DEEP CYCLE BATTERIES

Why a Deep Cycle Battery?

Century Deep Cycle Batteries are designed to provide long life when continually charged and discharged. Thick grids, antimonial alloying and dense active material combine to provide a reliable deep cycle battery.

Choosing the Right Battery

The size of the deep cycle battery is dependant on the application that it is intended for. The following selection guide can be used to determine the correct size.

Selection Criteria

Application	Key Selection Criteria Metrics	
Scissor Lifts	Size of Battery Compartment	L x W x H
Small materials handling	OEM Capacity recommendation	Ah @ 20 hr rate
Drive-on Golf Carts	Operating voltage	Volts
Sweepers & Scrubbers	Required recharge time	Hours
Walk-behind Golf Buggies		
Auxiliary Power Supply	Size of Battery Compartment	L x W x H
Recreational Vehicle	OEM Capacity recommendation or refer to Power Supply Calculation (below)	Ah @ 20 hr rate
Marine	Operating voltage	Volts
Solar	Required recharge time	Hours

Power Supply Calculation

Calculate Equipment Power Consumption

Power consumption (Watt Hours) = Equipment loading (Watts) x Est Usage (Hours)

Refrigerator, 40W for 10 hours	= (40 x 10)	=	400Wh
Lights, 20W for 4 hours	= (20 x 4)	=	80Wh
Winch, 90W for 0.2 hour	= (90 x 0.2)	=	18Wh
Total Power Consumption		=	**498Wh**

Convert Power Consumption into Battery Ah to 80% Depth of Discharge

$$\text{Capacity (Ah)} = \frac{\text{Power consumption (Watt Hours)}}{\text{Total Battery Voltage x 0.8}} = \frac{498}{12 \times 0.8} = \textbf{52Ah}$$

Include 30% safety margin to allow for contingencies

Example:

Actual Battery Size Required (Ah) = Capacity (Ah) x 1.3 = 52 x 1.3 = **68Ah**

From selection chart choose N70T with a capacity of 75Ah.
– always round up as an extra safety measure.

Charging Recommendations

To achieve maximum life, deep cycle batteries should not be discharged below 20% State of Charge and should be recharged as soon as possible after use. Storage in a partially or completely discharged state will permanently reduce battery capacity and longevity. Use the following table as a guide to battery state of charge.

State of Charge	Specific Gravity @ 25°C	Open Circuit V.p.c
Fully Charged	1.280	2.12
80%	1.250	2.09
60%	1.215	2.05
40%	1.190	2.03
20%	1.160	2.00
Completely Discharged	1.110	1.95

Three stage automatic chargers are recommended.

Infrequent Usage charger output
10 – 13% of Battery Capacity @ 20 hour rate.

Frequent Usage charger output
14 – 17% of Battery Capacity @ 20 hour rate.

DEEP CYCLE

PART No.	CENTURY TYPE	WEIGHT (kg)	WARRANTY	VOLTS	PLATES	CAPACITY @ 20HR (amp hrs)	NOMINAL OVERALL DIMENSIONS (mm)			ASSEMBLY	TERMINAL TYPE
							L	W	H		
11480	12A	14.6	6	6	17	105	227	173	205	A	Standard
11491	GC2	27.5	6	6	19	200	260	180	275	A	Standard/Wingnut
11516	43T	12.7	6	12	7	40	238	135	215	C	Dual Fit
11525	46T	15.7	6	12	9	50	235	172	205	D	Standard
11526	47T	15.7	6	12	9	50	235	172	215	C	Dual Fit
11539	NS70T	21.0	6	12	9	65	257	172	249	D	Standard/Wingnut
11549	N70T	22.4	6	12	13	75	305	175	225	D	Dual Fit
11565	86T	26.5	6	12	15	85	350	175	241	C	Dual Fit
11566	89T*	33.3	6	12	15	115	345	175	285	C	Dual Fit

* Only recommended for applications that receive a weekly equalising charge. Assembly configurations outlined on page 11.