

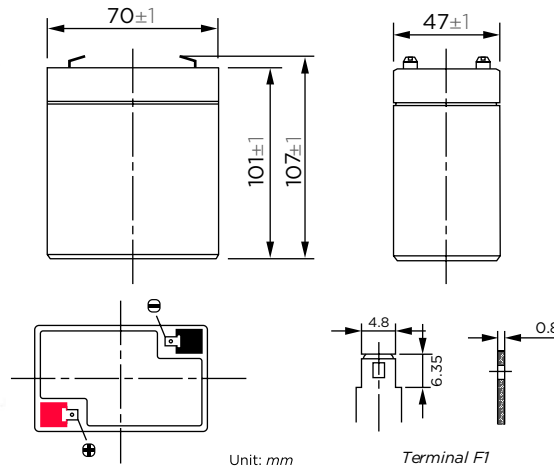


Your Replacement Battery Source

# BC-645F1

Rechargeable Sealed Lead Acid Battery

(6V 4.5Ah/20hr)



These rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.

## Battery Construction

Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

## SPECIFICATION

Nominal voltage .....6V  
 Number of cells .....3  
 Length (mm/inch) .....70/2.76  
 Width (mm/inch) .....47/1.85  
 Height(mm/inch).....101/3.98  
 Total Height (mm/inch).....107/4.21  
 Approx.Weight (kg/lbs).....0.75/1.65

## Performance Characteristics

<b>Capacity</b> 77°F(25°C)	20 hour rate (0.2A, 5.25V)	4.5Ah
	5 hour rate (0.7A, 5.25V)	3.9Ah
	1 hour rate (2.5A, 4.8V)	2.8Ah
<b>Internal Resistance</b>	Full charged Battery 77°F(25°C):30mΩ	
<b>Capacity affected by Temperature</b> (20 hour rate)	104°F(40°C)	102%
	77°F(25°C)	100%
	32°F(10°C)	85%
	5°F(-15°C)	65%
<b>Self-Discharge</b> 68°F(20°C)	Capacity after 3 month storage	90%
	Capacity after 6 month storage	80%
	Capacity after 12month storage	60%
<b>Max. discharge current 77°F(25°C):</b> 67.5A(5S)		
<b>Charge</b> (Constant Voltage)	Float: 6.80-6.90 V/77°F/(25°C)	
	Cycle: 7.25-7.45 V/77°F/(25°C) Max. Current: 1.13A	

## General Features

- Absorbent Glass Mat(AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

## Discharge Constant Current (Amperes at 77°F 25°C)

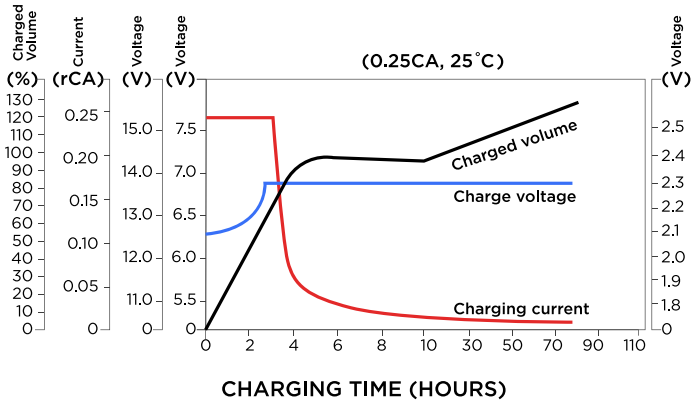
End Points Volts/Cell	5 min	10 min	15 min	30 min	1h	3h	5h	10h	20h
1.60V	15.8	11.0	8.90	4.80	2.80	1.25	0.87	0.46	0.23
1.65V	15.0	10.5	8.52	4.62	2.70	1.20	0.84	0.45	0.23
1.70V	14.1	10.1	8.10	4.40	2.60	1.15	0.81	0.44	0.23
1.75V	13.3	9.58	7.65	4.23	2.50	1.10	0.78	0.43	0.22
1.80V	12.4	9.00	7.20	3.95	2.40	1.05	0.75	0.42	0.22

