

Power your world

**EXIDE**®  
**Batteries**  
SINCE 1935

## Cycling Range



Scan here

- for fitment guide
- for fitting instructions

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# Technology Story

*Exide Batteries has a commitment to “Power the Future” through the delivery of Enhanced Performance, Extreme product life and Ultimate value to its customers*

*Deep cycle batteries supply a relatively low amount of current for a long period of time. A deep cycle battery is constructed in such a way that repeated discharge/recharge situations have much less of an adverse effect on the batteries life or performance, compared to that of a conventional car battery. With that in mind Exide have created an extensive range of deep cycle products that can be matched to the application based on the demand, environment and fitment requirements of the particular application.*

*The Exide range covers GEL, AGM and flooded battery options, which allows the user to install the best technology available for their individual requirements, that being solar, golf carts, sweepers, materials handling, industrial, farming and many other applications*

## Flooded Battery Technology

*The flooded lead acid battery is the traditional method for manufacturing automotive batteries. The key enhancement of a deep cycle battery is the cast plates that are moulded extra thick. All flooded lead acid batteries have vents that are continuously open to the environment. Flooded batteries generally cannot be operated at an angle greater than 45 degrees. There is free acid surrounding the lead plates within the internals of the battery.*

### FEATURE

- Thick plate design with high density active material
- Dual post designs included threaded posts
- Envelope separators with Glass Matt
- Up to 12 month warranty available
- Robust case design
- Integrated carry handles
- Cost effective technology

### BENEFIT

- Easy recharge and ideal for repeated cycling use
- For use with multiple cabling attachments to suit a variety of applications
- Helps prevent electrical short and provides a reliable current path that protects against vibration failure for longer battery life
- Reliability in product performance
- Able to withstand harsh environments
- Allows for easy installation and handling
- More affordable for many applications





# Absorbed Glass Matt / GEL Technology

AGM stands for Absorbed Glass Mat. An AGM battery is a VRLA battery that is different from flooded lead acid it has its entire amount of electrolyte "absorbed" in the separator material. The separator acts like a sponge and is saturated to approximately 98% (over 100% would mean free acid in the battery). This is why an AGM battery is spill-proof and can be mounted in virtually any position. AGM battery plates can be flat or rolled and as there is no free flooding of acid they can operate in any position and can last substantially longer than conventional cycling batteries.

## FEATURE

- Absorbed Glass Matt / GEL technology
- Spill and leak proof
- Robust case design
- Low self-discharge
- Freeze tolerant and no gassing
- Excellent cycling ability
- 12 months warranty

## BENEFIT

- Excellent cycling for long operating hours
- For horizontal and vertical operation and hassle free
- Helps to withstand rugged and heavy applications
- Longer between charging if the battery is not in use
- Can be used in extreme temperatures
- Designed purely for deep cycle use with industrial quality design
- Premium product reliability.



## GEL Technology

GEL technology is designed for maximum energy power supply requirements. With its reliable current output, it guarantees the function of all the vehicles electrical components. It provides an ideal buffer for cases where there is uneven charge and discharge, such as solar applications. Its uncompromising fulfilment of professional requirements means that the GEL product is ideally suited to use in leisure and sports vehicles too.

## FEATURE

- Sealed battery system with recombination
- Lead/calcium alloy on positive and negative plate
- Robust case design
- Acid fixed in gel
- 12 months warranty

## BENEFIT

- Absolutely maintenance-free
  - Clean and environmentally friendly
  - No release of acid vapours
  - Extremely low gassing
- Constant coldcranking performance over the life of the battery
- High vibration resistance
- Leak-proof
  - Permitted angle of inclination up to 180°
  - Deep discharge proofed
  - No stratification
- Premium product reliability



## APPLICATIONS

Product technology	Material handling	Ground Support	AGV's	Cold Stores	Electric/hybrid boats	Walkies	Access Equipment	Sweepers	Electric hybrid vehicles	golf carts
Flooded Battery	●●●	●●●	●●●	●●		●●●	●●●	●		●●
AGM / VRLA	●●●	●●	●●●	●●●	●●	●●	●●	●●	●	●●
AGM Spiral	●●●	●●●		●●●			●●	●●	●●	
GEL	●●●	●●●	●●	●●●	●●●	●●●	●●●	●●●		●●●

