

## AGM DEEP CYCLE DATA/SPECSHEETS





At U.S. Battery, we pride ourselves on providing our distributors and global partners with dependable products and reliable support information that will allow each end user to feel confident they've made the right choice when using any of our world-class sealed AGM Deep Cycle batteries.

This booklet contains a comprehensive compilation of data and technical information. With a history of excellence spanning from our humble beginnings in 1926 to the present, we feel confident that this data will further demonstrate the validity of the industry's trust in our premium products. We offer a variety of power solutions to a wide range of applications and industries all backed by a solid worldwide warranty.

Should you require additional information, please visit WWW.USBATTERY.COM

All of our Deep Cycle AGM batteries are specifically manufactured for U.S. Battery under our guidelines assuring our customers they are being provided the highest quality AGM batteries available.

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**ADDITIONAL CHARGING recommendations** 

6-Volt AGM Deep Cycle Batteries



## **US AGM 2000**

DATA SHEET
AGM Deep Cycle 6 -Volt



**Application:** Wherever Sealed, Leak Proof, Deep Cycle 6-volt batteries are needed.

**Dimensions:** 10.24" (260mm)L 7.09" (180mm)W 10.79" (274mm)H

Type: Sealed Non-Spillable Lead Acid (AGM)

Case material: ABS / Heat Sealed

	US AGM 2000 SPECIFICATIONS																		
IIC Pattory	BCI	Nominal	Maximum Bulk/Absorp.	Minimum	Amp-	Hour (	Capaci	ity @ I	Discha	rge Tin	nes (hr)	Disc	harge Mir	nutes	Length	Width	Height		Wet
US Battery Model	Group Size	Voltage	Charge (amps)	Charge (amps)	C1	C2	<b>C</b> 5	<b>C</b> 6	C10	C20	C100	75 Amps	56 Amps	25 Amps	Inch (mm)	Inch (mm)	Inch (mm)	Terminal Type	Weight lb (kg)
US AGM 2000	GC2	6	21	4.2	132	150	177	183	197	210	231	120	175	460	10.24" (260)	7.09" (180)	10.79" (274)	DUAL	60(27.2)

#### **US AGM 2000 CHARGING INSTRUCTIONS:**

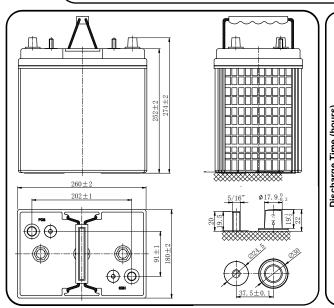
Nominal Charge Current (amps) 21

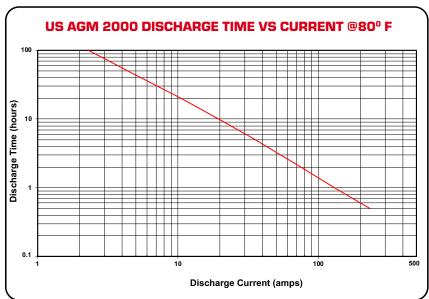
Max Charge Current (w/ temp. compensation) 42

Max Charge Voltage (temp. compensated) 7.4

Float/Maintenance Voltage (temp. compensated) 6.9

**Temperature Compensation** -4 mV/cell/°C (-2 mV/cell/°F)





**US AGM 2224** 

**US AGM 6V260** 

batteries are needed.

Case material: ABS / Heat Sealed

## **Image Coming Soon**



6-Volt

Application: Wherever Sealed, Leak Proof, Deep Cycle 6-volt batteries are needed.

> Dimensions: 10.2" (260mm)L 7.09" (180mm)W 9.72 (247mm)H

Type: Sealed Non-Spillable Lead Acid (AGM)

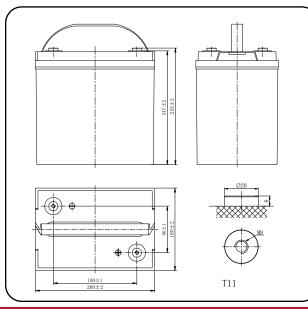
Case material: ABS / Heat Sealed

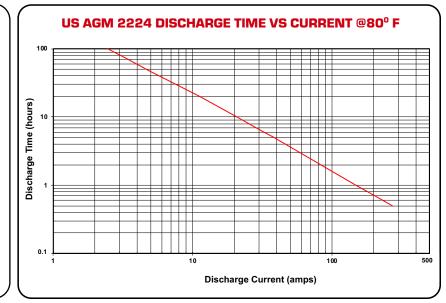
	US AGM 2224 SPECIFICATIONS																		
US Battery	BCI	Nominal	Maximum Bulk/Absorp.	Minimum	Amp-	Hour (	Capac	ity @ I	Discha	rge Tin	nes (hr)	Disc	harge Mi	nutes	Length	Width	Height		Wet
Model	Group Size	Voltage	Charge (amps)	Charge (amps)	C1	C2	C5	C6	C10	C20	C100	75 Amps	56 Amps	25 Amps	Inch (mm)	Inch (mm)	Inch (mm)	Terminal Type	Weight lb (kg)
US AGM 2224	GC2	6	22	4.5	150	166	190	195	208	224	246	135	188	490	10.24" (260)	7.09" (180)	9.96" (253)	T11	67(30.5)