## Discharge Constant Power (Watts at 77°F 25°C)

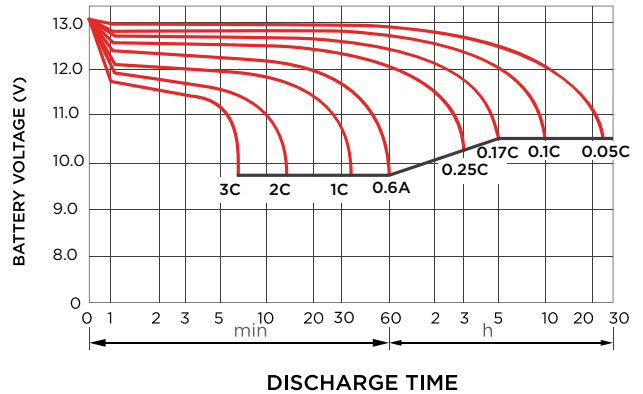
End Points Volts/Cell	5 min	10 min	15 min	30 min	1h	3h	5h	10h	20h
1.60V	31.7	22.2	17.6	9.50	5.33	2.45	1.56	0.90	0.52
1.65V	29.7	20.9	16.6	9.03	5.11	2.39	1.54	0.89	0.49
1.70V	27.7	19.6	15.7	8.54	4.87	2.33	1.51	0.88	0.48
1.75V	25.8	18.3	14.7	8.04	4.63	2.26	1.47	0.87	0.46
1.80V	23.9	17.1	13.7	7.54	4.38	2.18	1.44	0.86	0.44