### Guide Chart

Suitable ●

Highly Suitable ●●

Best Option ●●●

# ***Maintenance of a deep cycle battery***

1. New batteries should be fully charged prior to the first use.
2. New deep cycle batteries may need to be cycled before reaching full capacity (20-100 cycles, depending on type and use).
3. Battery cables should be intact and kept tight at all times. Recommended torque for top tapered terminal posts is 7.9 Newton Meters. After reattaching the cables to the battery terminals (ground cable last), coat the terminals with high temperature grease or petroleum jelly.
4. Vent caps should be in place during vehicle operation and charging. Follow the charger manufacturer's procedures for connecting and disconnecting cables and operation. Turn the charger OFF before connecting or disconnecting cables to the battery.
5. Batteries should be kept clean and free of debris at all times, especially the terminal area.
6. Check the electrolyte level a minimum of once/month during operation. Adjust the electrolyte level before charging to assure that the plates are just covered, no more than 5mm over the separators. After charging, adjust the electrolyte to a level approximately 10mm below the vent well.
7. Use distilled or deionized water to refill batteries. Never add acid to a battery except to replace spilled liquid. Electrolyte impurities of any kind severely shorten the life of a deep cycle battery.
8. For optimum longest battery life, batteries should not be discharged below 80% of their capacity.
9. Battery age effects maintenance. Longer charging times and/ or higher finishing current may be required. In addition, older batteries may require more frequent watering.
10. Avoid charging when the battery or ambient temperatures are above 48°C.
11. Periodic equalization may improve battery life. Equalizing charge consists of a long low current charge performed after the normal charge cycle. This charge helps to reduce the effects of electrolyte stratification.
12. When multiple batteries are used in an application, replacement batteries should be the same capacity and age as the original batteries. Using different batteries in the same system disturbs the system balance.
13. Hydrometer readings of each cell are the best indication of overall state of charge. The hydrometer reads the electrolyte density which is an indication of the concentration of sulphuric acid in the electrolyte mixture. Cell to cell specific gravity imbalance may require an equalization charge. If after an equalization charge has been carried out there is still a significant electrolyte imbalance, this may indicate a bad cell. Consult Exide or your Exide dealer for more information.
14. Batteries should be operated at full charge. Continuous operation at low states of charge or prolonged partial states of charge can result in shortened life and reduced capacity.
15. When the batteries are subjected to seasonal use applications, the following precautions should be taken:
  - Fully charge the battery before storage.
  - Remove connections to avoid parasitic drain.
  - Store the battery in a cool place but avoid temperatures consistently below freezing. The electrolyte freezing point drops as the battery's state of charge drops.
  - Boost every other month if possible. If the temperature is >28°C, more frequent recharging may be required.
16. Temperature extremes effect battery capacity and charging. Cold reduces capacity and inhibits charging. Heat increases watering and encourages overcharge.



# Easy 6 Step Selection Guide

It is easy to decide which deep cycle battery you will need and how long it will operate your equipment before recharging is necessary

1

Establish the loading of each piece of electrical equipment - this is expressed in watts and is stamped into the compliance plate attached to the electrical item.

2

Determine the length of time (in hours) you intend to operate each piece of equipment between recharges.

Watts x Hours of operation results in Watt hours.

3

Check the system voltage.  
(6v, 12V or 24V, 36V, 48V or 72V)

4

The next step is to determine the "Ampere Hour" (AH) requirement that the battery must accommodate. You calculate this by dividing WATT Hours by the system voltage.

5

Battery cables are not perfect so it pays to make allowances. A cable loss margin of 10% is usually appropriate and it is always better to have a buffer of extra capacity than what you have calculated, encompassing an over-capacity margin of approximately 25%. If the battery will be required for starting purposes, you will need to increase your ampere hour estimate by 50% to ensure you have sufficient starting power when the battery has been partly discharged. If you foresee constant stopping and starting, you will need to increase your estimate by even more and may need a dual battery system.

6

Battery capacity varies according to speed of discharge. The faster the battery is discharging the fewer Ampere hours it will deliver before recharge. Deep cycle batteries carry an Ampere Hours (AH) rating for 3 lengths of discharge time. You need to determine the length of time over which the battery will be discharged. Match as close as possible the time over which the battery will be discharged against the closest rated time of either 2hr, 5hr or 20hr discharge.

Example: Typical 4x4 / Marine Use

Equipment Type	Step 1 Equip Load (Watts)	Step 2 Est Usage (Hours)	Watt Hours
Radio	20	x 2.0	= 40
Lights	20	x 10.0	= 200
Winch	90	x 0.44	= 40
Fridge	40	x 6.0	= 240
<b>TOTAL</b>			<b>= 520</b>

**STEP 4:** 520 Watt Hours ÷ by 12 volts (STEP 3 system voltage) = 43 Ampere hours approximately.

## STEP 5: Allowances

Ampere hours already estimated = 43	
Plus 10% allowance for cable loss = 4	
Plus 25% over capacity allowance = 11	
Plus 50% vehicle starting margin* = N/A	
<b>TOTAL AH required</b>	<b>= 58</b>
* If only operating a single battery system for a vehicle.	

