



PROVING SOLIDARITY FOR  
**THE GREEN ENERGY**



INVERTER | SOLAR HYBRID INVERTER | BATTERY | SOLAR BATTERY | LITHIUM INVERTER | LITHIUM BATTERY

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• BATTERY



## About Us

Our main object is R&D (Research & Development) to acquire major market position of Home UPS, Inverter, Solar Tubular Batteries & renewable energy products by providing the best quality more reliable & latest technology based fully featured innovative products.

## About Our R&D

We believe in innovation and excellence in latest technologies that is very important to run an industries successfully. The Friend Solar Powertek has established their own R&D department from the starting day's to design and develop new and innovative products with novel technologies to run a product efficiently on each aspects of technologies. DSP micro-controller is used to incorporate the smart and latest features along with robust protection in renewable energy and power backup products.

## Quality

Quality and services are foremost business principle for us. We believe in quality and latest technologies for developing the quality based products for customers demand and satisfaction.

## Vision

To provide affordable and innovative solar energy solutions to empower organizations and individuals through the use of Renewable energy.



FOR **YOUR**  
**LUXURY**  
**HOUSE**

**TRUSTED**  
**EVERY WHERE**



Faster Charging



Life Saver



Power Guard





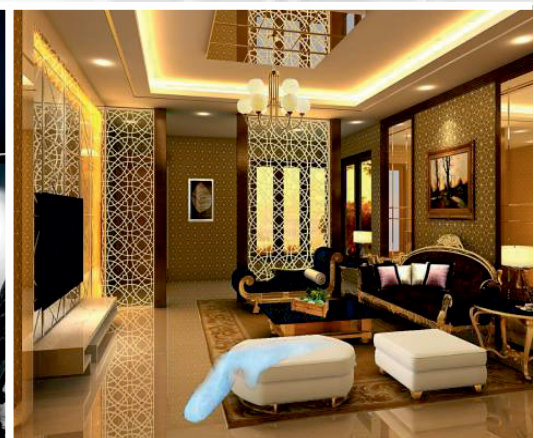
#### FEATURES

- Powerfull micro controller based PWM technology
- Advanced fuzzy logic control technology reduces frequency of water topping in battery
- Minimum loss of energy while converting DC to AC
- Noiseless Operation
- Keeps voltage within safe range

#### TECHNICAL SPECIFICATIONS\*

Model	750	950	1100	1650
I/P Range(Normal mode)	110V-290V $\pm$ 10V			
I/P Range(UPS mode)	175V-265V $\pm$ 5V			
O/P Voltage Battery Mode	225V $\pm$ 5%			
O/P Frequency Battery Mode	50HZ $\pm$ 0.5HZ			
O/P Waveform Battery Mode	Sinewave			
Low Battery Shutdown	10.3V $\pm$ 0.2V		10.3V $\pm$ 0.2V	10.3V $\pm$ 0.4V
Running Load	42A $\pm$ 2A	54A $\pm$ 2A	64A $\pm$ 2A	52A $\pm$ 2A
Overload	44A $\pm$ 2A	54A $\pm$ 2A	68A $\pm$ 2A	55A $\pm$ 2A
DC Voltage	12	12	12	24
Charging Current	11A $\pm$ 2A	11A $\pm$ 2A	11A $\pm$ 2A	11A $\pm$ 2A
Charging Cut off	14.2V $\pm$ 0.2V	14.2V $\pm$ 0.2V	14.2V $\pm$ 0.2V	14.4V $\pm$ 0.2V
No Load Current	<2.5A			
Battery Recommended	135AH-250AH			

\*Specifications may change due to continuous improvement



## Allied Power Solar Solutions

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(GOVT. RECOGNISED EXPORT HOUSE)

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LUXURY  
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Faster Charging



Life Saver



Pure Sinewave







### FEATURES

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### TECHNICAL SPECIFICATIONS\*

Model	2KVA	2.5KVA	3.2KVA
I/P Range(Normal mode)		110V-290V ± 10V	
I/P Range(UPS mode)		175V-265V ± 5V	
O/P Voltage Battery Mode		225V ± 5V	
O/P Frequency Battery Mode		50HZ ± 0.5HZ	
O/P Waveform Battery Mode		Sinewave	
Low Battery Shutdown		20.8V ± 0.2V	20.8V ± 0.4V
Running Load	64A±2AMP	84A±2AMP	100A±2A
Overload	64A±2AMP		55A±2A
DC Voltage	24V	24V	24
Charging Current	11A±2A		11A±2A
Charging Cut off	28.6V ± 0.2V	28.6V ± 0.2V	28.6V ± 0.2V
No Load Current		<2.5A	
Battery Recommended		135AH-250AH	

\*Specifications may change due to continuous improvement



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(GOVT. RECOGNISED EXPORT HOUSE)

## FEATURES

- Powerfull micro controller based PWM technology
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- Noiseless Operation
- Keeps voltage within safe range



## TECHNICAL SPECIFICATIONS\*

Model	3.5KVA/48V	5KVA/48V	10KVA/120V
I/P Range(Normal mode)	110V-290V +/-10V	110V-290V +/-10V	110V-290V +/-10V
I/P Range(UPS mode)	175V-265V +/-10V	175V-265V +/-10V	175V-265V +/-10V
O/P Voltage Battery Mode	225V +/-5V	225V +/-5V	225V +/-5V
O/P Frequency Battery Mode	50HZ +/-0.5HZ	50HZ +/-0.5HZ	50HZ +/-0.5HZ
O/P Waveform Battery Mode	Sinewave	Sinewave	Sinewave
Low Battery Shutdown	41.6V ± 0.4V	41.6V ± 0.4V	104V ± 0.4V
Running Load	58AMP+/-2AMP	92AMP+/-2AMP	74AMP+/-2AMP
Overload	60AMP+/-2AMP	95AMP+/-2AMP	76AMP+/-2AMP
DC Voltage	48V	48V	120V
Charging Current	13AMP+/-2AMP	13AMP+/-2AMP	13AMP+/-2AMP
Charging Cut off	56.8V+ / -0.4V	56.8V+ / -0.4V	145V+ / -0.4V
No Load Current	<2.5AMP	<2.5AMP	<2.5AMP

**Battery Recommended**

\*Specifications may change due to continuous improvement



• SOLAR

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• BATTERY





# SOLAR TUBULAR BATTERY





## LEAD ACID BATTERIES 100Ah-12V

### SPECIFICATIONS

Battery Type	:	TT100
Rated Capacity at 20 hour Rate	:	100Ah
Battery Nominal Voltage	:	12V
Dimensions		
Length	:	503±3mm
Width	:	189±2mm
Height up to Terminal	:	354±3mm
Fully Charged Battery		
Electrolyte Specific Gravity at 27°C	:	1.250±0.010
Battery Weight (with electrolyte)	:	50Kg.