#### **US AGM 2224 CHARGING INSTRUCTIONS:**

Nominal Charge Current (amps)	22
Max Charge Current (w/ temp. compensation)	45
Max Charge Voltage (temp. compensated)	7.4
Float/Maintenance Voltage (temp. compensated)	6.9

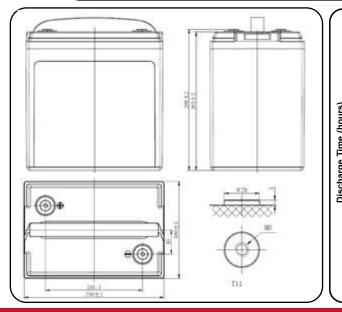
**Temperature Compensation** -4 mV/cell/°C (-2 mV/cell/°F) For automatic chargers, use settings compatible with AGM batteries
\*See back of book for additional charging information

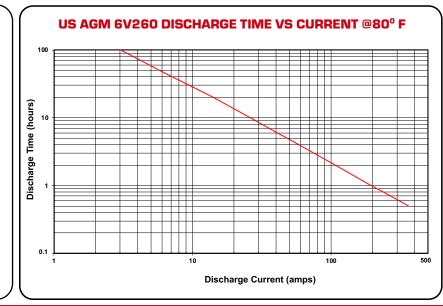




			us /	AGI	VI	6	V	2	60	) 9	SP	E	CIF	IC	ATI	SNO			
IIC Pattory	BCI	Nominal	Maximum Bulk/Absorp.	Minimum	Amp-	Hour (	Capaci	ity @ I	Discha	rge Tin	nes (hr)	Disc	harge Mir	nutes	Length	Width	Height		Wet
US Battery Model	Group Size	Voltage	Charge (amps)	Charge (amps)	C1	C2	<b>C</b> 5	<b>C6</b>	C10	C20	C100	75 Amps	56 Amps	25 Amps	Inch (mm)	Inch (mm)	Inch (mm)	Terminal Type	Weight lb (kg)
S AGM 6V260	GC2	6	28	5.6	197	214	240	245	261	280	300	180	240	630	10.24" (260)	7.09" (180)	10.79" (268)	T11	77(34.7)

**US AGM 6V260 CHARGING INSTRUCTIONS: Nominal Charge Current** (amps) Max Charge Current (w/ temp. compensation) 56 Max Charge Voltage (temp. compensated) 7.4 6.9 Float/Maintenance Voltage (temp. compensated) **Temperature Compensation** -4 mV/cell/°C (-2 mV/cell/°F)







## **US AGM 6V27**

**DATA SHEET** 

**AGM Deep Cycle 6 -Volt** 

**Application:** Wherever Sealed, Leak Proof, Deep Cycle 6-volt batteries are needed.

**Dimensions:** 12.05" (306mm)L 6.61" (168mm)W 8.98" (228mm)H

Type: Sealed Non-Spillable Lead Acid (AGM)

Case material: ABS / Heat Sealed

			US	AG	M	lE	<b>3V</b>	/2	27	S	P	EC	IFI	C/	ATIO	NS			
IIC Pattony	BCI	Nominal	Maximum Bulk/Absorp.	Minimum		Hour (	Capaci	ity @ I	Discha	rge Tin	nes (hr)	Disc	harge Mir	nutes	Length	Width	Height		Wet
US Battery Model	l Groun	Voltage		Charge (amps)	C1	C2	<b>C</b> 5	C6	C10	C20	C100	75 Amps	56 Amps	25 Amps	Inch (mm)	Inch (mm)	Inch (mm)	Terminal Type	Weight lb (kg)
US AGM 6V27	27	6	22	4.3	119	143	182	191	210	215	236	112	180	500	12.05" (306)	6.61" (168)	8.98" (228)	T11	64(28.8)

#### **US AGM 6V27 CHARGING INSTRUCTIONS:**

Nominal Charge Current (amps)

Max Charge Current (w/ temp. compensation)

Max Charge Voltage (temp. compensated)

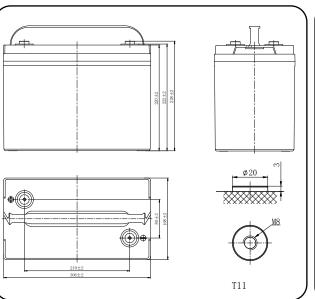
7.4

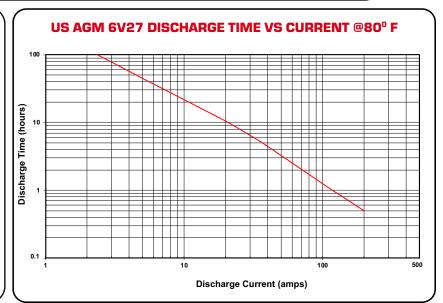
Float/Maintenance Voltage (temp. compensated)

6.9

**Temperature Compensation** -4 mV/cell/°C (-2 mV/cell/°F)

For automatic chargers, use settings compatible with AGM batteries
\*See back of book for additional charging information