(Note)The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

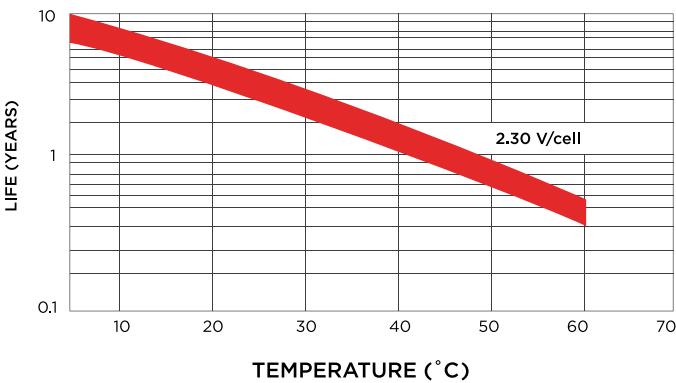
**Charge characteristic curve**



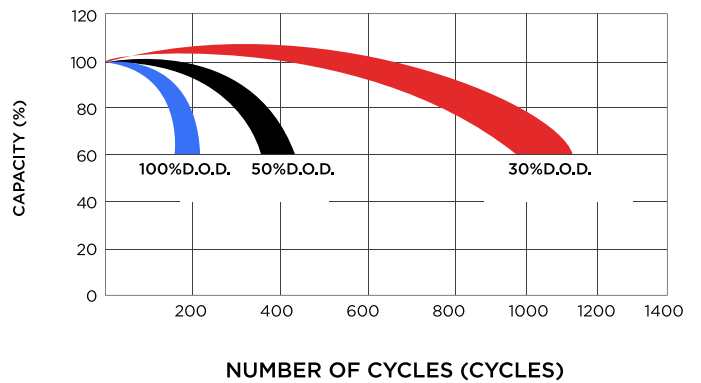
**Discharge characteristic (25°C)**



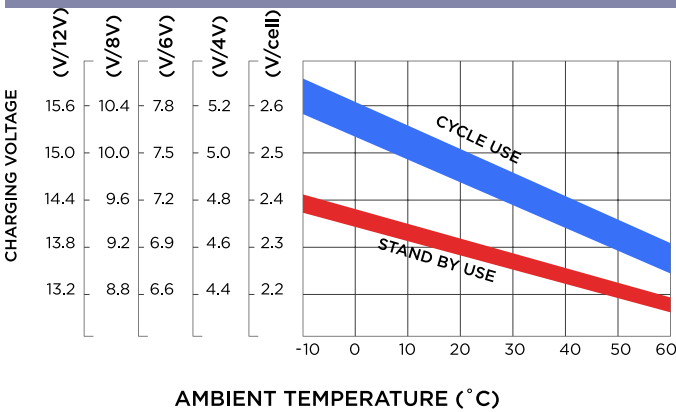
**Temperature effects on float life**



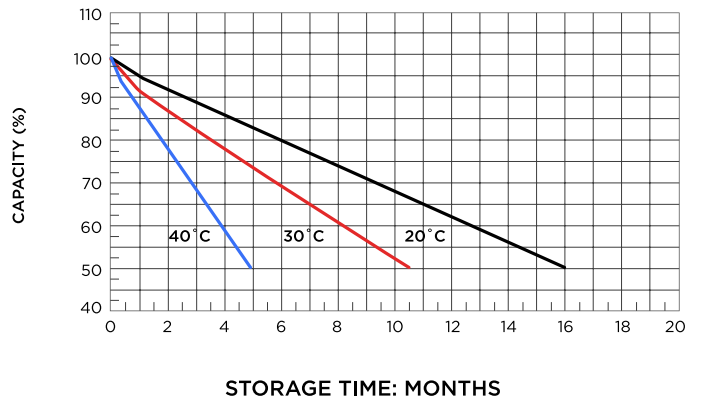
**Cycle service life in relation to depth of discharge**



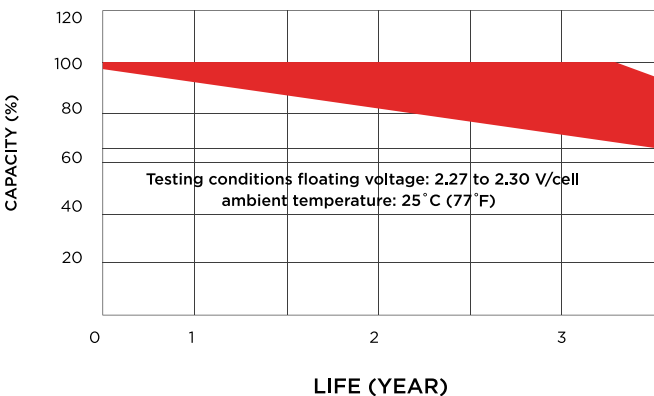
**Relationship between charging voltage and temperature**