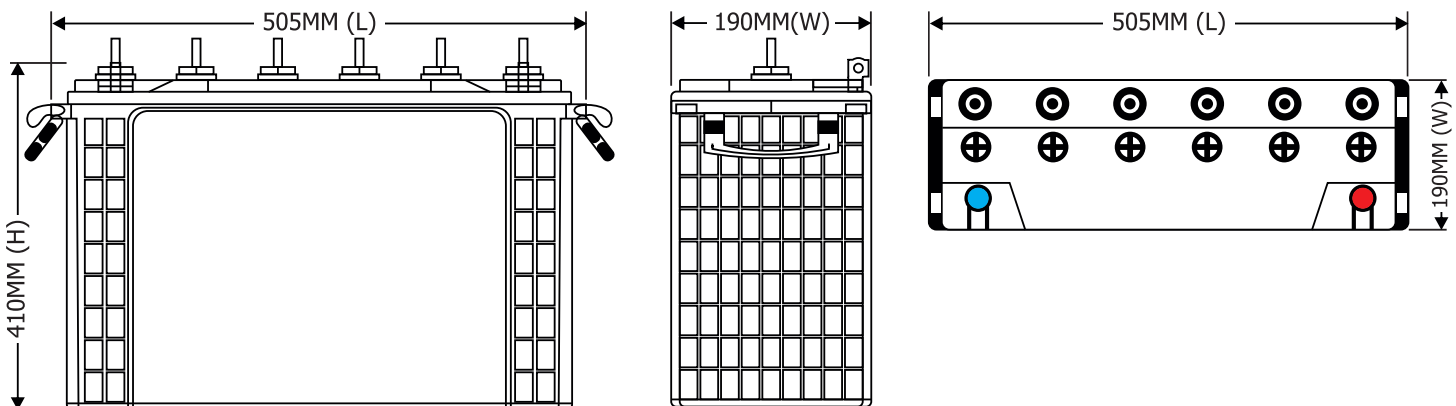
### ELECTRICAL PERFORMANCE

Capacity at 27°C	20 Hour Rate to 10.80V	100Ah
	10 Hour Rate to 10.80V	88Ah
	5 Hour Rate to 10.80V	73Ah
	3 Hour Rate to 10.80V	52Ah
	1 Hour Rate to 10.50V	31Ah
Loss of capacity on storage per month at 27°C		< 5.0%
Percentage (%) of Ampere-hour-Efficiency		> 92.0%
Percentage (%) of Watt-hour-Efficiency		> 78.0%

### BATTERY CHARGING

Constant Voltage Charging (CV)	Maximum Charging current	20.0A
	Cyclic use	14.40±0.05V
	Float use	13.80±0.05V
Constant Current Charge (CC)	Maximum Charging current	10.0A

### BATTERY DIMENSIONS





# LEAD ACID BATTERIES 150Ah-12V

## SPECIFICATIONS

Battery Type	:	TT150
Rated Capacity at 20 hour Rate	:	150Ah
Battery Nominal Voltage	:	12V
Dimensions		
Length	:	503±3mm
Width	:	189±2mm
Height up to Terminal	:	354±3mm
Fully Charged Battery		
Electrolyte Specific Gravity at 27°C	:	1.250±0.010
Battery Weight (with electrolyte)	:	55Kg.

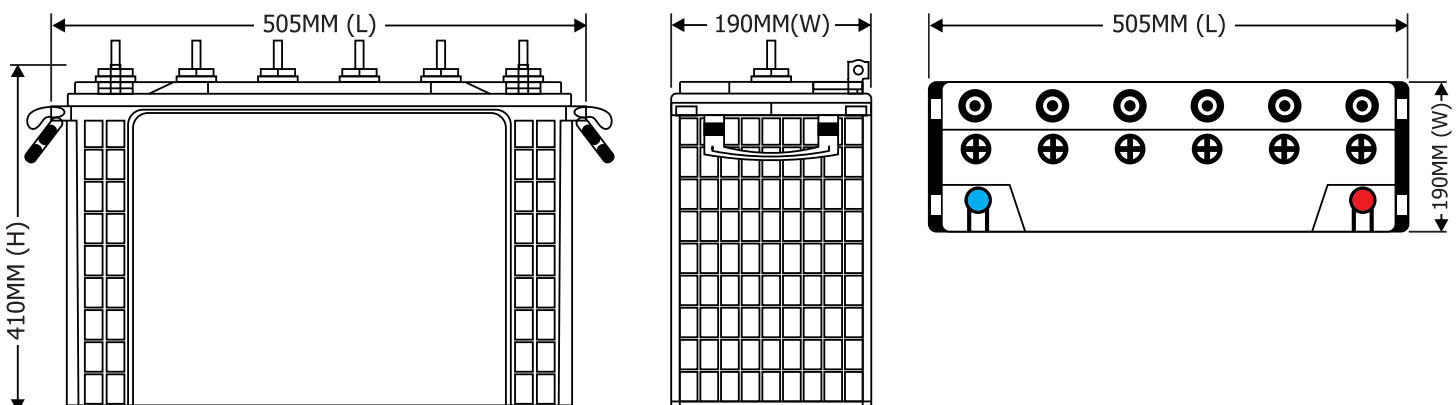
## ELECTRICAL PERFORMANCE

Capacity at 27°C	20 Hour Rate to 10.80V	150Ah
	10 Hour Rate to 10.80V	132Ah
	5 Hour Rate to 10.80V	109Ah
	3 Hour Rate to 10.80V	78Ah
	1 Hour Rate to 10.50V	47Ah
Loss of capacity on storage per month at 27°C		< 5.0%
Percentage (%) of Ampere-hour-Efficiency		> 92.0%
Percentage (%) of Watt-hour-Efficiency		> 78.0%

