



**MAXON**<sup>®</sup>  
BATTERIES

**MXG12-220**

**Gel Deep Cycle Battery**



**SPECIFICATIONS**

Nominal Voltage	12V (3 cells per unit)	
Design Floating Life @ 25°C	10 Years	
Nominal Capacity @ 25°C (20 hour rate @ 11.0A, 1.8V)	220 Ah	
Rated Capacity	10 hour rate (20.0A)	200 Ah
	5 hour rate (35.4A)	177 Ah
	1 hour rate (132A)	132 Ah
Internal Resistance	Full Charged Battery @ 25°C	≤2.7mΩ
Ambient Temperature	Discharge	-15°C~50°C
	Charge	0°C~40°C
	Storage	15°C~40°C
Capacity affected by Temperature (10 hour rate )	40°C	103%
	25°C	100%
	0°C	86%
Self-Discharge @ 25°C per Month	3%	
Charge (Constant Voltage) @ 25°C	Standby Use	Initial Charging Current Less than 60A Voltage 13.5 -13.8V
	Cycle Use	Initial Charging Current Less than 60A Voltage 14.4 -15.0V



<b>12V</b> Voltage	<b>220Ah</b> Capacity	<b>Gel</b> Technology	<b>Deep</b> Cycle
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The Maxon MXG range of Hybrid Gel Deep Cycle batteries are a competitively priced battery that doesn't compromise quality. Using Japanese Technology they have an extremely high cycle rate (1200 Cycles @50% DOD) compared to standard AGM & Gel batteries and are well known for their reliability.

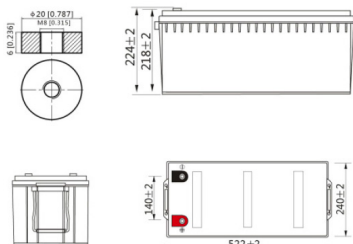
The MXG12 series batteries are a rechargeable 12V Hybrid Gel deep cycle battery. They are highly suitable for all deep cycling applications such as Solar, Camping, Caravan, and Marine because of their high cycling ability and fast recharging capability. They are also used in a range of standby and industrial equipment applications.

**GENERAL FEATURES**

- High Performance Gel hybrid battery
- Integrated design to ensure the best in uniformity and reliability
- High cycle ability 1200 cycles @50% DOD
- Extreme vibration resistant
- Advanced AGM separators

**DIMENSIONS & WEIGHT**

Length (mm)	552
Width (mm)	240
Height (mm)	216
Total Height (mm)	218
Weight (kg)	58.5



**APPLICATIONS**

- Caravan, Camper vans and 4WD
- Portable power
- Marine equipment
- Solar systems
- Standby systems

Marine	Solar	4W Drives
Caravans	Standby	UPS
3-Yr Warranty	CE	CERTIFIED ISO 9001 ISO 14001 PRODUCER

**COMPLIED STANDARDS**

IEC 60896-21/22	JIS C8704
IEC61427	BS6290 part4
GB/T 19638	CE/ISO

## BATTERY DISCHARGE TABLE

### Discharge Constant Current per Cell (Amperes at 25°C)

F.V/Time	15min	30min	45min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	309.5	206.4	148.1	132.0	81.8	55.0	46.2	37.4	24.6	22.0	12.1
1.65V	303.9	202.6	145.4	129.6	80.4	54.0	45.4	36.7	24.2	21.6	11.9
1.70V	298.3	198.9	142.7	127.2	78.9	53.0	44.5	36.0	23.7	21.2	11.7
1.75V	292.7	195.1	140.0	124.8	77.4	52.0	43.7	35.4	23.3	20.8	11.4
1.80V	281.4	187.6	134.6	120.0	74.4	50.0	42.1	34.0	22.4	20.0	11.0

### Discharge Constant Power per Cell (Watts at 25°C)

F.V/Time	15min	30min	45min	1h	2h	3h	4h	5h	8h	10h	20h
1.60V	595.9	397.2	285.0	254.1	157.5	105.9	89.0	72.0	47.4	42.4	23.3
1.65V	585.0	390.0	279.8	249.5	154.7	104.0	87.4	70.7	46.6	41.6	22.9
1.70V	574.2	382.8	274.7	244.9	151.8	102.0	85.7	69.4	45.7	40.8	22.4
1.75V	563.4	375.6	269.5	240.2	148.9	100.1	84.1	68.1	44.8	40.0	22.0
1.80V	541.7	361.1	259.1	231.0	143.2	96.3	80.9	65.5	43.1	38.5	21.2

**Note:** The above data are average values, and can be obtained within 3 charge/discharge cycles. These are not minimum values. Cell and battery designs/specifications are subject to modification without notice.