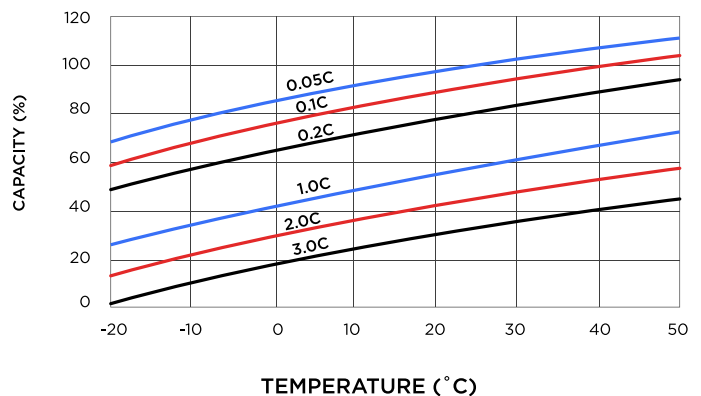
**Self-discharge characteristic**



**Life characteristics of standby use**



**Temperature effects on capacity**



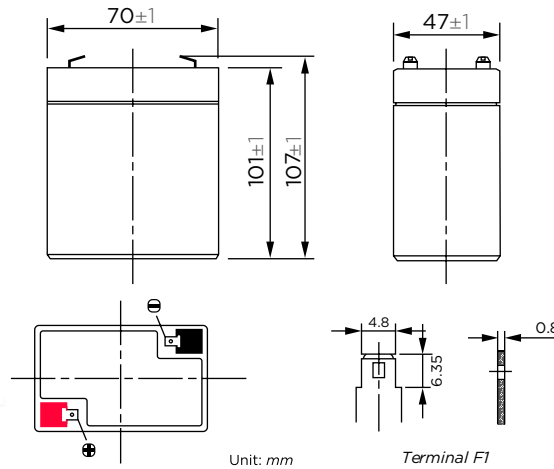


Your Replacement Battery Source

# BC-645F1

Rechargeable Sealed Lead Acid Battery

(6V 4.5Ah/20hr)



These rechargeable batteries are lead-lead dioxide systems. The dilute sulfuric acid electrolyte is absorbed by separators and thus immobilized. Should the battery be accidentally overcharged producing hydrogen and oxygen, special one-way valves allow the gases to escape thus avoiding excessive pressure build-up. Otherwise, the battery is completely sealed and is, therefore, maintenance-free, leak proof and usable in any position.

## Battery Construction

Component	Positive plate	Negative plate	Container	Cover	Safety valve	Terminal	Separator	Electrolyte
Raw material	Lead dioxide	Lead	ABS	ABS	Rubber	Copper	Fiberglass	Sulfuric acid

## SPECIFICATION

Nominal voltage .....6V  
 Number of cells .....3  
 Length (mm/inch) .....70/2.76  
 Width (mm/inch) .....47/1.85  
 Height(mm/inch).....101/3.98  
 Total Height (mm/inch).....107/4.21  
 Approx.Weight (kg/lbs).....0.75/1.65

## Performance Characteristics

<b>Capacity</b> 77°F(25°C)	20 hour rate (0.2A, 5.25V)	4.5Ah
	5 hour rate (0.7A, 5.25V)	3.9Ah
	1 hour rate (2.5A, 4.8V)	2.8Ah
<b>Internal Resistance</b>	Full charged Battery 77°F(25°C):30mΩ	
<b>Capacity affected by Temperature</b> (20 hour rate)	104°F(40°C)	102%
	77°F(25°C)	100%
	32°F(10°C)	85%
	5°F(-15°C)	65%
<b>Self-Discharge</b> 68°F(20°C)	Capacity after 3 month storage	90%
	Capacity after 6 month storage	80%
	Capacity after 12month storage	60%
<b>Max. discharge current 77°F(25°C):</b> 67.5A(5S)		
<b>Charge</b> (Constant Voltage)	Float: 6.80-6.90 V/77°F/(25°C)	
	Cycle: 7.25-7.45 V/77°F/(25°C) Max. Current: 1.13A	

## General Features

- Absorbent Glass Mat(AGM) technology for efficient gas recombination of up to 99% and freedom from electrolyte maintenance or water adding.
- Not restricted for air transport-complies with IATA/ICAO Special Provision A67.
- UL-recognized component.
- Can be mounted in any orientation.
- Computer designed lead, calcium tin alloy grid for high power density.
- Long service life, float or cyclic applications.
- Maintenance-free operation.
- Low self discharge.

