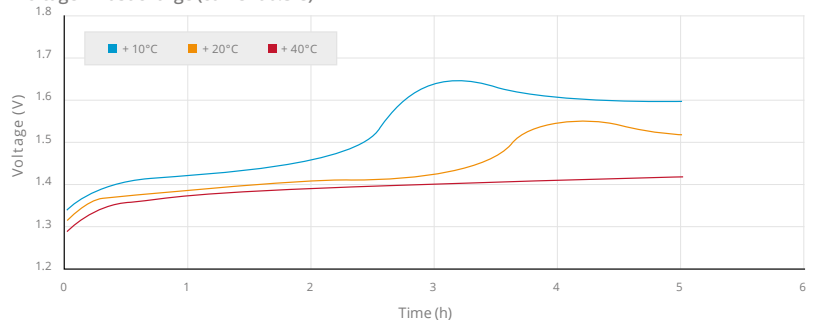
Data in this document is subject to change without notice and become contractual only after written confirmation by ARTS Energy.

For graphs shown, C is the IEC₅ capacity.

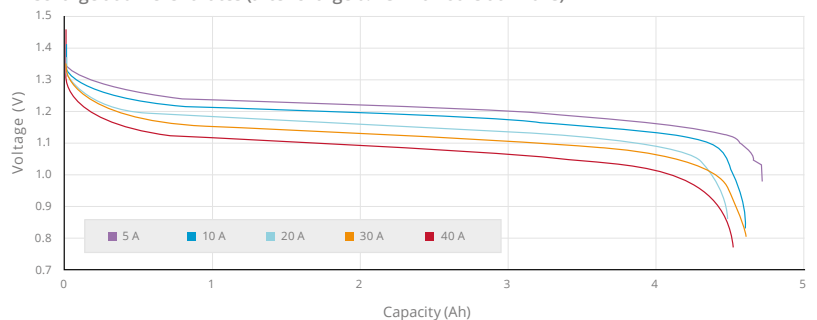
Voltage in normal charge (current 0.1 C)



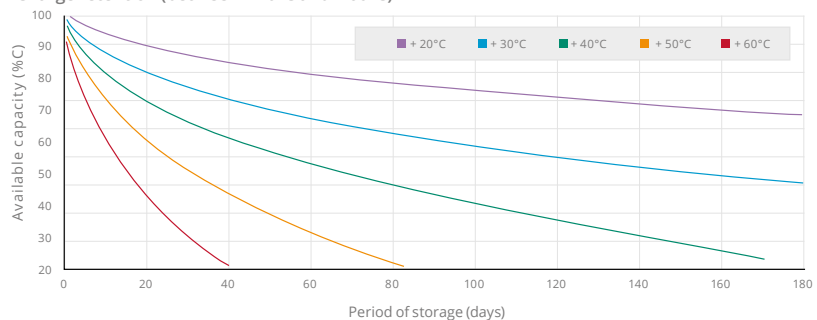
Voltage in fast charge (current 0.3 C)



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



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



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