## BATTERY CHARGING

Constant Voltage Charging (CV)	Maximum Charging current	30.0A
	Cyclic use	14.40±0.05V
	Float use	13.80±0.05V
Constant Current Charge (CC)	Maximum Charging current	15.0A

## BATTERY DIMENSIONS





## LEAD ACID BATTERIES 180Ah-12V

### SPECIFICATIONS

Battery Type	:	TT180
Rated Capacity at 20 hour Rate	:	180Ah
Battery Nominal Voltage	:	12V
Dimensions		
Length	:	503±3mm
Width	:	189±2mm
Height up to Terminal	:	354±3mm
Fully Charged Battery		
Electrolyte Specific Gravity at 27°C	:	1.250±0.010
Battery Weight (with electrolyte)	:	60Kg.

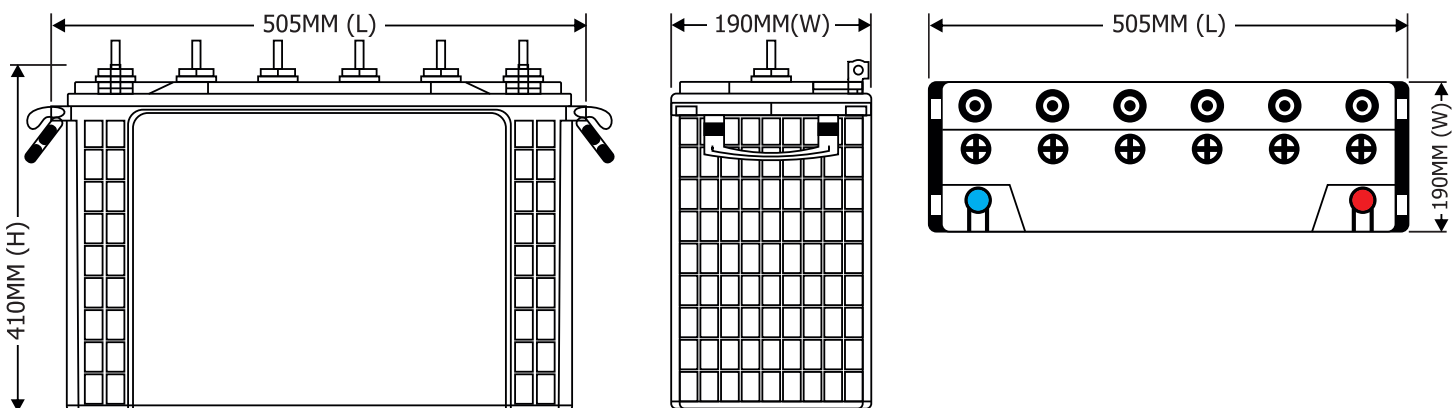
### ELECTRICAL PERFORMANCE

Capacity at 27°C	20 Hour Rate to 10.80V	180Ah
	10 Hour Rate to 10.80V	158Ah
	5 Hour Rate to 10.80V	131Ah
	3 Hour Rate to 10.80V	94Ah
	1 Hour Rate to 10.50V	56Ah
Loss of capacity on storage per month at 27°C		< 5.0%
Percentage (%) of Ampere-hour-Efficiency		> 92.0%
Percentage (%) of Watt-hour-Efficiency		> 78.0%

### BATTERY CHARGING

Constant Voltage Charging (CV)	Maximum Charging current	38.0A
	Cyclic use	14.40±0.05V
	Float use	13.80±0.05V
Constant Current Charge (CC)	Maximum Charging current	19.0A

### BATTERY DIMENSIONS







## LEAD ACID BATTERIES 200Ah-12V

### SPECIFICATIONS

Battery Type	:	TT200
Rated Capacity at 20 hour Rate	:	200Ah
Battery Nominal Voltage	:	12V
Dimensions		
Length	:	503±3mm
Width	:	189±2mm
Height up to Terminal	:	354±3mm
Fully Charged Battery		
Electrolyte Specific Gravity at 27°C	:	1.250±0.010
Battery Weight (with electrolyte)	:	63Kg.

