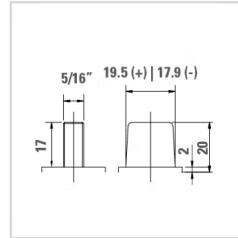
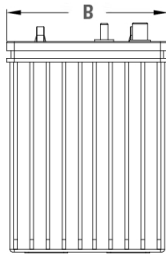
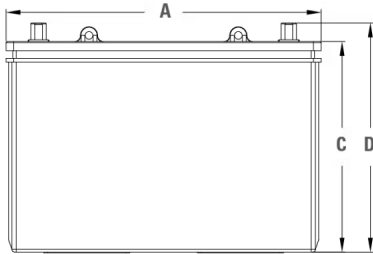


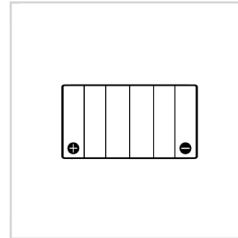


DRY CELL Marine/RV Battery

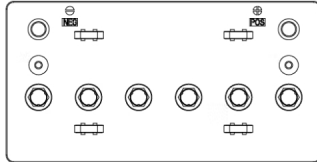
Discover[®] DRY CELL Marine RV batteries outperform traditional Flooded, AGM and Gel batteries with exceptional dual-purpose, starting and cycling performance. The batteries are tolerant of a wide ambient temperature range, vibration and Partial State of Charge (PSOC) operation. DRY CELL Marine RV batteries are safe, nonspillable, maintenance-free and are trusted by boat builders and recreational vehicle manufacturers.



TERMINAL



LAYOUT



MECHANICAL SPECIFICATIONS

Industry Reference	BCI: 31	
Length A (in/mm)	13	330
Width B (in/mm)	6.8	172
Height C (in/mm)	8.5	216
Total Height D (in/mm)	9.3	236
Weight (lbs/kgs)	71.5	32.5
Terminal *	AM	
Technology	DRY CELL AGM, VRLA	

NOTE 1: Dimensions have a ±2 mm (0.08 in) tolerance. Weights may vary.
NOTE 2: Refer to [terminal guide](#) on website for torque values.

ELECTRICAL SPECIFICATIONS

Voltage (V)	12
Internal Resistance (mΩ)	4
Short Circuit (A) (20°C / 68°F)	3600
Self-Discharge (20°C / 68°F)	2-3% per month
Charge Temperature	Min: -10°C (14°F) Max: 50°C (122°F)
Discharge Temperature	Min: -40°C (-40°F) Max: 50°C (122°F)
Storage Temperature	Min: -20°C (-4°F) Max: 60°C (140°F)

NOTE 3: Extra considerations must be given when designing systems for use at maximum temperatures.
NOTE 4: Internal Resistance is approximate.

PERFORMANCE SPECIFICATIONS

Amp Hours (AH)
20 HR
120

20 HR: 1.75VPC at 30°C/86°F

Minutes of Discharge		Cranking Amps	
@25A	@75A	CA (0°C/32°F)	CCA (-18°C/0°F)
240	58	1000	700

FEATURES

HYDRO POLYMER

- Organic capillary separators with hydro polymer electrolytes resist dry-out and prevent thermal runaway
- Maintains performance characteristics over operational life

ENHANCED ALLOYS

- Thick plates with graphite enhanced alloys deliver maximum runtime over operational life

CARBON BOOST

- Carbon additives to increase duty cycle performance, charge acceptance and partial state of charge operation

AUTOMATED THROUGH-THE-PARTITION WELD

- Improved intercell weld consistency, and less lead waste than manual welding process (key industry models)
- Supports higher current loads and lowers internal resistance

POLYPROPYLENE CASE

- High heat resistance and durability (key industry models)
- High precision pressure relief valves reduce water loss and extend life
- Integrated flame arrestors prevent fire and explosion

BENEFITS

ENHANCED RUNTIME

- High amp hour capacity
- High operational voltage over lifetime
- 50% DoD above 2.05 VPC

EXTENDED SERVICE LIFE

- Long life superior to deep-cycle FLA / AGM / Gel batteries
- 700+ cycles 60% DoD (IEC 896-2 Stationary Lead-Acid)
- 1,400+ cycles 50% DoD (BCIS-06 Deep-Cycle Lead-Acid)