## Discharge Constant Current (Amperes at 77°F 25°C)

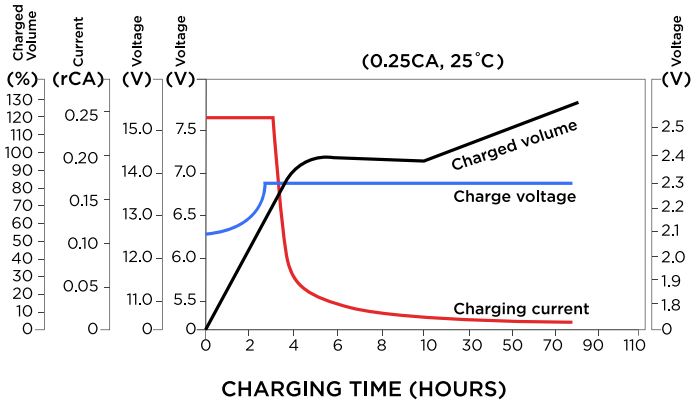
End Points Volts/Cell	5 min	10 min	15 min	30 min	1h	3h	5h	10h	20h
1.60V	15.8	11.0	8.90	4.80	2.80	1.25	0.87	0.46	0.23
1.65V	15.0	10.5	8.52	4.62	2.70	1.20	0.84	0.45	0.23
1.70V	14.1	10.1	8.10	4.40	2.60	1.15	0.81	0.44	0.23
1.75V	13.3	9.58	7.65	4.23	2.50	1.10	0.78	0.43	0.22
1.80V	12.4	9.00	7.20	3.95	2.40	1.05	0.75	0.42	0.22

## Discharge Constant Power (Watts at 77°F 25°C)

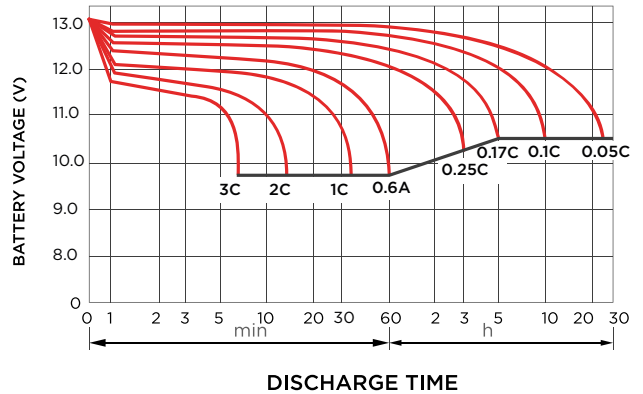
End Points Volts/Cell	5 min	10 min	15 min	30 min	1h	3h	5h	10h	20h
1.60V	31.7	22.2	17.6	9.50	5.33	2.45	1.56	0.90	0.52
1.65V	29.7	20.9	16.6	9.03	5.11	2.39	1.54	0.89	0.49
1.70V	27.7	19.6	15.7	8.54	4.87	2.33	1.51	0.88	0.48
1.75V	25.8	18.3	14.7	8.04	4.63	2.26	1.47	0.87	0.46
1.80V	23.9	17.1	13.7	7.54	4.38	2.18	1.44	0.86	0.44

(Note)The above characteristics data are average values obtained within three charge/discharge cycles not the minimum values.