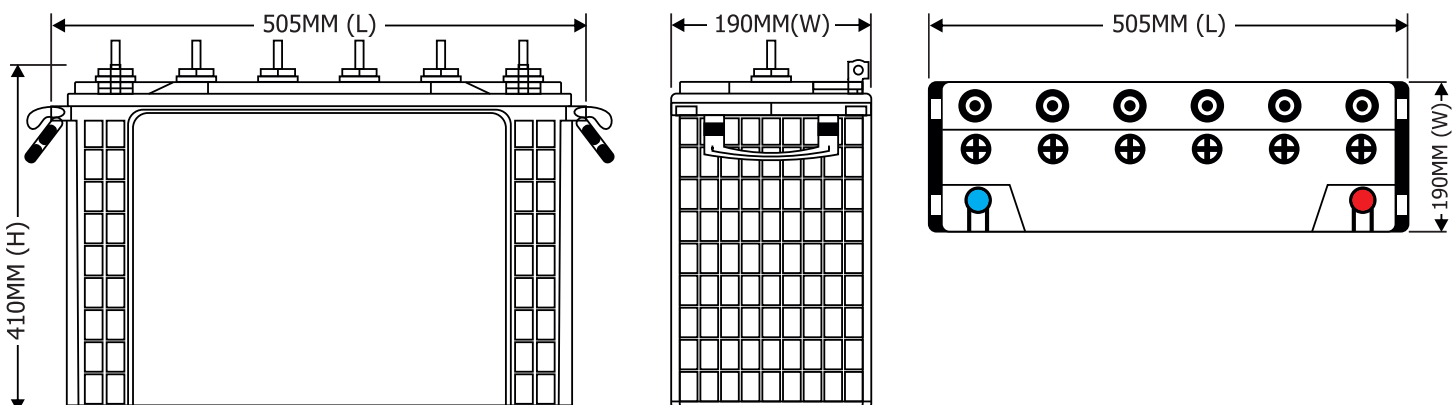
### ELECTRICAL PERFORMANCE

Capacity at 27°C	20 Hour Rate to 10.80V	200Ah
	10 Hour Rate to 10.80V	176Ah
	5 Hour Rate to 10.80V	146Ah
	3 Hour Rate to 10.80V	105Ah
	1 Hour Rate to 10.50V	63Ah
Loss of capacity on storage per month at 27°C		< 5.0%
Percentage (%) of Ampere-hour-Efficiency		> 92.0%
Percentage (%) of Watt-hour-Efficiency		> 78.0%

### BATTERY CHARGING

Constant Voltage Charging (CV)	Maximum Charging current	38.0A
	Cyclic use	14.40±0.05V
	Float use	13.80±0.05V
Constant Current Charge (CC)	Maximum Charging current	19.0A

### BATTERY DIMENSIONS





## LEAD ACID BATTERIES 220Ah-12V

### SPECIFICATIONS

Battery Type	:	TT220
Rated Capacity at 20 hour Rate	:	220Ah
Battery Nominal Voltage	:	12V
Dimensions		
Length	:	503±3mm
Width	:	189±2mm
Height up to Terminal	:	354±3mm
Fully Charged Battery		
Electrolyte Specific Gravity at 27°C	:	1.250±0.010
Battery Weight (with electrolyte)	:	65Kg.

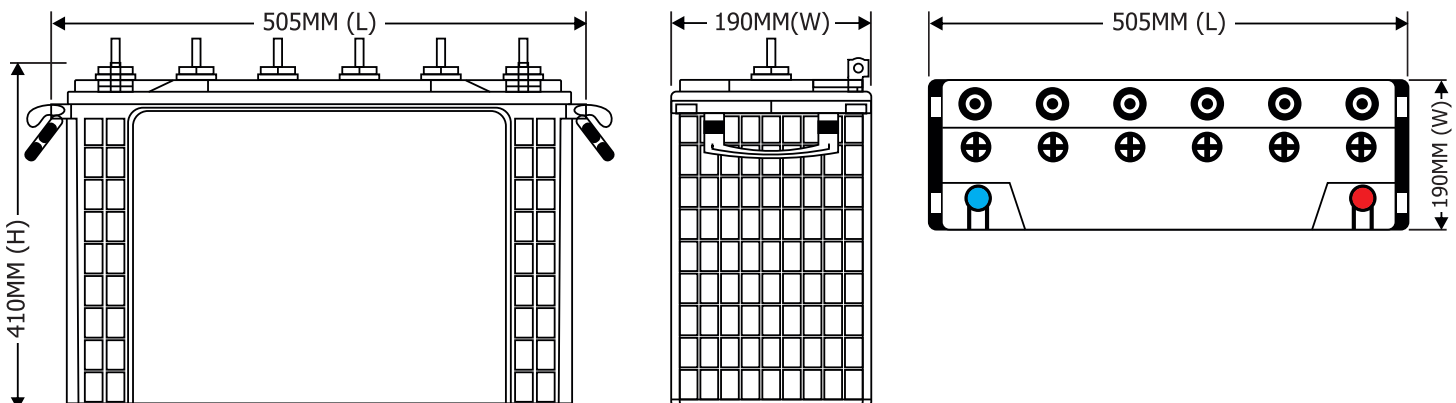
### ELECTRICAL PERFORMANCE

Capacity at 27°C	20 Hour Rate to 10.80V	220Ah
	10 Hour Rate to 10.80V	193Ah
	5 Hour Rate to 10.80V	161Ah
	3 Hour Rate to 10.80V	115Ah
	1 Hour Rate to 10.50V	69Ah
Loss of capacity on storage per month at 27°C		< 5.0%
Percentage (%) of Ampere-hour-Efficiency		> 92.0%
Percentage (%) of Watt-hour-Efficiency		> 78.0%

### BATTERY CHARGING

Constant Voltage Charging (CV)	Maximum Charging current	42.0A
	Cyclic use	14.40±0.05V
	Float use	13.80±0.05V
Constant Current Charge (CC)	Maximum Charging current	21.0A

### BATTERY DIMENSIONS





## LEAD ACID BATTERIES 240Ah-12V

### SPECIFICATIONS

Battery Type	:	Tt240
Rated Capacity at 20 hour Rate	:	240Ah
Battery Nominal Voltage	:	12V
Dimensions		
Length	:	503±3mm
Width	:	189±2mm
Height up to Terminal	:	354±3mm
Fully Charged Battery		
Electrolyte Specific Gravity at 27°C	:	1.250±0.010
Battery Weight (with electrolyte)	:	67Kg.