## **US AGM 305**

**DATA SHEET** 

**AGM Deep Cycle 6 -Volt** 



**Application:** Wherever Sealed, Leak Proof, Deep Cycle 6-volt batteries are needed.

Dimensions: 11.61" (295mm)L 7.09" (180mm)W 14.49" (368mm)H

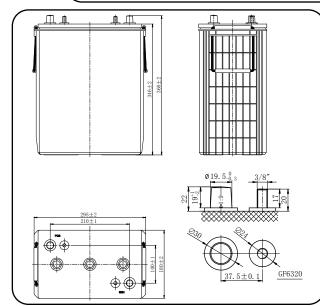
Type: Sealed Non-Spillable Lead Acid (AGM)

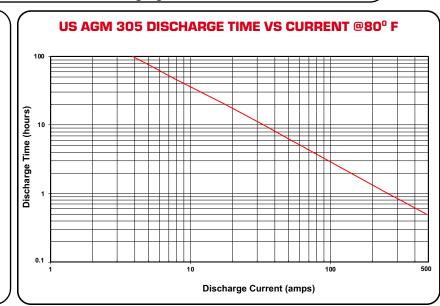
Case material: Polypropylene / Heat Sealed

	US AGM 305 SPECIFICATIONS																		
US Battery	BCI	Nominal	Maximum Bulk/Absorp.	Minimum	Amp-	Hour C	apaci	ity @ I	Discha	rge Tin	nes (hr)	Disc	harge Mir	nutes	Length	Width	Height		Wet
Model	Group Size	Voltage	Charge (amps)	Charge (amps)	C1	C2	<b>C</b> 5	<b>C6</b>	C10	C20	C100	75 Amps	56 Amps	25 Amps	Inch (mm)	Inch (mm)	Inch (mm)	Terminal Type	Weight lb (kg)
US AGM 305	902	6	35	7	259	279	307	313	335	350	385	240	332	820	11.61" (295)	7.09" (180)	14.49" (368)	DUAL	106(48)

# US AGM 305 CHARGING INSTRUCTIONS: Nominal Charge Current (amps) Max Charge Current (w/ temp. compensation) Max Charge Voltage (temp. compensated) Float/Maintenance Voltage (temp. compensated) 6.9

**Temperature Compensation** -4 mV/cell/°C (-2 mV/cell/°F)









Application: Wherever Sealed, Leak Proof, Deep Cycle 6-volt batteries are needed.

> **Dimensions:** 11.61" (295mm)L 7.09" (180mm)W 16.85" (428mm)H

Type: Sealed Non-Spillable Lead Acid (AGM)

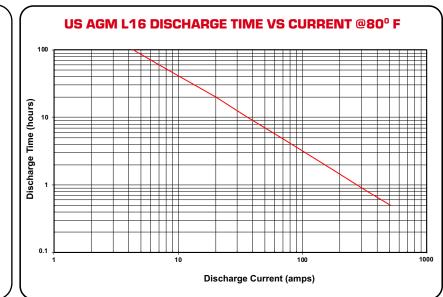
Case material: Polypropylene / Heat Sealed

			US	A	31	V	L	1	6	SI	PE	CI	FIC	CA	TIOI	<b>US</b>			
IIC Pottory	BCI	Nominal	Maximum Bulk/Absorp.	Minimum		Hour (	Capac	ity @ I	Discha	rge Tin	nes (hr)	Disc	harge Mi	nutes	Length	Width	Height		Wet
US Battery Group	Groun	Voltage		Charge (amps)	C1	C2	C5	C6	C10	C20	C100	75 Amps	56 Amps	25 Amps	Inch (mm)	Inch (mm)	Inch (mm)	Terminal Type	Weight lb (kg)
US AGM L16	903	6	40	8	277	301	336	344	362	400	435	265	369	925	11.61" (295)	7.09" (180)	16.85" (428)	DUAL	120(54.2)

## **US AGM L16 CHARGING INSTRUCTIONS:**

Nominal Charge Current (amps) Max Charge Current (w/ temp. compensation) 80 Max Charge Voltage (temp. compensated) 7.4 6.9 Float/Maintenance Voltage (temp. compensated)

**Temperature Compensation** -4 mV/cell/°C (-2 mV/cell/°F) For automatic chargers, use settings compatible with AGM batteries
\*See back of book for additional charging information



8-Volt AGM Deep Cycle Batteries



# US AGM 8V170 DATA SHEET AGM Deep Cycle 8 -Volt

**Application:** Wherever Sealed, Leak Proof, Deep Cycle 8-volt batteries are needed.

**Dimensions:** 10.2" (260mm)L 7.17" (182mm)W 11.3" (286mm)H

**Type:** Sealed Non-Spillable Lead Acid (AGM)

Case material: ABS / Heat Sealed

#### **US AGM 8V170 SPECIFICATIONS** Maximum Amp-Hour Capacity @ Discharge Times (hr) BCI Height Inch **US Battery** Group Size Inch Voltage Model Charge **75** 56 25 Charge C1 C2 | C5 | C6 | C10 | C20 | C100 lb (kg) (mm) Type (mm) (amps) (amps) Amps Amps US AGM 8V170 GC8 115 149 156 163 185 120 381 76(34.5)