RESILIENCE

- Partial stage of charge operation superior to AGM
- Intense duty cycling superior to AGM / Gel
- Overcharge and over-discharge resilience superior to AGM

EXTREME TEMPERATURES

- High temperature life superior to AGM
- Low temperature operation superior to FLA / AGM / Gel batteries

EXTREME VIBRATION RESISTANCE

- Vibration resistance superior to AGM / Gel
- Vibration shock tested (IEC 61373, DIN EN 61373, SAE J537)

OEM TRUSTED

- Exceeds OEM specifications
- Innovative technology
- Global service and support

RELIABLE AND SAFE

- Valve Regulated Lead-Acid, DRY CELL AGM
- Maintenance-free, nonspillable, no-gassing
- Spark and explosion tested (SAE J1495)

CERTIFIED QUALITY

Discover[®] manufacturing facilities are fully certified to ISO 9001/14001 and OSHA 18001 standards. Designed in accordance with and published in compliance with applicable standards, including:

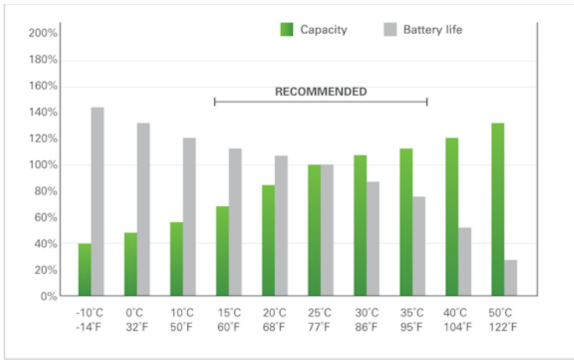
- IEC 60896-21/22. Lead-Acid Stationary
- DIN 43 539. VRLA
- SAE J537. Storage
- UL, CE Health Safety Certified

SHIPPING CLASSIFICATION

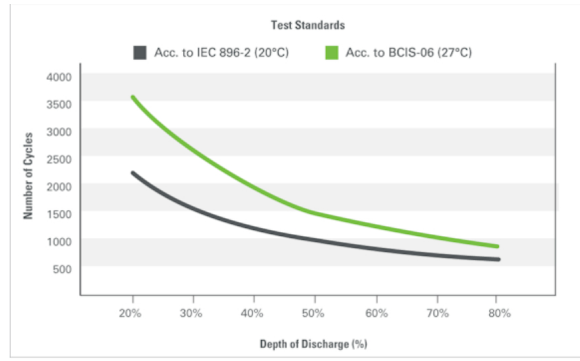
- Classified as a nonspillable battery
- Without restriction for transport by Sea (IMDG amendment 27)
- Without restriction for transport by Air (IATA/ICAO provision 67)
- Without restriction for transport by Ground (STB, DOT-CFR-HMR49)



