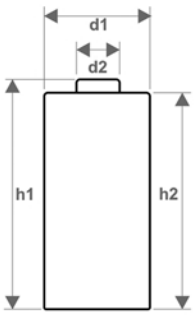
1.- Introduction

This specification governs the perfomance of the following FULLWAT Nickel-Metal Hydride Cylindrical cell (NH500AAJF) and its stack-up batteries.

2.- Data of stack up batteries

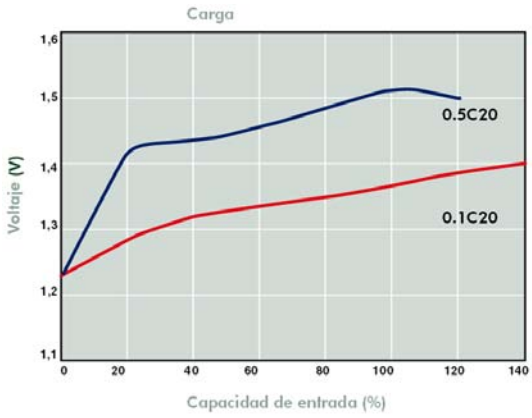
All data involves and weight to stack-up battery are equal to the value of unit cell time the number of unit cell which consisted in the stack batteries.

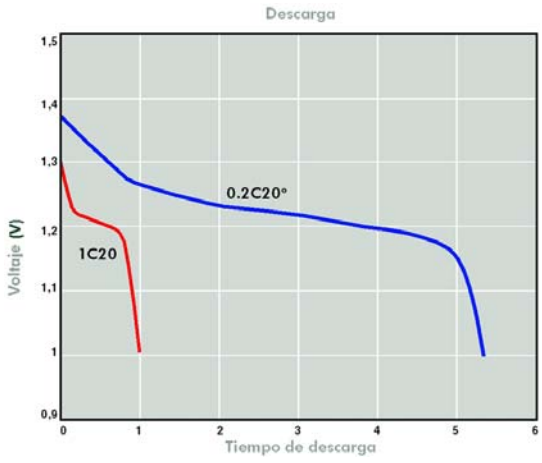
3.- Ratings



Dimensions			
d1	ø 13,9 mm.	**d2**	ø 8,1 mm.
h1	28,1 mm.	**h2**	42 mm.

Nominal capacity			500 mAh
Nominal voltage			1,2 V
Charge current		**Pulse**	< 25 mAh
		Standard	50 mAh
		Medium	150 mAh
		Quick	500 mAh
Charge time		**Pulse**	No limit
		Standard	14 ~ 16 hrs
		Medium	4 ~ 5 hrs
		Quick	1.2 hrs
Temperature	**Charge**	**Standard**	0 ~ 50 ºC
		Medium	10 ~ 50 ºC
		Quick	10 ~ 50 ºC
	Discharge		-30 ~ 60 ºC
	Storage		-30 ~ 65 ºC
Impedance (mohmios)		**Medium**	28
(After charge)		**Máx.**	35
Weight			13 grs.





4.- Configuration and dimensions

5.- Perfomance

Unless otherwise stated, tests should be done within one month of delivery under the following conditions:

Ambient temperature (T1):	20 ± 5 ºC
Relative humidity	60 ± 20 %
Charge conditions	50 mA (C/10) x 14 hours
Discharge conditions	100 mA (C/5) to 1,0 V/cell

Test	Unit	Value	Conditions	Remarks
Capacity	mAh	> 500	Standard charge discharge	Up to 3 cycles are allowed
Open circuit voltage (VOC)	V/cell	> 1,25	Within 1 hour after standard charge	
Internal impedance	mohms/cell	Medium < 28 Maximum < 35	Upon fully charge (1KHz)	
High rate discharge (1C)	Minute	> 54	Standard charge, 1 hour rest before discharge by 500 mA (1C) to 1,0 V/cell	Up to 3 cycles are allowed
Overcharge		No leakage nor explosion	50 mA (C/10). Charge 28 days.	
Charge retention	mAh	> 420 (70 %)	Standard charge. Storage: 28 days. Standard discharge.	
Cycle life	Cycle	> 500	IEC285 (1993) 4.4.1	
Accelerated cycle life	Cycle	> 400	Charge 250 mA (C/2). Discharge 500 mA (C) to 1,0 V/cell, End-of 80% nominal capacity.	Cycling charging cut-off condition. V=0~5 mV/cell and timer cut-off 110% nominal capacity input and temp. cut-off 55°C
Leakage		No leakage nor explosion	Fully charge at 250 mA (C/2).	
Vibration resistance		Change of voltage should be under 0,02V/cell, change of impedance should be under 5 mohms/cell.	Charge the battery at C/10 for 14 hours,Then leave for 24 hrs, check battery before/after vibration. Amplitude 1,5 mm.. Vibration 3000 CPM. Any direction for 60 min.	
Impact resistance		Change of voltage should be under 0,02V/cell, change of impedance should be under 5 mohms/cell.	Charge the battery at C/10 for 14 hours,Then leave for 24 hrs, check battery before/after dropped. Height = 50 cm. Wooden board (thickness 30mm) Direction not specified, 3 times.	

6.- External appearance

The cell/battery shall be free from cracks, scars, breakage, rust, discoloration, leakage nor deformation.

7.- Warranty

One year limited warranty against workmanship and material defects.

8.- Caution.

- Reverse charging is not acceptable.
- Charge before use. The cells/batteries are delivered in an uncharged state.
- Do not charge/discharge with more than our specified current.
- Do not short circuit the cell/battery. Permanent damage to the cell/battery may result.
- Do not incinerate or mutilate the cell/battery.
- Do not solder directly to the cell/battery.
- The life expectancy may be reduced if the cell/battery is subjected adverse conditions like: extreme temperature, deep cycling , excessive overcharge/ over-discharge.
- Store the cell/battery uncharged in a cool dry place.Always discharge batteries before bulk storage or shipment.