#### **US AGM 8V170 CHARGING INSTRUCTIONS:**

Nominal Charge Current (amps)

Max Charge Current (w/ temp. compensation)

Max Charge Voltage (temp. compensated)

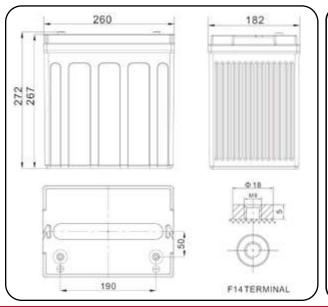
Float/Maintenance Voltage (temp. compensated)

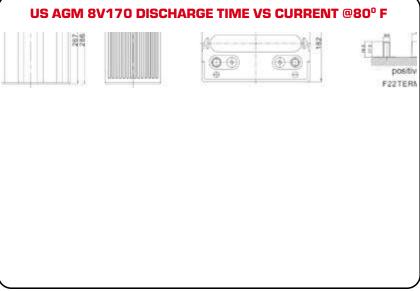
9.9

9.9

**Temperature Compensation** -4 mV/cell/°C (-2 mV/cell/°F)

For automatic chargers, use settings compatible with AGM batteries
\*See back of book for additional charging information





12 All of our Deep Cycle AGM batteries are specifically manufactured for U.S. Battery under our guidelines assuring our customers they are being provided the highest quality AGM batteries available.

12-Volt AGM Deep Cycle Batteries



## US AGM U'

DATA SHEET

AGM Deep Cycle 12 -Volt



**Application:** Wherever Sealed Low Maintenance & Leak Proof 12-volt batteries are needed.

> Dimensions: 7.68" (195mm)L 5.12" (130mm)W 7.13" (181mm)H

Type: Sealed Non-Spillable Lead Acid (AGM)

Case material: ABS / Heat Sealed

		US AGM U1 SPECIFICATIONS																	
IIC Pottoni	BCI	Nominal	Maximum Bulk/Absorp.	Minimum	Amp-	Hour (	Capac	ity @ I	Discha	rge Tin	nes (hr)	Disc	harge Mi	nutes	Length	Width	Height		Wet
US Battery G	Group Size	Voltage		Charge (amps)	C1	C2	C5	C6	C10	C20	C100	75 Amps	56 Amps	25 Amps	Inch (mm)	Inch (mm)	Inch (mm)	Terminal Type	Weight lb (kg)
US AGM U1	U1	12	4	0.7	20	23	29	30	33	35	39	11	16	45	7.68" (195)	5.12" (130)	7.13" (181)	F7	22(9.8)

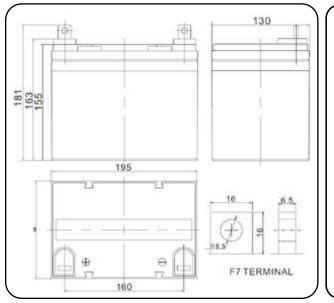
#### **US AGM U1 CHARGING INSTRUCTIONS:**

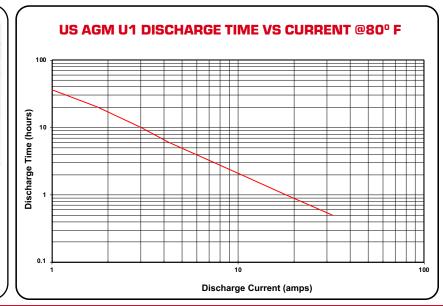
Nominal Charge Current (amps)	4
Max Charge Current (w/ temp. compensation)	7
Max Charge Voltage (temp. compensated)	14.9
Float/Maintenance Voltage (temp. compensated)	13.8

-4 mV/cell/°C (-2 mV/cell/°F) **Temperature Compensation** 

For automatic chargers, use settings compatible with AGM batteries

\*See back of book for additional charging information







**US AGM 24** 

DATA SHEET **AGM Deep Cycle 12 -Volt** 



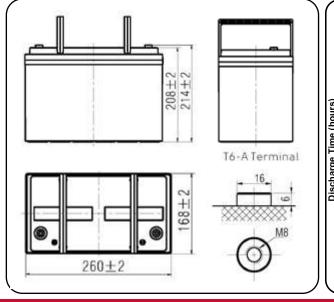
Application: Wherever Sealed, Leak Proof, Deep Cycle 12-volt batteries are needed.

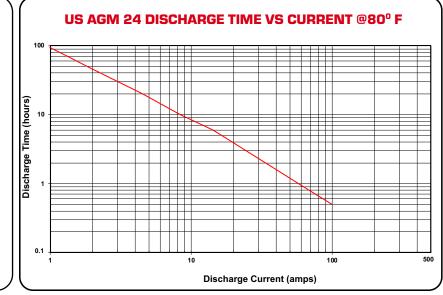
> **Dimensions:** 10.24" (260mm)L 6.61" (168mm)W 8.43" (214mm)H

Type: Sealed Non-Spillable Lead Acid (AGM)