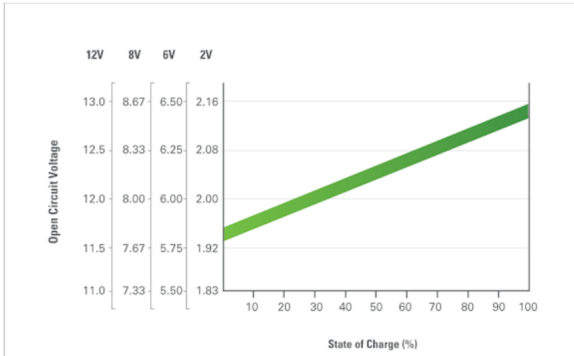
Temperature Effects on Capacity



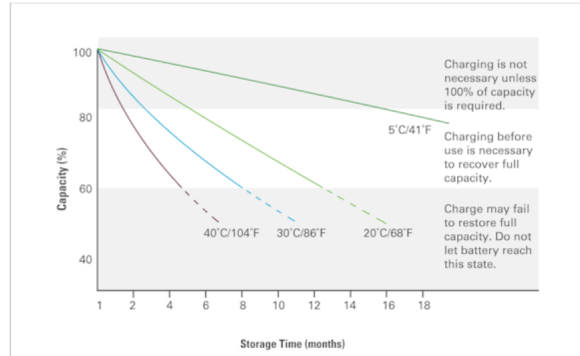
Test Standards and Cycle Life



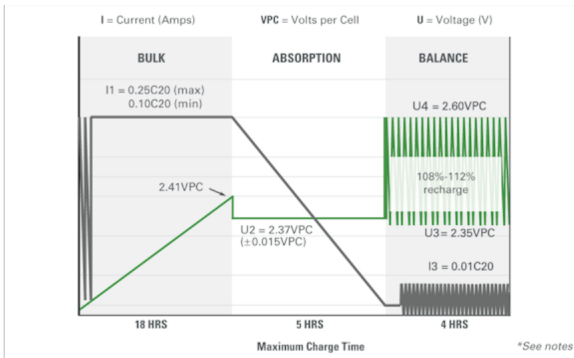
Open Circuit Voltage in Relation to SOC (20°C)



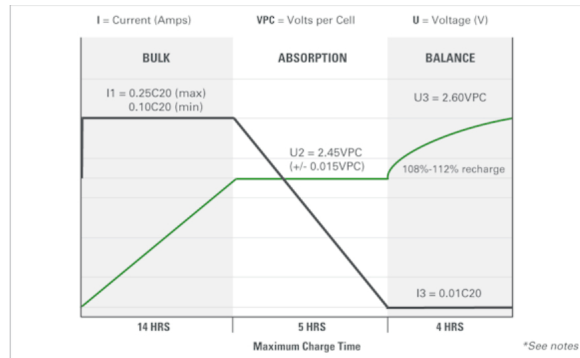
Self-Discharge Characteristics



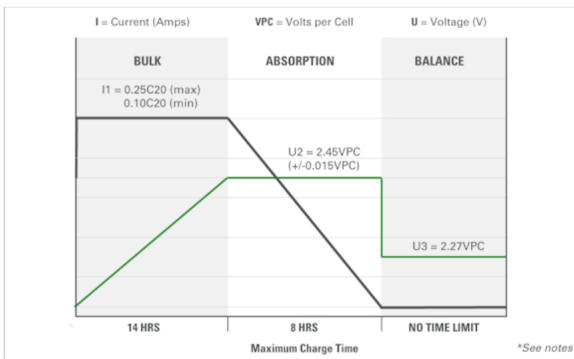
IUI Pulse Charge Profile



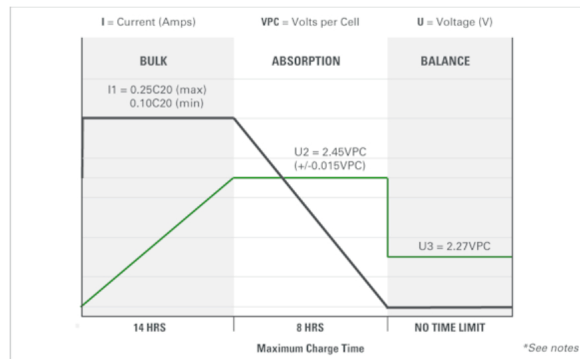
Constant Current (IUI) Charge Profile



Voltage Regulated (IUU) Charge Profile



Relation between Charge, Voltage and Temperature



NOTES

- Due to self-discharge characteristics of lead-acid battery technologies, batteries should be top charged within 6 months of storage to ensure optimum performance, prevent sulphation and permanent capacity loss.
- Charge profile recommendations correspond to battery voltages at 25°C (77°F). For temperatures below, adjust +5mVPC/°C (+3mVPC/°F). Temperatures above, adjust -5mVPC/°C (-3mVPC/°F). Temperature compensated charging helps ensure optimum battery runtime and life performance.
- Charge profile recommendations depend on application and charger. IUI (or IUI with Pulse) is appropriate for applications that require frequent and deep discharges. IUU is appropriate for applications that are on standby and cycled less frequently.
- IUI with Pulse algorithm uses a pulse termination criterion. The finish current is pulsed on and off in order to keep the battery voltage at a minimum while still reaching target overcharge. If average VPC exceeds U2 and the charger output has been on for more than 30 seconds, the output is shut off until VPC falls to U3.
- IUI Charge Profile (if applicable), may have a continuous float phase added (2.27VPC).

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