## Step 6: Length of time for discharge

2 hr

5hr

20hr

Now refer to Deep cycle battery specification sheet and match the total ampere hour requirements against the chosen discharge time rating.

# Specification chart for Cycling Range

Product Code	Bar Code	Volts	Technology	Length	Width	Height	CCA	RC	AH	Vent	Ledge	Post	Assembly
<b>SEMI-INDUSTRIAL CYCLING</b>													
ED1	9313122902208	6	Hybrid Maint	228	172	202	435	145	98	RP	SL	SAE	A
ED2S	9313122902215	12	Hybrid Maint	304	173	233	850	294	150	RP	NL	SAE	A
ED4	9313122902222	12	Hybrid Maint	237	174	215	320	99	56	RP	NL	DFP	C (+R)
ED4R	9313122902239	12	Hybrid Maint	237	174	215	320	99	56	RP	NL	DFP	D (+L)
ED5	9313122902246	12	Hybrid Maint	300	174	220	480	135	72	RP	NL	DFP	D (+L)
ED50	9313122902253	12	Hybrid Maint	261	175	225	435	145	70	RP	NL	DFP	D (+L)
ED6	9313122902260	12	Hybrid Maint	344	172	231	490	315	98	RP	NL	DFP	C (+R)
ED7	9313122902277	12	Hybrid Maint	344	172	282	615	260	125	RP	NL	SAE	C (+R)
<b>HEAVY INDUSTRIAL CYCLING</b>													
DC6V225	9313122902284	6	Hybrid Maint	260	181	277		480	225	RP	NL	SAE/Steel Bolt DF	E
DC6V245	9313122902291	6	Hybrid Maint	260	181	293		525	245	RP	NL	SAE/Steel Bolt DF	A
DC6V250	9313122902307	6	Hybrid Maint	296	180	289		572	258	RP	NL	LUG	A
DC6V305	9313122902314	6	Hybrid Maint	296	180	366		715	310	RP	NL	LUG	A
DC6V375	9313122902321	6	Hybrid Maint	296	180	414		855	380	RP	NL	LUG	A
DC8V150	9313122902338	8	Hybrid Maint	260	181	290		290	150	RP	NL	SAE/Steel Bolt DF	D (+L)
DC12VXC	9313122902970	12	Hybrid flooded	333	179	289	800	292	155	Vented	NL	SAE/Steel Bolt DF	D (+L)
DC12V80	9313122902345	12	Hybrid Maint	260	167	244	500	140	70	RP	NL	SAE/Steel Bolt DF	H (+R)
DC12V105	9313122902352	12	Hybrid Maint	303	167	244	675	182	105	RP	NL	Twin	C (+R)
DC12V115	9313122902369	12	Hybrid Maint	303	173	243	900	205	115	RP	NL	SAE/Steel Bolt DF	H (+R)
DC12V195	9313122902376	12	Hybrid Maint	371	175	374	600	398	200	RP	NL	LUG	C (+R)
DC12V200	9313122902383	12	Hybrid Maint	527	280	274	800	400	200	RP	NL	SAE/Steel Bolt DF	F
<b>GEL</b>													
ES450	9313122902390	12	Gel	210	175	175	180		36	TS	NL	Stud Thread	C (+R)
ES650	9313122902406	12	Gel	306	175	190	270		60	TS	NL	SAE	C (+R)
ES900	9313122902925	12	Gel	350	175	190	275		80	TS	NL	SAE	D (+L)
ES950	9313122902413	12	Gel	330	171	236	280		85	TS	NL	SAE	D (+L)
ES2400	9313122902987	12	Gel	518	274	216	800		200	TS	NL	SAE	D (+L)
<b>AGM / GEL</b>													
GF12014YF	9313122902451	12	Gel AGM	181	76	167			15	TS	NL	5ML Lug	C (+R)
GF12022YF	9313122902468	12	Gel AGM	167	176	126			24	TS	NL	5ML Lug	C (+R)
GF12025YG	9313122902475	12	Gel AGM	197	132	180			28	TS	NL	6ML LUG	D (+L)
GF12033YG2	9313122902482	12	Gel AGM	210	175	175			38	TS	NL	6ML LUG	C (+R)
GF12044Y	9313122902499	12	Gel AGM	261	135	230			50	TS	NL	SAE	C (+R)
GF12051YG1	9313122902505	12	Gel AGM	278	175	190			56	TS	NL	6ML LUG	C (+R)
GF12063Y0	9313122902932	12	Gel AGM	260	171	210			70	TS	NL	6ML LUG	D (+L)
GF12072Y	9313122902512	12	Gel AGM	330	171	236			80	TS	NL	SAE	D (+L)