

# 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)*	1600
IEC minimum capacity (mAh)*	1500
IEC designation	KRHR 23/43
Impedance at 1000 Hz (mΩ)	< 5

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

#### DIMENSIONS

Diameter (mm)	22.0 + 0.15/-0.05
Height (mm)	41.9 ± 0.3
Top projection (mm)	0.8 ± 0.2
Top flat area diameter (mm)	9.0 min
Weight (g)	44

Dimensions are given for bare cells.

#### CHARGE CONDITIONS

	Temp. (°C)	Current
Fast	0 to +40	1,5A 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	15A max
	-20 to +60	1C max
	-30 to +60	C/3 max
	-40 to +60	C/5 max

#### CYCLING CONDITIONS

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

## NI-CD

# VRE Cs 1600

## Standard Series

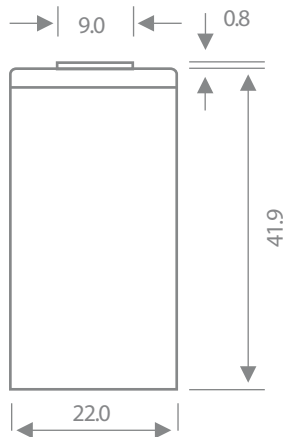
# VRE Cs 1600

## Standard Series

### STORAGE

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

### TYPICAL DIMENSIONS



Typical dimensions (mm). Without tube.

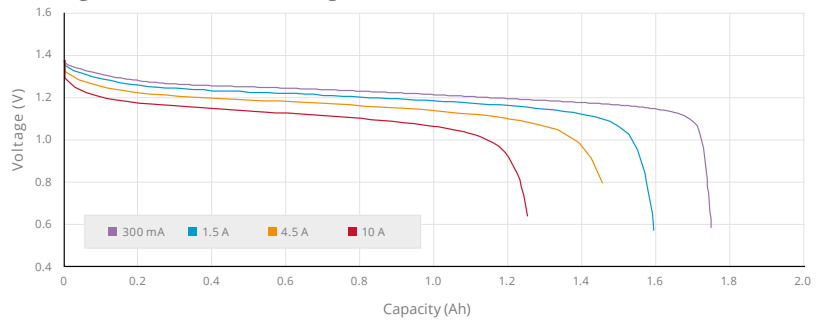
The operation of the battery must strictly be in accordance with ARTS Energy technical recommendations, to obtain the performances stated by ARTS Energy.

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

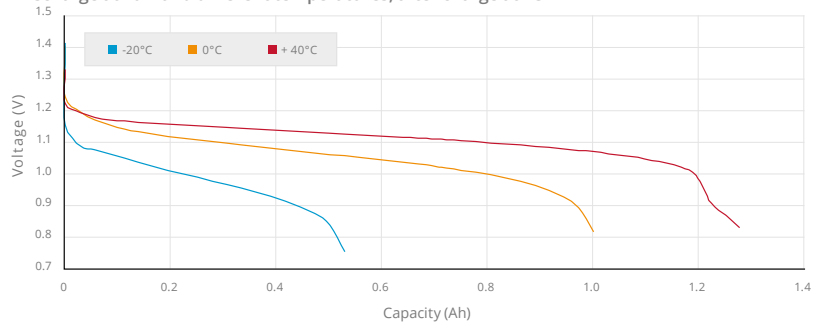
Data in this document is subject to change without notice and become contractual only after written confirmation by ARTS Energy.

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

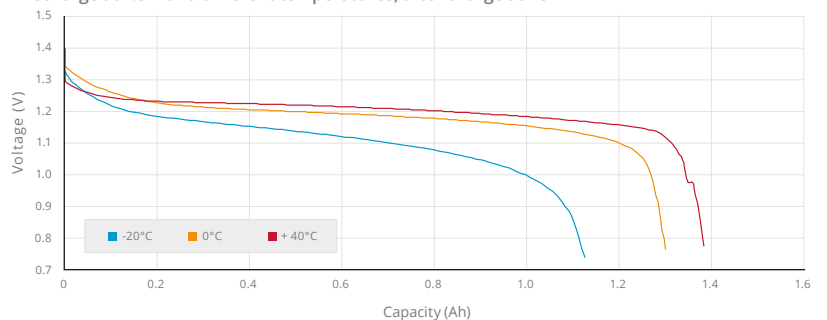
Discharge at different rates after charge 16h at C/10



Discharge at 10 A and different temperatures, after charge at 1C



Discharge at 1.5 A and different temperatures, after charge at 1C



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Doc No.: 034-A-0417 - Edition: April 2017  
ARTS Energy SAS. Stock capital 971.002  
RCS Angoulême 792 635 013  
Conception in FR by Alain Bruneaud Création



www.arts-energy.com