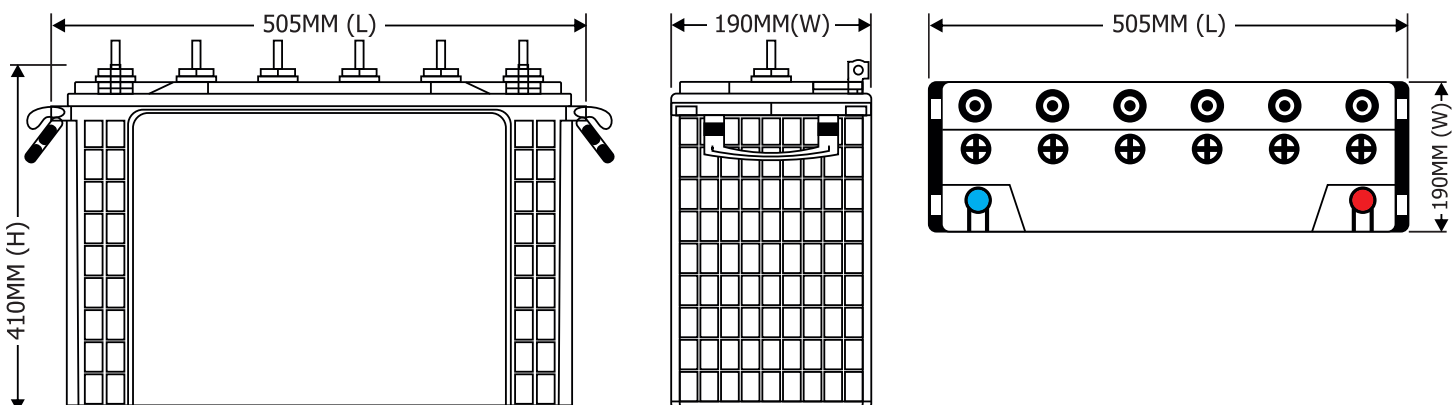
### ELECTRICAL PERFORMANCE

Capacity at 27°C	20 Hour Rate to 10.80V	240Ah
	10 Hour Rate to 10.80V	211Ah
	5 Hour Rate to 10.80V	175Ah
	3 Hour Rate to 10.80V	126Ah
	1 Hour Rate to 10.50V	75Ah
Loss of capacity on storage per month at 27°C		< 5.0%
Percentage (%) of Ampere-hour-Efficiency		> 92.0%
Percentage (%) of Watt-hour-Efficiency		> 78.0%

### BATTERY CHARGING

Constant Voltage Charging (CV)	Maximum Charging current	42.0A
	Cyclic use	14.40±0.05V
	Float use	13.80±0.05V
Constant Current Charge (CC)	Maximum Charging current	21.0A

### BATTERY DIMENSIONS







## LEAD ACID BATTERIES 260Ah-12V

### SPECIFICATIONS

Battery Type	:	Tt260
Rated Capacity at 20 hour Rate	:	260Ah
Battery Nominal Voltage	:	12V
Dimensions		
Length	:	503±3mm
Width	:	189±2mm
Height up to Terminal	:	354±3mm
Fully Charged Battery		
Electrolyte Specific Gravity at 27°C	:	1.250±0.010
Battery Weight (with electrolyte)	:	71Kg.

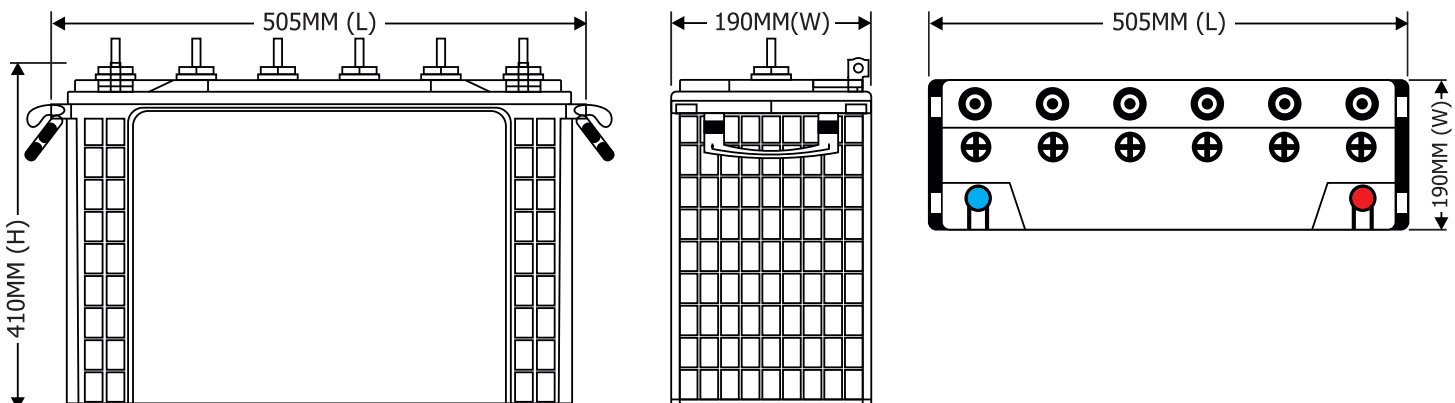
### ELECTRICAL PERFORMANCE

Capacity at 27°C	20 Hour Rate to 10.80V	260Ah
	10 Hour Rate to 10.80V	228Ah
	5 Hour Rate to 10.80V	190Ah
	3 Hour Rate to 10.80V	136Ah
	1 Hour Rate to 10.50V	81Ah
Loss of capacity on storage per month at 27°C		< 5.0%
Percentage (%) of Ampere-hour-Efficiency		> 92.0%
Percentage (%) of Watt-hour-Efficiency		> 78.0%

### BATTERY CHARGING

Constant Voltage Charging (CV)	Maximum Charging current	42.0A
	Cyclic use	14.40±0.05V
	Float use	13.80±0.05V
Constant Current Charge (CC)	Maximum Charging current	21.0A

### BATTERY DIMENSIONS





## LEAD ACID BATTERIES 300Ah-12V

### SPECIFICATIONS

Battery Type	:	TT300
Rated Capacity at 20 hour Rate	:	300Ah
Battery Nominal Voltage	:	12V
Dimensions		
Length	:	503±3mm
Width	:	189±2mm
Height up to Terminal	:	354±3mm
Fully Charged Battery		
Electrolyte Specific Gravity at 27°C	:	1.250±0.010
Battery Weight (with electrolyte)	:	76Kg.

