

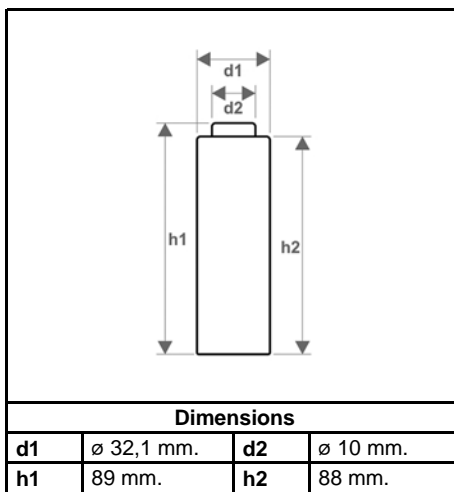
### 1.- Introduction

This specification governs the performance of the following FULLWAT Nickel-Cadmium Cylindrical cell (N8000FJF) and its stack-up batteries.

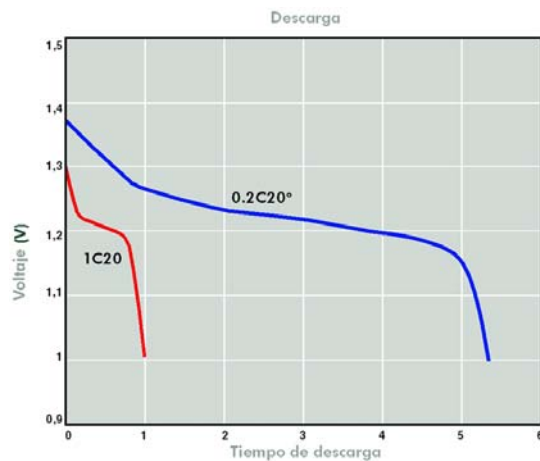
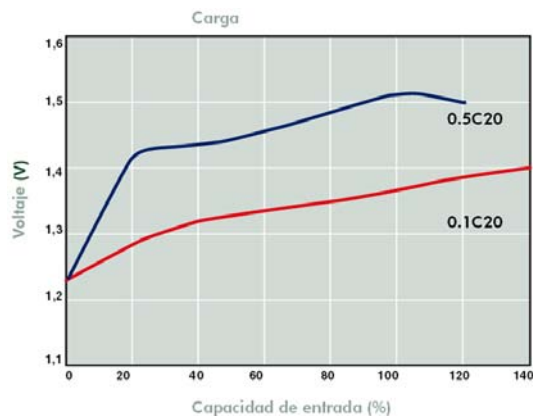
### 2.- Data of stack up batteries

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



<b>Nominal capacity</b>		8000 mAh	
<b>Nominal voltage</b>		1,2 V	
<b>Charge current</b>	<b>Pulse</b>	< 400 mAh	
	<b>Standard</b>	800 mAh	
	<b>Medium</b>	2400 mAh	
	<b>Quick</b>	8000 mAh	
<b>Charge time</b>	<b>Pulse</b>	No limit	
	<b>Standard</b>	14 ~ 16 hrs	
	<b>Medium</b>	4 ~ 5 hrs	
	<b>Quick</b>	1.2 hrs	
<b>Temperature</b>	<b>Charge</b>	<b>Standard</b>	0 ~ 50 °C
		<b>Medium</b>	10 ~ 50 °C
		<b>Quick</b>	10 ~ 50 °C
	<b>Discharge</b>	-30 ~ 60 °C	
		<b>Storage</b>	-30 ~ 65 °C
	<b>Impedance (mohmios) (After charge)</b>	<b>Medium</b>	6
<b>Máx.</b>		7	
<b>Weight</b>		189 grs.	



### 4.- Configuration and dimensions

See attached graphics.

## 5.- Performance

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

Ambient temperature (T1):	20 ± 5 °C
Relative humidity	60 ± 20 %
Charge conditions	800 mA (C/10) x 14 hours
Discharge conditions	1600 mA (C/5) to 1,0 V/cell

Test	Unit	Value	Conditions	Remarks
Capacity	mAh	> 8000	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 < 6 Maximum < 7	Upon fully charge (1KHz)	
High rate discharge (1C)	Minute	> 54	Standard charge, 1 hour rest before discharge by 8000 mA (1C) to 1,0 V/cell	Up to 3 cycles are allowed
Overcharge		No leakage nor explosion	800 mA (C/10). Charge 28 days.	
Charge retention	mAh	> 5600 (70 %)	Standard charge. Storage: 28 days. Standard discharge.	
Cycle life	Cycle	> 500	IEC285 (1993) 4.4.1	
Accelerated cycle life	Cycle	> 400	Charge 4000 mA (C/2). Discharge 8000 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 4000 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**

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

## **7.- Warranty**

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One year limited warranty against workmanship and material defects.

## **8.- Caution.**

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- 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.