	US AGM 24 SPECIFICATIONS																Ħ			
US Battery	BCI	Nominal	Maximum Bulk/Absorp.	Minimum	Amp-	Hour (	our Capacity @ Discharge Times (hr)									Height		Wet	>	
Model	Group Size	Voltage	Charge (amps)	Charge (amps)	C1	C2	C5	C6	C10	C20	C100	75 Amps	56 Amps	25 Amps	Inch (mm)	Inch (mm)	Inch (mm)	Terminal Type	Weight lb (kg)	12
US AGM 24	24	12	9	1.8	58	67	82	85	90	92	93	43	65	175	10.24" (260)	6.61" (168)	8.43" (214)	Т6	52(23.5)	

**US AGM 24 CHARGING INSTRUCTIONS: Nominal Charge Current** (amps) Max Charge Current (w/ temp. compensation) 18 Max Charge Voltage (temp. compensated) 14.9 Float/Maintenance Voltage (temp. compensated) 13.8 **Temperature Compensation** -4 mV/cell/°C (-2 mV/cell/°F)







**Application:** Wherever Sealed, Leak Proof, Deep Cycle 12-volt batteries are needed.

**Dimensions:** 12.05" (306mm)L 6.61" (168mm)W 9.06" (230mm)H

Type: Sealed Non-Spillable Lead Acid (AGM)

Case material: ABS / Heat Sealed

	US AGM 27 SPECIFICATIONS																		
US Battery	BCI	Nominal	Maximum Bulk/Absorp.			p-Hour Capacity @ Discharge Times (hr)													Wet
Model	l Groun	Voltage	Charge (amps)	Charge (amps)	C1	C2	<b>C</b> 5	C6	C10	<b>C20</b>	C100	75 Amps	56 Amps	25 Amps	Inch (mm)	Inch (mm)	Inch (mm)	Terminal Type	Weight lb (kg)
US AGM 27	27	12	11	2.2	70	81	98	101	108	112	115	55	80	220	12.05" (306)	6.61" (168)	9.17" (233)	DUAL	61(27.8)

US AGM 27 CHARGING INSTRU	CTIONS:
Nominal Charge Current (amps)	11
Max Charge Current (w/ temp. compensation)	22

Max Charge Voltage (temp. compensation)

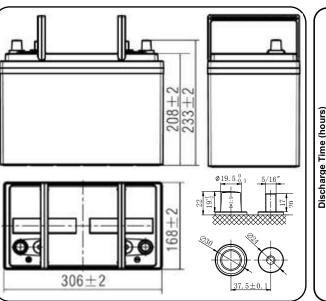
14.9

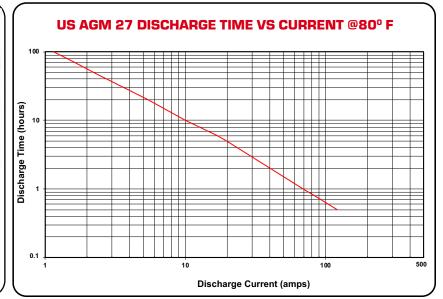
Float/Maintenance Voltage (temp. compensated)

13.8

**Temperature Compensation** -4 mV/cell/°C (-2 mV/cell/°F)

For automatic chargers, use settings compatible with AGM batteries
\*See back of book for additional charging information







### **US AGM 31**

**DATA SHEET** 

AGM Deep Cycle 12 -Volt



**Application:** Wherever Sealed, Leak Proof, Deep Cycle 12-volt batteries are needed.

Dimensions: 12.9" (328mm)L 6.77" (172mm)W 8.66" (220mm)H

Type: Sealed Non-Spillable Lead Acid (AGM)

Case material: ABS / Heat Sealed

#### **US AGM 31 SPECIFICATIONS** Amp-Hour Capacity @ Discharge Times (hr) Height Inch **US Battery** Group Inch Inch 25 Charge C2 | C5 | C6 | C10 | C20 | C100 Size Type lb (kg) (mm) (mm) US AGM 31 31 12.9" (328) 6.77" (172) 8.66" (220) F12 67(30.5)

US AGM 31 CHARGING INSTRUCTIONS:
Nominal Charge Current (amps)

Max Charge Current (w/ temp. compensation)

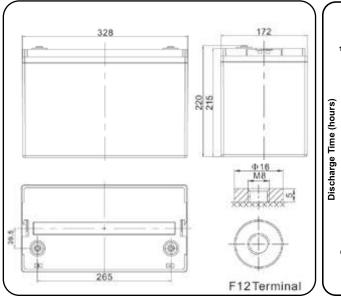
Max Charge Voltage (temp. compensated)

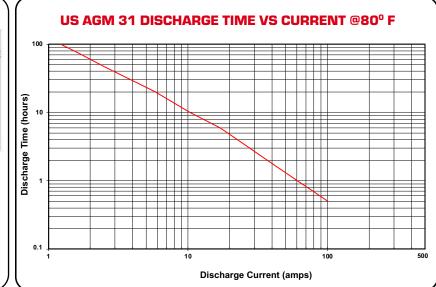
Float/Maintenance Voltage (temp. compensated)

Temperature Compensation

Temperature Compensation

For automatic chargers, use settings compatible with AGM batteries





## **US AGM 12V140**

DATA SHEE





**Image Coming Soon**  Application: Wherever Sealed, Leak Proof, Deep Cycle 12-volt batteries are needed.

> **Dimensions:** 16.1" (408mm)L 6.97" (177mm)W 8.86" (225mm)H

Type: Sealed Non-Spillable Lead Acid (AGM)

