



# Fused Iron™ Battery



### Maximum Dimensions

	mm	(inches)
<b>Width:</b>	108	(4.25)
<b>Length:</b>	157	(6.19)
<b>Height:</b>	360	(14.17)
<b>Terminal Spacing:</b>	83	(3.25)

### General Specifications

<b>Battery Type:</b>	Rechargeable, Flooded, Vented
<b>Chemical System:</b>	Nickel Iron (NiFe)
<b>Weight (dry):</b>	8.1 kg (17.9 lbs)
<b>Weight (with electrolyte):</b>	11.3 kg (24.8 lbs)
<b>Nominal Discharge Voltage</b>	1.2-1.25 Volts (rate dependent)
<b>Average Cell Capacity C/10 to 0.9V</b>	300 Ah; minimum 270Ah
<b>Average Cell Capacity C/5 to 0.9V</b>	285Ah; minimum 257Ah
<b>Average Cell capacity C/2 to 0.9V</b>	270Ah; minimum 243Ah
<b>Terminals:</b>	M8 x 1.25
<b>Container:</b>	Polypropylene (V0 available)
<b>Vent:</b>	Includes Flame Arrestor
<b>DI Water Top Up Frequency:</b>	Depends on Application
<b>Autofill System:</b>	Available Separately

### System Operation

<b>Recommended Charging</b>	Constant current
<b>Charge Voltage</b>	1.65V - 1.80V
<b>Charged Open circuit Voltage</b>	1.4-1.45V
<b>Optimum Charging Current</b>	C/5 (60 Amps)
<b>Min. Charging Current</b>	C/10 (30 Amps)
<b>Max. Cont. Charging Current</b>	C/2 (150 Amps)
<b>Max. Pulsed Charging Current</b>	1C (300 Amps - 0.5 minute)
<b>Maintenance Charge</b>	Application Dependent
<b>Initiation Charge</b>	150% min, 200% max.
<b>Optimum Discharge Current</b>	C/4 - C/10 (30-75 Amps)
<b>Max Discharge Current</b>	C/2 (150 Amps)
<b>Battery Cycle Life @25°C</b>	>11,000 cycles @ 80% DOD
<b>Battery Cycle Life @35°C</b>	>6,000 cycles @ 80% DOD
<b>Battery Life on Float</b>	20 yrs.
<b>Battery Storage Life</b>	85 yrs.

### Environment

<b>Discharge Temperature (°C):</b>	-30 to +60 (-40 available)
<b>Charge Temperature (°C):</b>	-30 to +60 (-40 available)
<b>Storage Temperature (°C):</b>	-30 to +60 (-40 available)
<b>Operating Humidity:</b>	5% to 95% non-condensing
<b>Temperature Compensation</b>	None
<b>Ah Efficiency (0 to 80% SOC)</b>	98%
<b>Ah Efficiency (80 to 100% SOC)</b>	75%
<b>Recommended 80% DOD</b>	5% - 85% SOC (5% = 1.1V)
<b>Solar Compatible:</b>	Yes
<b>Wind Compatible:</b>	Yes
<b>Transportation Classification:</b>	UN2795 Class 8

### Advantages Over Lead Acid Technology

Parameter	Advantage
Energy	<ul style="list-style-type: none"> <li>- Deeper depth of discharge capability results in significantly more usable capacity.</li> <li>- More specific energy at recommended depth of discharge.</li> <li>- More volumetric energy density at recommended depth of discharge.</li> </ul>
Charging	<ul style="list-style-type: none"> <li>- Capable of higher rate charging.</li> </ul>
Life	<ul style="list-style-type: none"> <li>- Much longer cycle life.</li> <li>- Much longer shelf life.</li> <li>- Longer float charging life.</li> </ul>
Efficiency	<ul style="list-style-type: none"> <li>- Higher efficiency (energy out / energy in).</li> </ul>
Temperature	<ul style="list-style-type: none"> <li>- Higher maximum operating temperature. Air conditioning not required.</li> <li>- Higher safe storage temperature.</li> <li>- <b>No air conditioning required.</b></li> </ul>
Environment	<ul style="list-style-type: none"> <li>- No lead content. No acid content.</li> </ul>

**Important Notice**

This datasheet contains typical information specific to products manufactured at the time of its publication.  
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