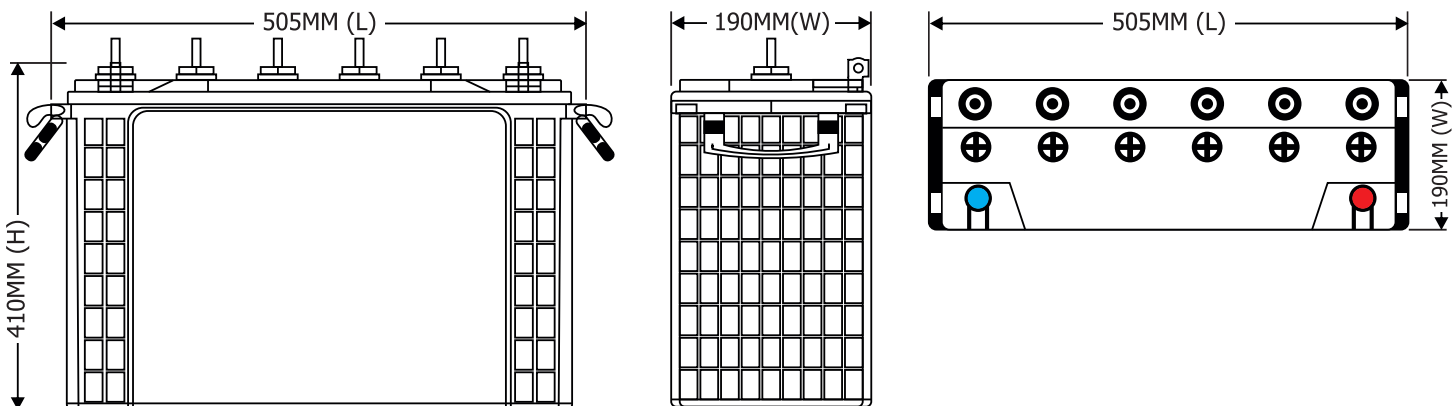
### ELECTRICAL PERFORMANCE

Capacity at 27°C	20 Hour Rate to 10.80V	300Ah
	10 Hour Rate to 10.80V	264Ah
	5 Hour Rate to 10.80V	219Ah
	3 Hour Rate to 10.80V	157Ah
	1 Hour Rate to 10.50V	94Ah
Loss of capacity on storage per month at 27°C		< 5.0%
Percentage (%) of Ampere-hour-Efficiency		> 92.0%
Percentage (%) of Watt-hour-Efficiency		> 78.0%

### BATTERY CHARGING

Constant Voltage Charging (CV)	Maximum Charging current	42.0A
	Cyclic use	14.40±0.05V
	Float use	13.80±0.05V
Constant Current Charge (CC)	Maximum Charging current	21.0A

### BATTERY DIMENSIONS





## LEAD ACID BATTERIES 330Ah-12V

### SPECIFICATIONS

Battery Type	:	TT330
Rated Capacity at 20 hour Rate	:	330Ah
Battery Nominal Voltage	:	12V
Dimensions		
Length	:	503±3mm
Width	:	189±2mm
Height up to Terminal	:	354±3mm
Fully Charged Battery		
Electrolyte Specific Gravity at 27°C	:	1.250±0.010
Battery Weight (with electrolyte)	:	81Kg.

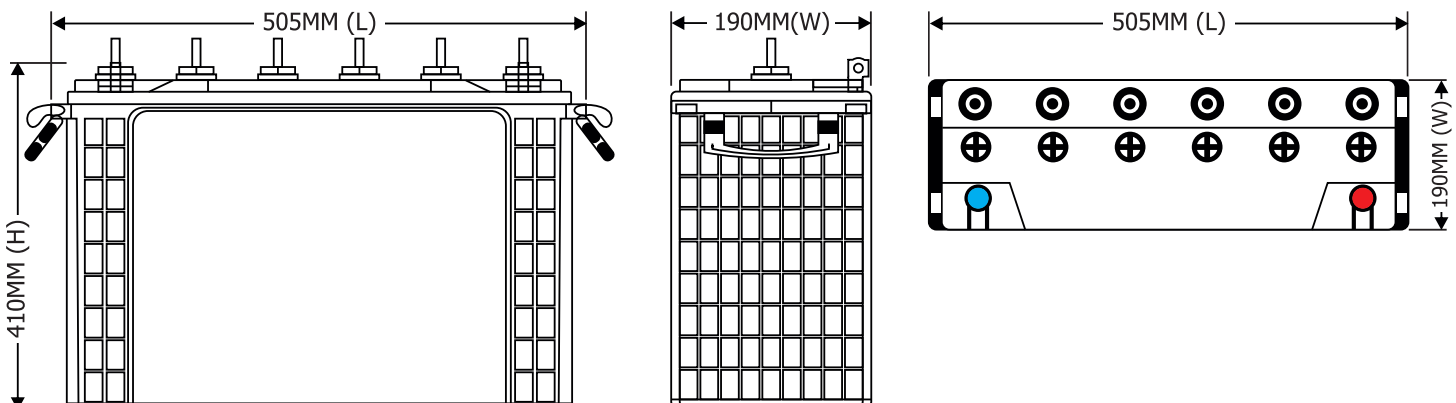
### ELECTRICAL PERFORMANCE

Capacity at 27°C	20 Hour Rate to 10.80V	330Ah
	10 Hour Rate to 10.80V	290Ah
	5 Hour Rate to 10.80V	241Ah
	3 Hour Rate to 10.80V	173Ah
	1 Hour Rate to 10.50V	104Ah
Loss of capacity on storage per month at 27°C		< 5.0%
Percentage (%) of Ampere-hour-Efficiency		> 92.0%
Percentage (%) of Watt-hour-Efficiency		> 78.0%

