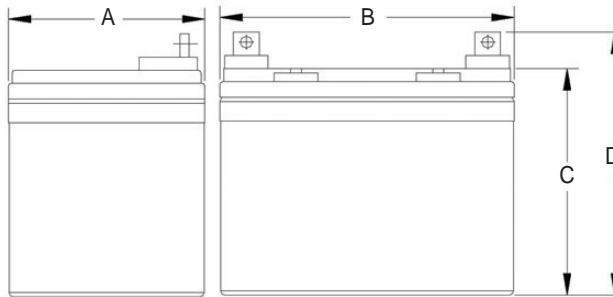


EVU1A-A

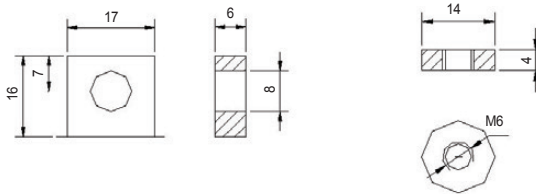
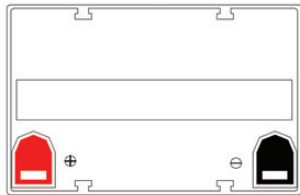
EV Traction Dry Cell Industrial Battery Block

Discover® EV Series Industrial Batteries provide superior high integrity and reliability for commercial, industrial and private applications. The maintenance-free, thick plate construction, designed for tough applications and repeated deep discharging makes the EV Series the definitive choice for robust Traction applications including Home Medical Equipment (HME), Electric Vehicle, Automated Guided Vehicles (AGV), Aerial Lifts, Floor Cleaning Equipment, Robotics, Materials Handling, Renewable Energy and Marine / RV applications.



Terminal (F7)

Optional Terminal (M6)



Mechanical Specifications

Industry Reference	U1	
Length [A]	7.7 in	195 mm
Width [B]	5.1 in	130 mm
Height [C]	6.5 in	164 mm
Total Height [D]	7.1 in	180 mm
Weight	23 lbs	11 kgs
Terminal (Opt'l)	F7 (M6)	
Terminal Torque	7.0- 8.5 (7.0- 8.5)	
Cells	6 cell	
Electrolyte	1.2875 S.G.	AGM

Electrical Specifications

Volts	12 V
80% DOD Voltage Cutoff	11.4 V
RINT	7.30 mOhms
Short Circuit (68°F / 20°C)	1520A
Self Discharge	<3% of capacity month @ 68°F / 20°C
Cranking Amps*	245 @ 32°F / 0°C 205 @ 0°F / -18°C
Standard Charge	50°F / -10°C to 122°F / 50°C
Standard Discharge	-4°F / -20°C to 122°F / 50°C
Maximum Discharge**	-40°F / -40°C to 140°F / 60°C

*CRANKING AMPS: Cranking Amps data is provided as a reference only. Specific application sizing and life factors must be considered when using deep cycle product in a starting application.

**CAUTION: Extra considerations must be given to depths of discharge, operating voltages and currents when designing systems for use at maximum temperatures.

Electrical Specifications

Amp Hours (AH)						Minutes of Discharge				
100HR	20HR	10HR	5HR	3HR	1HR	@25A	@56A	@75A	@85A	@100A
37	33	31	28	25	20	45	17	12	9	7

Max Charge / Discharge Currents	Peak (5 seconds)	Peak (10 seconds)	Max Continuous	Recommended Max Continuous
Charge	1C10Hr	0.75C10Hr	0.5C10Hr	0.3C10Hr
Discharge	2C10Hr	1.5C10Hr	1C10Hr	0.5C10Hr

Updated January 25, 2012

EV Series Features & Benefits

- Maintenance Free Clean & Green® choice of Original Equipment Manufacturers.
- Traction heavy duty grid design (PbCaSn) gives consistent active material adhesion and corrosion resistance.
- High impact reinforced copolymer and polypropylene cases with flat top designs.
- A recognized gas recombination efficiency of greater than 99.9%.
- Multiple terminal, configuration options and carrying handles available with most models.
- Classified as a non-spillable battery and is not restricted for transportation by:
 - Air (IATA/ICAO provision 67)
 - Surface (DOT-CFR-HMR49)
 - Water (per IMDG amendment 27).
- Compatible with sensitive electronic equipment.
- Comprehensive design to conserve resources, improve safety and reduce waste. 98% recyclable.

Certifications and Standards

Designed in accordance with and published in compliance with applicable BCI, IEC and BS EN standards, including:

- IEC60896-21/22
- BS EN 60254-1:2005
- AS/NZS 4029.2:2000 BS EN 60254-1:2005 (MOD).

Discover® and its facilities and products are certified to multiple standards:

- ISO, UL, QS, and TUV standards
- ETTS Germany
- Euro Bat classification for Environmental Stewardship Standards.