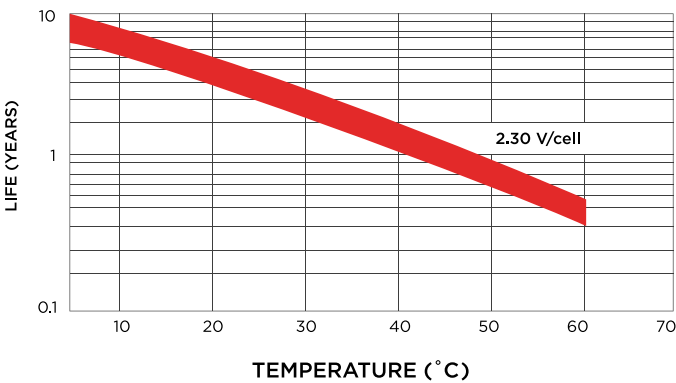
**Charge characteristic curve**



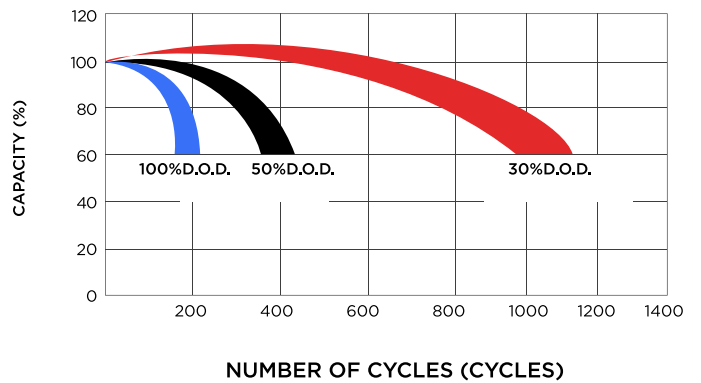
**Discharge characteristic (25°C)**



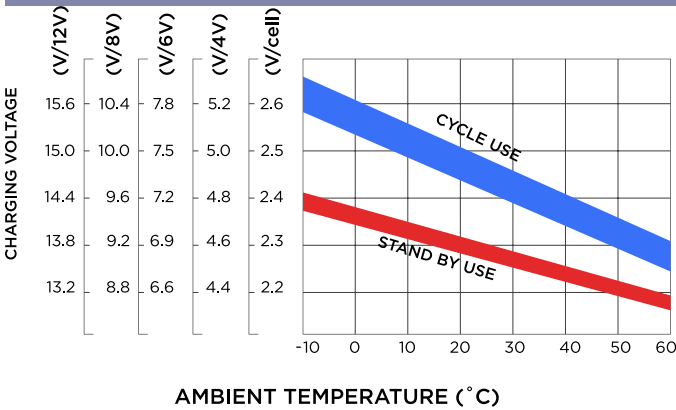
**Temperature effects on float life**



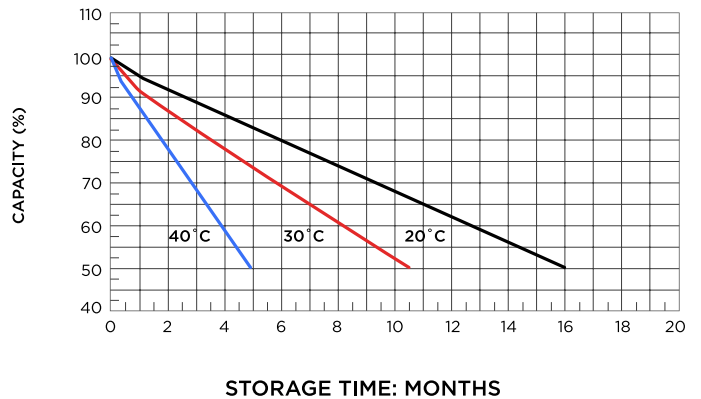
**Cycle service life in relation to depth of discharge**



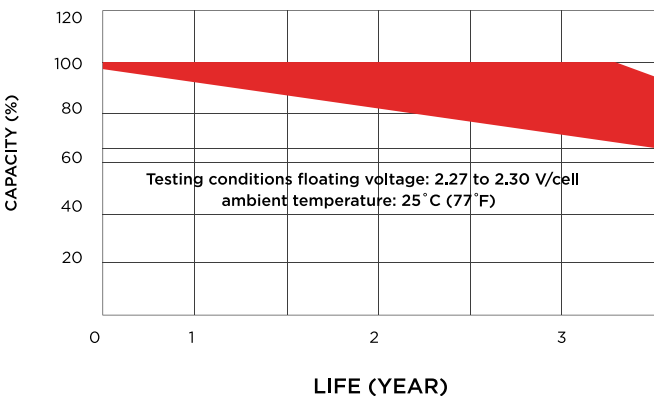
**Relationship between charging voltage and temperature**



**Self-discharge characteristic**



**Life characteristics of standby use**



**Temperature effects on capacity**

