High Temperature Series

Nickel-Cadmium

VNT Cs U

The new VNT U series benefits from the latest innovation on Saft's PNE (plastic bonded nickel electrode) technology. The VNT U series operates until + 55°C but also brings an improvement at low temperature, suiting perfectly with severe outdoor applications.

VNT Cs U is specially designed to accept a permanent charge in high temperature environments such as emergency lighting equipment. VNT Cs U offers at least 4 years of life duration at an average temperature up to + 50°C in accordance to the IEC 61951-1 standard (U type cells).

To meet customers' requirements, Saft provides custom-designed and standardized battery packs.

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

Applications

- Emergency lighting
- Professional lighting
- Memory back-up systems
- Security devices

Main advantages

- Good charge efficiency at high temperature
- Good autonomy at low temperature
- Permanent charge
- Good storage retention
- Long life duration at high temperature

Technology

- Plastic-bonded positive electrode
- Plastic-bonded negative electrode

Temperature range in discharge

- 20°C to + 70°C

Electrical characteristics	
Nominal voltage (V)	1.2
Typical capacity (mAh)*	1650
IEC minimum capacity (mAh)*	1600
IEC designation	KRMU 23/43
Impedance at 1000 Hz (mΩ)	8

* 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)	45

Dimensions are given for bare cells.

Charge conditions			
Rate	Time (h)	Temp. (°C)	Charge current (mA)
Standard *	16	+ 15 to + 55	160
Permanent		+ 15 to + 55	80
Trickle **			40 to 53

* End of charge cut-off is requested: timer, coulomb meter.
** Trickle charge follows full charge.

Maximum discharge current	
Continuous (A) at + 20°C	5.2
Peak (A) at + 20°C*	40

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

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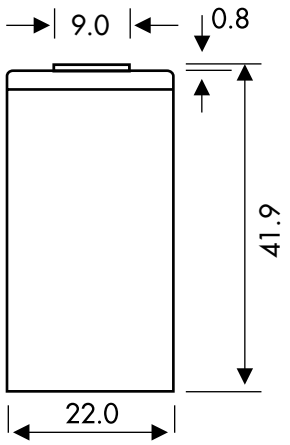
Storage

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

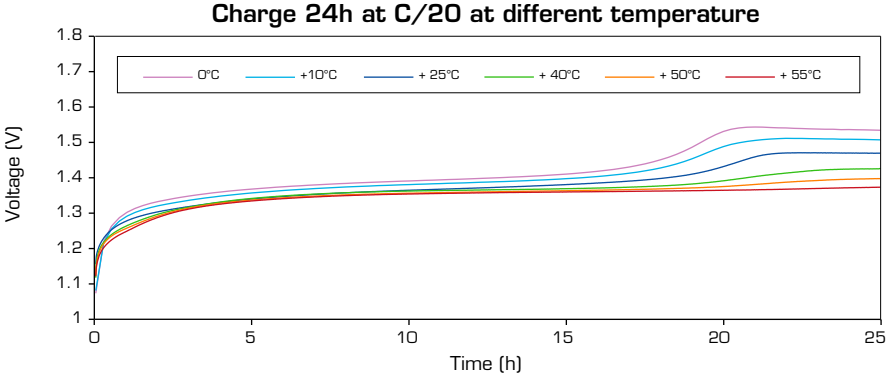
Typical performances

For graph shown, C is the IEC_5 capacity.

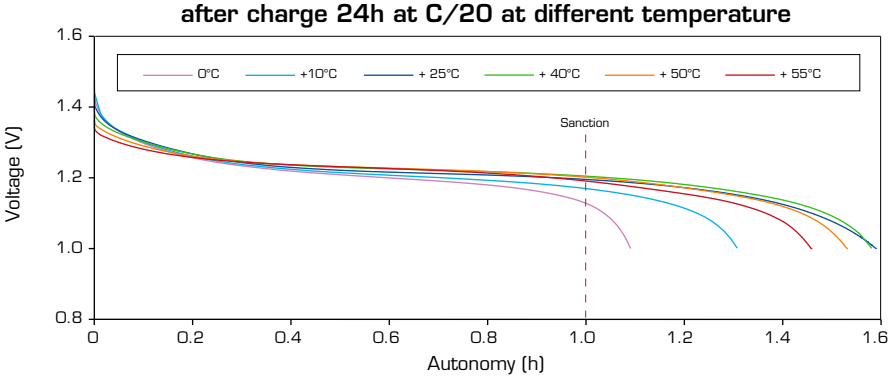
Dimensions are in mm.



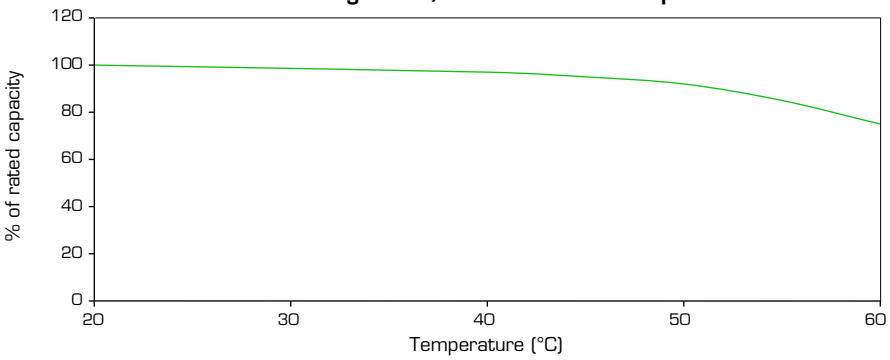
Charge 24h at C/20 at different temperature



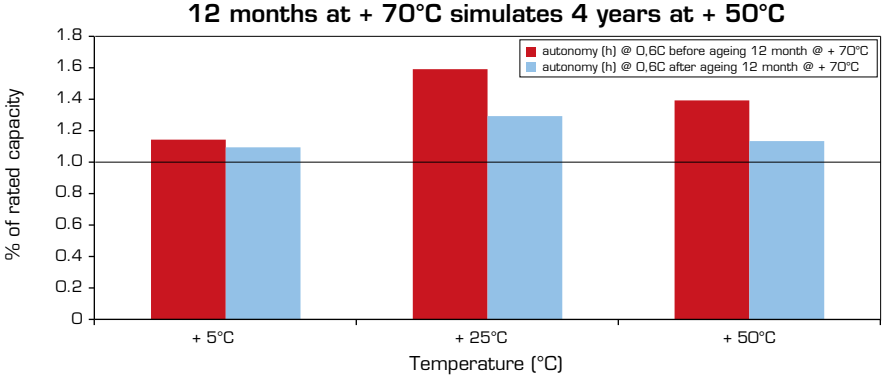
Discharge at 0.6C at different temperature after charge 24h at C/20 at different temperature



Charge efficiency after charge at C/20 and discharge at C/5 at different temperature



12 months at + 70°C simulates 4 years at + 50°C



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