

STAND ALONE POWER



CYCLIC DUTY



DEPENDABLE



Deep Cycle Batteries



WHY CHOOSE A Deep Cycle

Deep Cycle batteries are designed to provide longer life performance when continually discharged and recharged. The Deep Cycle battery's construction allows it to deliver energy for extended periods of time, without sustaining the life shortening damage such use would cause to a standard automotive battery. **BATTERY?**

Where Do You Need Deep Cycle Power?

A Deep Cycle battery is the best choice whenever you need steady power provided over a long period of time. Typical applications include:



Choosing The Right Battery

Century Batteries provides a wide variety of products to suit many needs, ranging from Wet Flooded batteries to Sealed Gel products. Whatever your choice, it is important to have adequate capacity (Amp Hours) in the battery for the amount of power your application will use. You can work this out quickly and easily by establishing: the power consumption of each piece of equipment (marked in watts on the equipments' information panel); the number of hours you will use between recharges; and the voltage of the system.

Equipment	Loading (Watts)		Estimated Usage (Hours)		Watt Hours
Refrigerator	40	X	10	=	400
Interior Lights	20	X	4	=	80
Winch	90	X	0.2	=	18
Total Watt Hours				=	498

Now divide the total Watt Hours by the system voltage to obtain the Amp Hours.

$$498 \text{ Watt Hours} / 12 \text{ Volts (12 volt system)} = 41.5 \text{ Amp Hours}$$

This figure is basically your guide to the battery size you need, after one more very important calculation. Electrical systems are not always perfect, so we strongly recommend you allow a little power in reserve. A 30% safety margin is a reasonable allowance for most applications. For larger more critical systems allow 50%.

$$\text{Estimated Amp Hours (41.5) + 30\% (12.45) = Total Amp Hours 53.95}$$

Now you can select the correct battery for your needs simply by comparing your total calculated Amp Hours with the 20-hour capacity figures shown in the battery specification tables.

Note the faster a battery is discharged, the fewer Amp Hours it will deliver before requiring a recharge. That is why Deep Cycle batteries carry Amp Hour ratings for various periods of discharge time. For each discharge rate and battery type, divide the Amp Hour capacity by the number of hours, to determine how many amps you can draw per hour per battery.

DURATHON Deep Cycle (Wet / Flooded Batteries)

Battery Type	Volts	Amp Hour Capacity at 25°C				Nominal Overall Dimensions (mm)			Weight (kg)	Terminal Type
		20Hr	10Hr	5Hr	2Hr	Length	Width	Height		
12A	6V	105	92	82	68	227	123	205	14	Std Post
43T	12V	40	35	32	26	238	135	215	11	Dual Fit
47T	12V	50	44	39	32	235	175	210	14	Dual Fit
N70T	12V	75	66	60	50	305	175	225	21	Dual Fit
86T	12V	85	75	68	55	350	175	240	25	Dual Fit
N150DC	12V	180	158	143	115	518	221	248	52	Std Post
N200DC	12V	240	211	187	154	527	279	248	66	Std Post

- Extra thick plates – long cycle life in harsh applications
- Fibreglass separator technology – locks active material to maximise capacity
- Carry handles – lift and place with ease



COMMANDER Semi Traction (Wet / Flooded Batteries)

Battery Type	Volts	Amp Hour Capacity at 25°C				Nominal Overall Dimensions (mm)			Weight (kg)	Terminal Type
		20Hr	10Hr	5Hr	2Hr	Length	Width	Height		
CY220-6	6V	225	198	176	144	263	180	277	28	Dual Fit
CY310-6	6V	315	277	246	202	305	179	370	51	Dual Fit
CY350-6	6V	350	308	273	224	298	179	426	58	Dual Fit
8VGC	8V	167	147	130	106	263	180	277	28	Dual Fit
CY185-12	12V	185	163	144	118	394	179	362	60	Std Post

- Larger sizes – dependable power for semi traction mobility, golf buggy and remote area power supply use
- Fibreglass separator technology – locks active material to maximise capacity
- Rugged case and lid – impervious to harsh environments



OPTIMA Deep Cycle (High Performance Sealed Spiralcell™ Technology)

Battery Type	Volts	Amp Hour Capacity at 25°C				Nominal Overall Dimensions (mm)			Weight (kg)	Terminal Type
		20Hr	10Hr	5Hr	2Hr	Length	Width	Height		
D34/78	12V	55	48	42	26	254	175	198	20	Std Post
D31A	12V	75	65	57	35	325	165	238	27	Std Post

- Fully sealed – non-spillable even when inverted
- Spiralcell technology – corrosion resistant plate design for long cycle life coupled with extreme cranking capability
- Absorbed glass matt separators – high internal compression results in superior vibration resistance
- Ergonomic carry handle – lift and place with ease



COMMANDER GEL (Gel Valve Regulated Sealed)