Case material: ABS / Heat Sealed

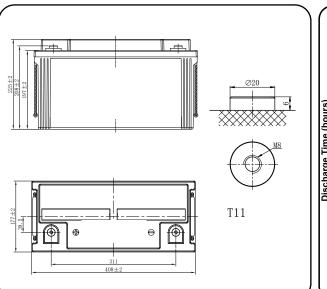
	US AGM 12V140 SPECIFICATIONS																		
US Battery	BCI	Nominal	Maximum Bulk/Absorp.	Minimum	Amp-	Hour (	Capac	ity @ I	Discha	rge Tim	nes (hr)	Disc	harge Mir	nutes	Length	Width	Height		Wet
Model	Groun	Voltage	Charge (amps)	Charge (amps)	C1	C2	C5	<b>C</b> 6	C10	C20	C100	75 Amps	56 Amps	25 Amps	Inch (mm)	Inch (mm)	Inch (mm)	Terminal Type	Weight lb (kg)
US AGM 12V140	N/A	12	14	2.9	104	115	132	136	139	144	152	88	126	321	16.1" (408)	6.97" (177)	8.86" (225)	T11	86(39.2)

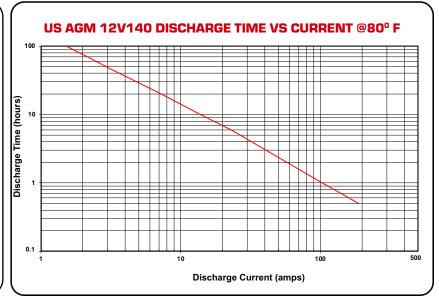
## **US AGM 12V140 CHARGING INSTRUCTIONS:**

Nominal Charge Current (amps) Max Charge Current (w/ temp. compensation) 29 Max Charge Voltage (temp. compensated) 14.9 Float/Maintenance Voltage (temp. compensated) 13.8

**Temperature Compensation** -4 mV/cell/°C (-2 mV/cell/°F)

For automatic chargers, use settings compatible with AGM batteries
\*See back of book for additional charging information







## **US AGM 12V150**

DATA SHEE

AGM Deep Cycle 12 -Volt



Application: Wherever Sealed, Leak Proof, Deep Cycle 12-volt batteries are needed.

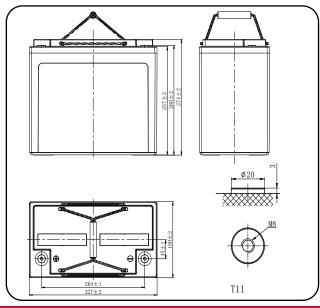
> Dimensions: 12.87" (327mm)L 7.09" (180mm)W 10.79" (274mm)H

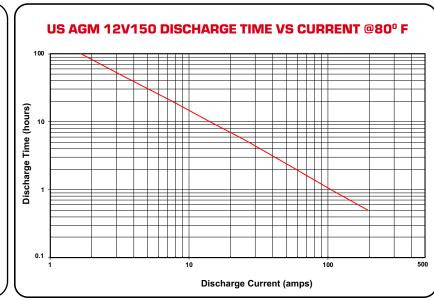
Type: Sealed Non-Spillable Lead Acid (AGM)

Case material: ABS / Heat Sealed

																1				
		U	JS A	GN	4	1 2	21	/1	5	0	SI	PE	CII	FIC	CAT	ON	S			÷
IIC Pattory	BCI	Nominal	Maximum Bulk/Absorp. Charge (amps)	Minimum	Amp-	Hour (	Capac	ity @	Discha	rge Tin	nes (hr)	Disc	harge Mir	nutes	Length	Width	Height		Wet	
US Battery Model	Groun	Voltage		Charge Cha	Charge (amps)	C1	C2	C5	C6	C10	C20	C100	75 Amps	56 Amps	25 Amps	Inch (mm)	Inch (mm)	Inch (mm)	Terminal Type	Weight lb (kg)
JS AGM 12V150	GC12	12	15	3	106	117	133	137	142	150	166	90	120	323	12.87" (327)	7.09" (180)	10.79" (274)	T11	93(42.2)	

**US AGM 12V150 CHARGING INSTRUCTIONS: Nominal Charge Current** (amps) 15 Max Charge Current (w/ temp. compensation) 30 Max Charge Voltage (temp. compensated) 14.9 Float/Maintenance Voltage (temp. compensated) 13.8 -4 mV/cell/°C (-2 mV/cell/°F) **Temperature Compensation** 