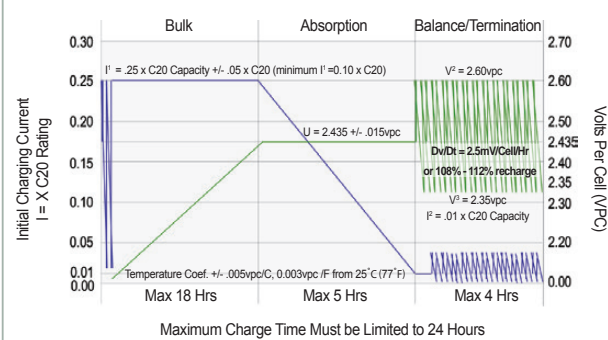


Contact Us

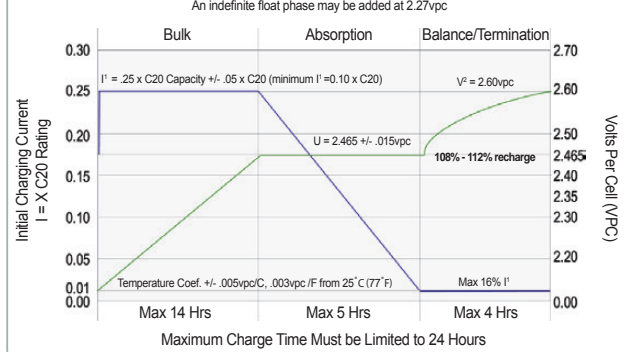
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Email: info@discover-energy.com
www.discover-energy.com

Graphs

Discover EV Traction Dry Cell - Constant Current IU1 with Pulse Termination

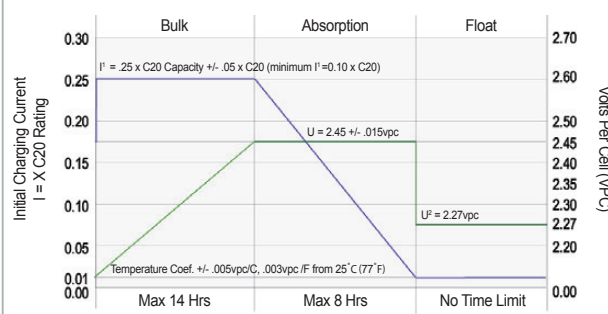


Discover EV Traction Dry Cell - Constant Current IU1

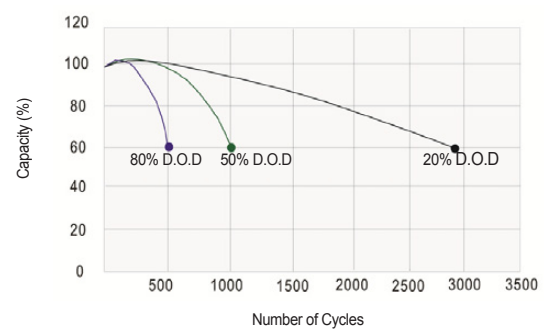


NOTE: This algorithm uses a pulse termination criterion. As a safety precaution during the Finish phase, if the average cell voltage, or volts per cell (vpc), exceeds V^2 and the charger output has been on for more than 30 seconds, the output is shut off until the vpc falls to V^3 . The finish phase then resumes and this "pulsing" continues until the target overcharge (108% - 112%) is reached.

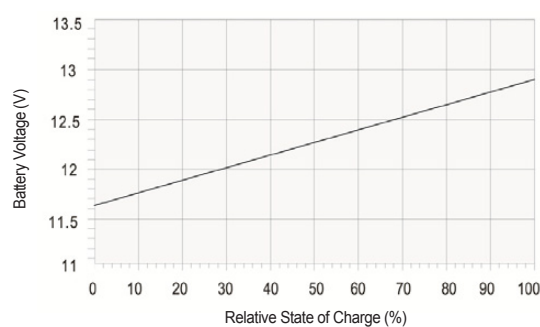
Discover EV Traction Dry Cell - Voltage Regulated IUU



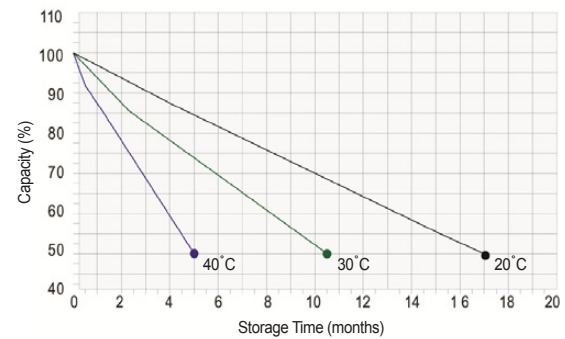
Cycle Service Life in Relation to Depth of Discharge



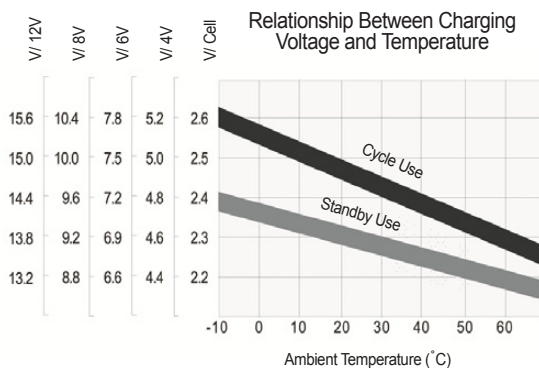
Relationship of OCV and State of Charge (20°C)



Self - Discharge Characteristics



Relationship Between Charging Voltage and Temperature



Temperature Effects on Capacity