Battery Type	Volts	Amp Hour Capacity at 25°C				Nominal Overall Dimensions (mm)			Weight (kg)	Terminal Type
		20Hr	10Hr	5Hr	2Hr	Length	Width	Height		
GDC33	12V	31	28	24	15	195	130	159	10.5	Insert M6
GDC40	12V	40	36	31	22	198	165	171	14.2	Insert M6
GDC78	12V	73	65	55	37	260	169	210	25	Insert M6
GDC110	12V	100	89	75	50	328	172	222	33	Insert M6
GDC150	12V	150	135	116	81	483	170	240	47	Insert M6
GDC232	12V	232	209	180	125	522	240	219	65	Insert M8

- Fully sealed – non-spillable GEL design
- Maintenance free – gas recombination technology
- GEL technology – superior vibration resistance
- Strong case material – high quality ABS case and lid resist distortion
- Carrying convenience – pre-fitted carry handles for ease of transportation and placement



Recommended Charging Information - Cyclic Application @ 25°C

Type	Bulk / Absorption Rate	Float Rate	Equalisation
DURATHON Deep Cycle	2.40 – 2.50 Volts Per Cell (VPC)	2.25 – 2.27 VPC	2.55 – 2.60 VPC
COMMANDER Semi Traction	2.50 – VPC	2.25 – 2.27 VPC	2.55 – 2.60 VPC
OPTIMA Spiralcell	2.30 – 2.50 VPC	2.20 – 2.30 VPC	2.60 – VPC Max
COMMANDER Gel	2.45 – VPC	2.28 – VPC	NA

- Charging parameters may vary according to environmental usage and equipment factors. Two or three stage constant voltage chargers are recommended for batteries used in Deep Cycle applications.
- Vessels and vehicles with dual battery systems require specialist battery isolation systems (refer to The Importance Of Battery Isolation) and a qualified marine or automotive electrician should be consulted.
- Marine chargers should be fitted with isolated transformers and the AC shore power circuit should be fitted with galvanic isolation.
- Refer to OPTIMA product brochures for additional charging parameters and information.

Charge Current

The recommended initial charge current is 10% of the rated battery capacity at the 20-hour rate. The maximum initial charge current is 25% of the rated battery capacity at the 20-hour rate. This will shorten the charge time but risks overheating and damaging the battery (cease charging if the battery reaches 45°C).

General

- Always fully charge a battery after use – do not leave in a discharged state.
- Only add water (if needed) at the end of charge – never to a discharged battery.
- Keep open sparks and flames away from the battery.
- Keep vent caps in place (wet / flooded batteries).
- Charge in well ventilated area (wet / flooded batteries).

Get Maximum Life From Your Battery

The life of a battery is directly affected by the depth of each discharge cycle. A battery discharged to 80% remaining capacity (20% depth of discharge), will last much longer than a battery discharged to only 20% remaining capacity (80% depth of discharge).

The ideal compromise between initial cost, battery life and usefulness is to aim for approximately 20 - 50% depth of discharge between recharges.

The single greatest cause of battery failure is when the battery is left in a discharged state. If the battery is not recharged to full capacity quickly, it can lead to permanent reduction in battery capacity and an increased likelihood of failure from internal short circuits.

Further Information

For larger SOLAR application Deep Cycle batteries, ask for a copy of our ENERSUN Solar Energy batteries brochure. Battery capacities are available from 450 – 1320 Amp Hour (C10).

Dual Battery Systems For Marine, 4WD & Motor Home Applications

The Importance Of Battery Isolation

If you simply connect your batteries in parallel for charging, you run the risk of running both your starting and Deep Cycle batteries flat. A battery isolator will control the charging of the batteries and separate them when the engine is switched off. Depending on your power requirements you have a choice of three different systems:

Solenoid Isolator

This is the most basic automatic system, where the solenoid acts as an automatic switch. Once the ignition is engaged, the solenoid connects the starting and Deep Cycle batteries in parallel, effectively giving you one big battery. The batteries are charged together when the engine is running and the solenoid isolates them when the engine is switched off.

Diode Isolator

The diode isolator acts as a one-way valve between the batteries, preventing current from flowing from one to the other. When your Deep Cycle battery is low on charge or even flat, the starting battery will remain in a fully charged state. Each battery is isolated and acts as an independent power source, which means the engines' alternator can recharge each battery according to its individual needs.

Electronic Voltage Sensing

A microprocessor constantly monitors voltage in the main battery, automatically giving it priority during charging. This ensures you always have starting power and also shortens the charging time for the auxiliary battery, as the system directs all voltage to the second battery, once the starting battery has reached a predetermined limit.

Talk To An Expert

As you can see, fitting a dual battery system is far more complex than just fitting a second battery. The advice of a qualified automotive or marine electrician is essential, especially where computer controlled engine or system management is involved.



For sales and service call 0800 CENTURY
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