### BATTERY CHARGING

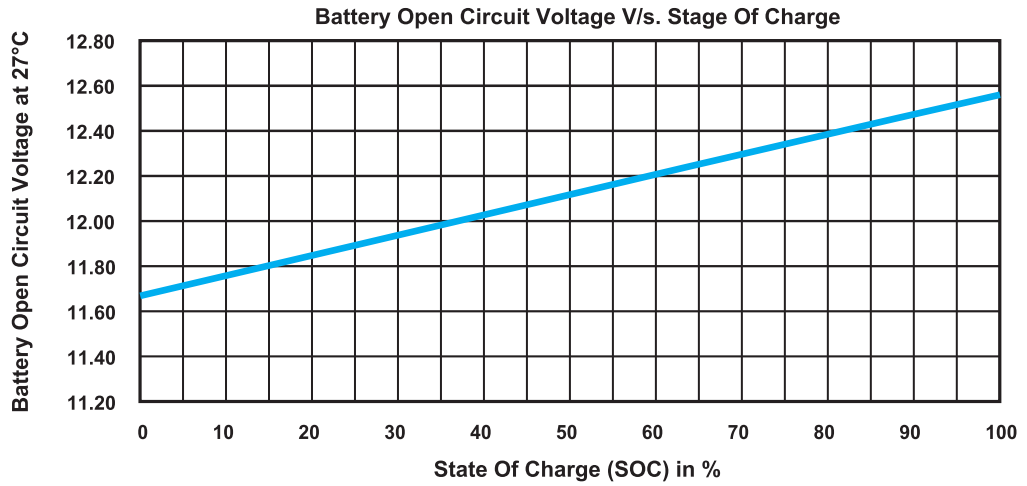
Constant Voltage Charging (CV)	Maximum Charging current	42.0A
	Cyclic use	14.40±0.05V
	Float use	13.80±0.05V
Constant Current Charge (CC)	Maximum Charging current	21.0A