**US AGM 12V240** 

DATA SHEE **AGM Deep Cycle 12 -Volt** 



**Application:** Wherever Sealed, Leak Proof, Deep Cycle 12-volt batteries are needed.

> **Dimensions:** 15.24" (387mm)L 7.09" (180mm)W 14.49" (368mm)H

**Type:** Sealed Non-Spillable Lead Acid (AGM)

Case material: Polypropylene / Heat Sealed

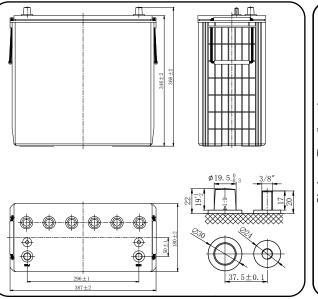
	US AGM 12V240 SPECIFICATIONS																		
IIC Pattony	BCI	Nominal	Bulk/Absorp.	Minimum	Amp-	Hour (	Capac	ity @ I	Discha	rge Tim	nes (hr)	Disc	harge Mir	nutes	Length	Width	Height		Wet
US Battery Model	I I-rolin	Voltage		Charge (amps)	Cī	C2	<b>C</b> 5	C6	C10	<b>C20</b>	C100	75 Amps	56 Amps	25 Amps	Inch (mm)	Inch (mm)	Inch (mm)	Terminal Type	Weight lb (kg)
US AGM 12V240	921	12	25	4.9	158	176	203	209	226	245	270	145	205	535	15.24" (387)	7.09" (180)	14.49" (368)	DUAL	142(64)

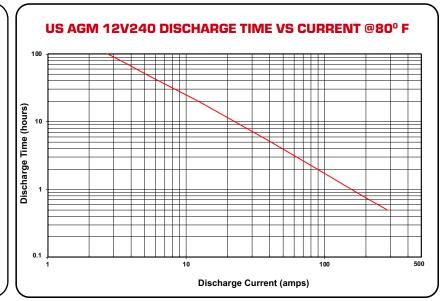
#### **US AGM 12V240 CHARGING INSTRUCTIONS:**

Nominal Charge Current (amps) Max Charge Current (w/ temp. compensation) 49 Max Charge Voltage (temp. compensated) 14.9 Float/Maintenance Voltage (temp. compensated) 13.8

**Temperature Compensation** -4 mV/cell/°C (-2 mV/cell/°F)

For automatic chargers, use settings compatible with AGM batteries
\*See back of book for additional charging information







#### **US AGM 8D**

**DATA SHEE AGM Deep Cycle 12-Volt** 



Application: Wherever Sealed, Leak Proof, Deep Cycle 12-volt batteries are needed.

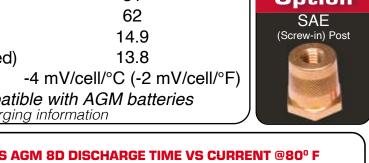
> **Dimensions:** 20.5" (521mm)L 10.6" (268mm)W 8.86" (225mm)H

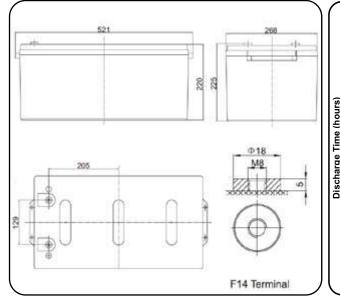
Type: Sealed Non-Spillable Lead Acid (AGM)

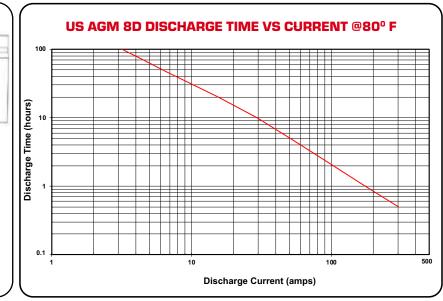
Case material: ABS / Heat Sealed

	US AGM 8D SPECIFICATIONS																÷			
IIC Pattory	BCI	Nominal	Maximum Bulk/Absorp.	Minimum	Amp-	p-Hour Capacity @ Discharge Times (hr)									Height		Wet	>		
US Battery Model	Group Size	Voltage	Charge (amps)	Charge (amps)	C1	C2	C5	C6	C10	C20	C100	75 Amps	56 Amps	25 Amps	Inch (mm)	Inch (mm)	Inch (mm)	Terminal Type	Weight lb (kg)	15
US AGM 8D	8D	12	31	6.2	176	205	252	262	294	308	317	180	262	738	20.5" (521)	10.6" (268)	8.86" (225)	F14	169(77)	

**US AGM 8D CHARGING INSTRUCTIONS: Nominal Charge Current** (amps) 31 Max Charge Current (w/ temp. compensation) 62 Max Charge Voltage (temp. compensated) 14.9 Float/Maintenance Voltage (temp. compensated) 13.8 **Temperature Compensation** 







#### **ADDITIONAL CHARGING recommendations:**

#### <u>Three-Stage Charger (Constant Current-Constant Voltage-Constant/Pulse Current)\*</u>

Following is the chargeing recommendations and charging profile using 3 stage\* chargers for US AGM deep cycle products.

\*Equalization and float charge modes are not considered to be one of the stages in a charge profile.

1. Bulk Charge Constant current @ maximum bulk charge to 2.40+/-0.05 volts per cell

(e.g. 7.20 volts +/-0.15 volts per 6 volt battery)

2. Absorption Charge Constant voltage (2.40+/-0.05 vpc) to minimum absorption charge then hold for 2-3

hours and terminate charge.