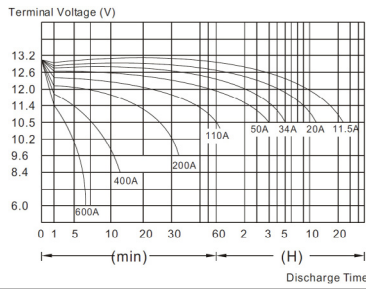


## BENEFITS

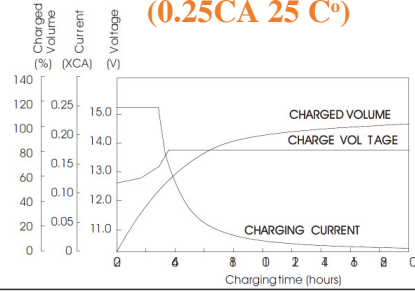
- ✓ High performance Gel / AGM Hybrid
- ✓ High Cycling up to 1,200 cycles @ 50% DOD
- ✓ Excellent for energy storage
- ✓ Fully sealed, allows for safe operation in any position
- ✓ Impact & fire resistant ABS case
- ✓ Up to 3 years replacement warranty
- ✓ Resistant to heavy vibrations
- ✓ Low self-discharge Relief Valve with flame-integrated arrestors
- ✓ Japanese Technology

# PERFORMANCE CHARACTERISTICS

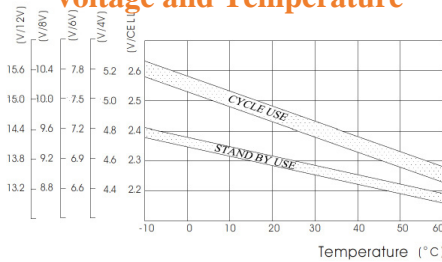
## Discharge Characteristics



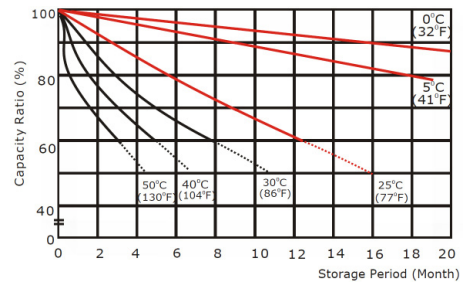
## Constant Voltage Charging Characteristics (0.25CA 25 C°)



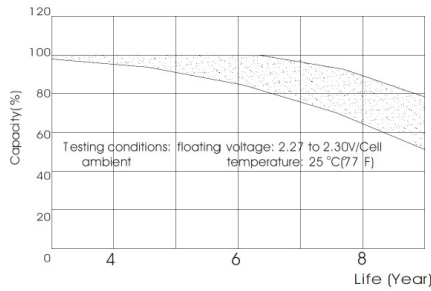
## Relationship between Charging voltage and Temperature



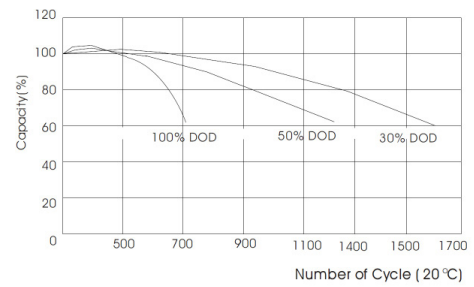
## Self-discharge Characteristics



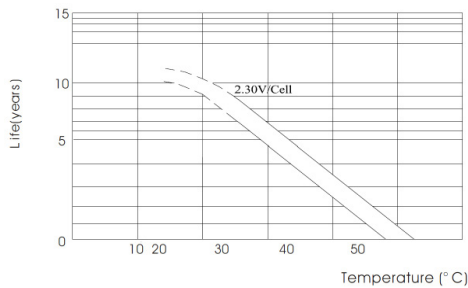
## Float service life



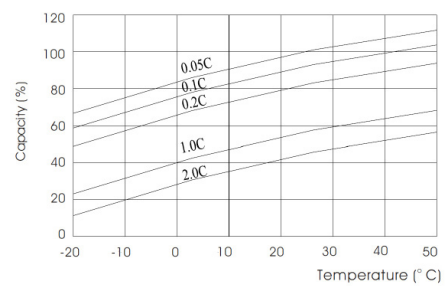
## Cycle service life @ different DOD



## Temperature Effects on Float Life



## Temperature Effects on Capacity



# BATTERY CONSTRUCTION

Component	Positive plate	Negative plate	Container & Cover	Safety valve	Terminal	Separator	Electrolyte	Pillar seal
Features	Thick high Sn low Ca grid with special paste	Balanced Pb-Ca grid for improved recombination efficiency	Fire resistance ABS (UL94-V0 optional)	Flame Si-Rubber and aging resistance	Female Copper Insert M8	Advanced PVC /AGM separator for high pressure cell design	Silicon Gel	Two layers epoxy resin seal