

# SUPER HIGH POWER SERIES

Nickel-Metal Hydride

## VH D

The Super High Power series has been extended with the new Saft Ni-MH D cell, VH D.

This cell, designed to fit professional video equipment, is also very well adapted for any application where power and long autonomy are required, such as personal electric vehicles, lights, radio control models, etc.

To meet customers requirements, Saft will provide custom-designed and standardized battery packs and electronic monitoring systems. For your battery design and system needs, please contact Saft's engineers.

### Applications

- Electric bicycles, scooters and wheelchairs
- Professional video cameras
- Home appliances
- Lighting products
- Lawn and gardening tools

### Main advantages

- Super high capacity
- Quick and fast charge
- Good storage ability

### Technology

- Foam positive electrode
- Metal-hydride negative electrode

### Temperature range in discharge

0°C to +40°C

### Storage

Recommended: +5°C to +25°C

Relative humidity: 65 ± 5%

Data are given for single cell.

Please consult Saft for utilization of cell outside this specification.

### Electrical characteristics

Nominal voltage (V)	1.2
Typical capacity (mAh) at C/5	8500
Minimum capacity (mAh) at C/5	8000
IEC designation	HR 33/62
Impedance at 1000 Hz (mΩ)	4.0

### Dimensions

Diameter (mm)	32.2 ± 0.1
Height (mm)	58.2 ± 0.4
Projection (mm)	1.4 ± 0.4
Flat area diameter (mm)	5.6
Weight (g)	160

Dimensions are given for bare cells.

### Charge conditions

Rate	Time (h)	Temp. (°C)	Charge current (mA)
Ultrafast			Consult Saft
Fast	2 to 3	-5 to +35	5000 to 3500
Quick	4 to 5	-5 to +40	2500 to 2000
Standard	15	-5 to +40	850
Trickle*		-5 to +40	80 to 400

End of charge cut-off is requested:  $-dT^{\circ}C/dt$  or negative dV.

\* Trickle charge follows quick or fast charge and depends on pack configuration

The maximum battery temperature recommended during charge is +45°C

### Maximum discharge current

Continuous (A) at +20°C	40
Peak (A) at +20°C*	100

\* Peak duration: 0.2 s-cell voltage (0.7)



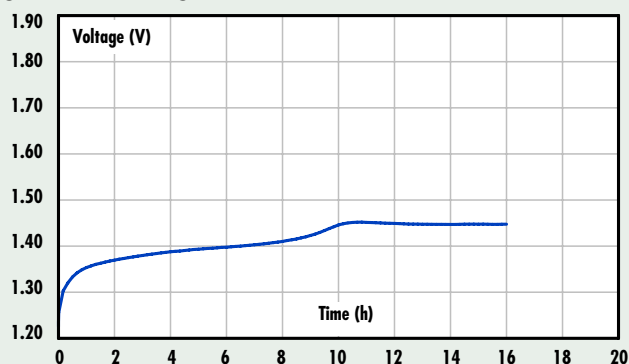
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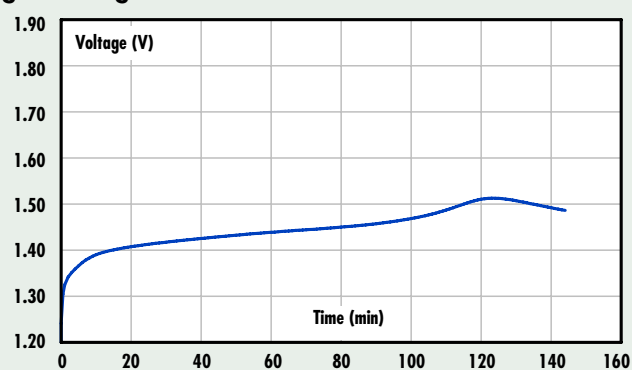
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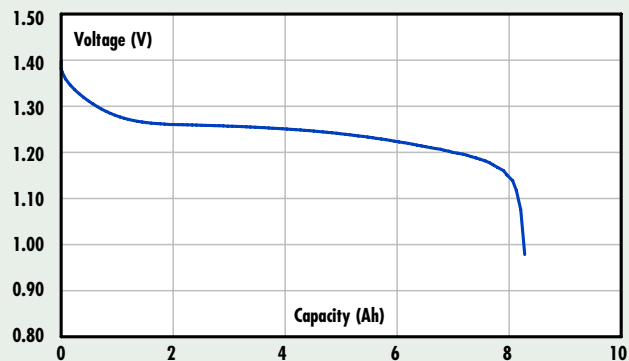
**Voltage in slow charge** current 0.1 C



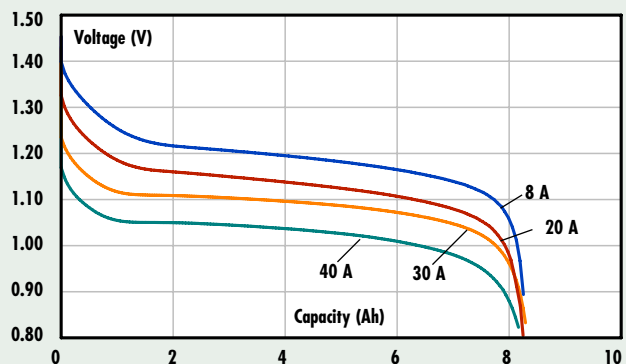
**Voltage in charge** current 0.5 C



**Voltage in discharge at +20°C (0.2 C) after slow charge at 0.1 C**

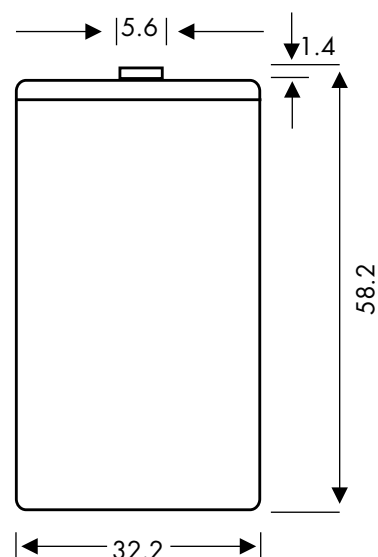


**Voltage in discharge at (+20°C) at various currents after fast charge at 0.5 C**



## Typical performances

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



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