3. Finish Charge Constant curent at 3% of C/20 Ah to 2.45+/-0.05 volts per cell then terminate charge

(e.g. 7.35 volts +/-0.15 volts per 6 volt battery)

<u>Pulse finish:</u> Periodic short current pulses at ~2% of C/20. Voltage rises to 2.7vpc, current turns off, voltage drops to 2.35vpc, current turns on and repeats. Termination is determined by % overcharge or max time.

(Optional Float Charge)

Constant voltage 2.23+/-0.03 vpc (6.70 volts per 6 volt battery) for unlimited time

Equalization Charge

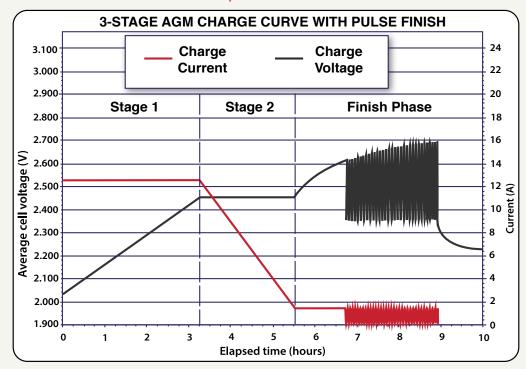
Constant voltage (2.45+/-0.05 vpc) extended for 1-3 hours after normal charge cycle (repeat every 30 days)

Notes:

Charge time from full discharge is 9-12 hours.

Absorption charge time is determined by the battery but will usually be "3 hours at 2.45 volts per cell. Finish charge time is typically 2-4 hours.

Float time is unlimited at 2.23 volts per cell.



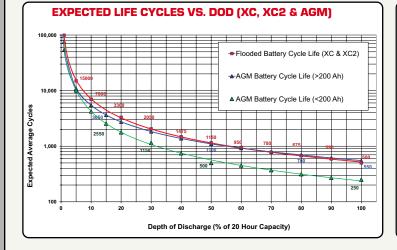
Do not charge at temperature corrected voltages above 15 volts (2.5 volts/cell).

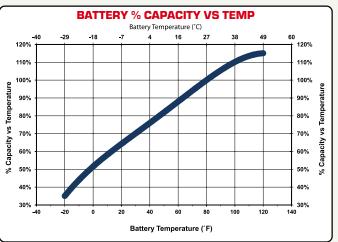
Use of a voltage controlled charger is a requirement for warranty coverage.

For best cycle life, limit discharge to less than 50% of the battery's 20 hour capacity.

Deep cycle batteries need to be equalized periodically. Equalizing is an extended, low current charge performed after the normal charge cycle. This extra charge helps keep all cells in balance. Actively used batteries should be equalized once per month. Manually timed chargers should have the charge time extended approximately 3 hours. Automatically controlled chargers should be unplugged and reconnected after completing a charge.

#### **ADDITIONAL** information:





#### U.S. Battery Operating Temperature Guidelines

**For charging,** we recommend staying within 0°F to120°F (-18 to 49°C) to avoid charging frozen batteries at low temperature or going into thermal runaway at high temperature.

**For discharging,** we recommend -20°F to 120°F (-29 to 49°C). Batteries discharged at temperatures below 32°F (0°C) should be recharged immediately to avoid freezing.

Batteries discharged at temperatures above 120°F (49°C) should be allowed to cool before recharging.

Extreme temperatures can substantially affect battery performance and charging. Cold reduces battery capacity and retards charging. Heat increases water usage and can result in overcharging. Very high temperatures can cause "thermal run-away" which may lead to an explosion or fire. If extreme temperature is an unavoidable part of an application, consult a battery/charger specialist about ways to deal with the problem.

## **COMMON RATINGS explained:**

#### 75 Amp Rating

Expressed in minutes; the amount of time it takes a battery to go from fully charged to 1.75 volts per cell using a constant 75 amp discharge at 80°F.

#### **20 Hour Rat**

Expressed in Ampere Hours; the total amount of Ampere Hours a fully charged battery can provide in a 20 hour period, reaching a discharge level of 1.75 volts per cell at 80°F. Divide the rating by 20 (hrs) to determine discharge current rate.

#### **6 Hour Rat**

Expressed in Ampere Hours; the total amount of Ampere Hours a fully charged battery can provide in a 6 hour period, reaching a discharge level of 1.75 volts per cell at 80°F. Divide the rating by 6 (hrs) to determine discharge current rate.

#### Convert 20 Hour To 6 Hour Capacity

Multiply 20 Hr. Ampere Hour Capacity by .84 (Divide result by 6 to determine discharge current rate).

#### **Reserve Capacity**

Expressed in minutes, the time it takes for a fully charged battery to reach 1.75 volts per cell using a constant 25 amp. discharge at 80°F.

#### C.C.A. (Cold Cranking Amps)

Expressed in amps., a rating usually applied to S.L.I. (starting, lighting, ignition) batteries; the highest discharge amps, that can be sustained by a fully charged battery over 30 seconds without dropping voltage below 1.2 volts per cell at 0°F.

#### CA/ M.C.A. (Cranking Amps)

Same as above except that the rating is at 32°F rather than 0°F. The higher temperature will result in an approximate increase in the cranking rate of 22%.

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