### BATTERY DIMENSIONS

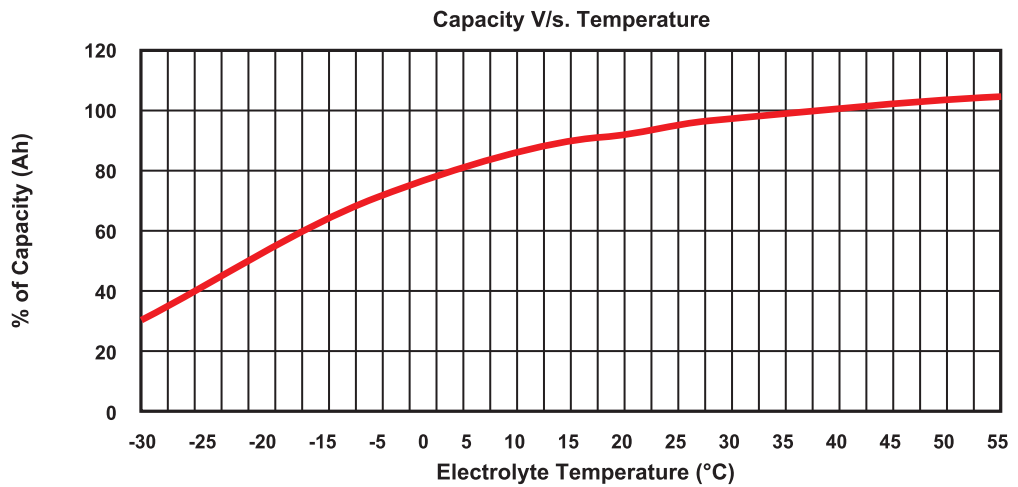


BATTERY CHARACTERISTICS

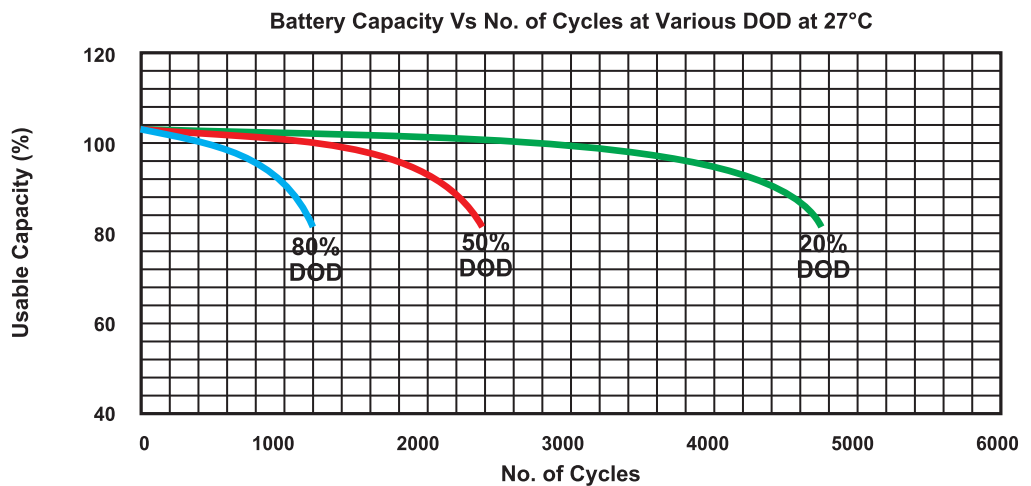
**BATTERY STATE OF CHARGE (SOC)**



**BATTERY CAPACITY V/S. TEMPERATURE**



**BATTERY LIFE CYCLES CHARACTERISTICS AT 27°C**

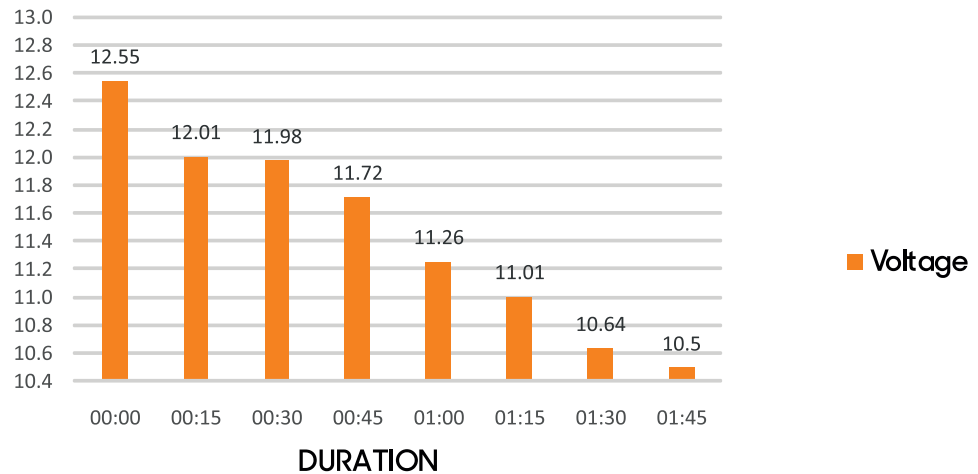


## EX-1000, 12V 100AH

OCV. :	12.55	BACK UP @ 400 WATTS
Sp.Gr.:	1.240	
Temp.:	26°C	

Duration	Voltage	Current	Sp. Gr.	Temperature in °C
00:00	12.55	32.93	1.235	26
00:15	12.01	32.88	1.243	26
00:30	11.98	32.8	1.241	26
00:45	11.72	31.94	1.238	27
01:00	11.26	31.87	1.230	27
01:15	11.01	31.76	1.226	27
01:30	10.64	31.5	1.220	28
01:45	10.5	-	1.217	28

## EX-1000, 12V 100AH



\* Note : Above Backup comes after 4th Cycle.

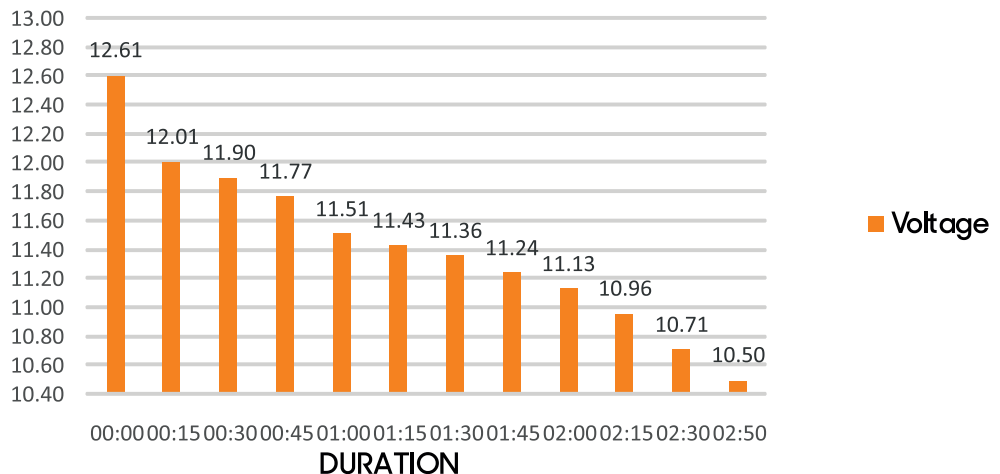


## EX-1500, 12V 150AH

OCV. :	12.61	BACK UP @ 400 WATTS
Sp.Gr.:	1.255	
Temp.:	26°C	

Duration	Voltage	Current	Sp. Gr.	Temperature in °C
00:00	12.61	33.50	1.255	26
00:15	12.01	33.44	1.253	26
00:30	11.9	33.19	1.248	27
00:45	11.77	32.46	1.242	27
01:00	11.51	32.31	1.239	27
01:15	11.43	32.79	1.234	27
01:30	11.36	32.15	1.226	28
01:45	11.24	32.06	1.225	28
02:00	11.13	32.00	1.220	29
02:15	10.96	31.8	1.215	29
02:30	10.71	30.33	1.212	30
02:50	10.50	-	1.200	30

## EX-1500, 12V 150AH



\* Note : Above Backup comes after 4th Cycle.



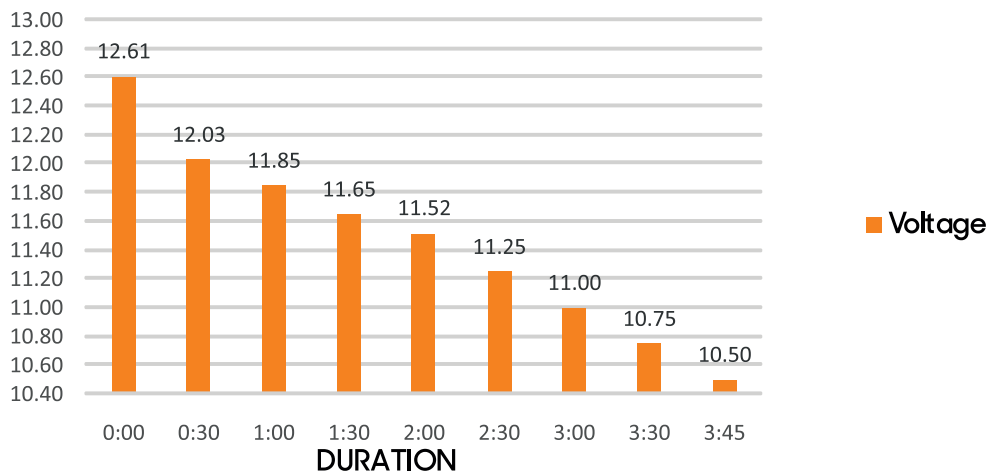


## EX-1800, 12V 180AH

OCV. :	12.61	<b>BACK UP @ 400 WATTS</b>
Sp.Gr.:	1.257	
Temp.:	26°C	

Duration	Voltage	Current	Sp. Gr.	Temperature in °C
0:00	12.61	32.87	1.257	26
0:30	12.03	32.00	1.245	26
1:00	11.85	31.52	1.239	27
1:30	11.65	31.81	1.231	27
2:00	11.52	31.2	1.223	27
2:30	11.25	31.00	1.212	27
3:00	11.00	30.89	1.202	28
3:30	10.75	30.06	1.200	28
3:45	10.50	-	1.200	29

## EX-1800, 12V 180AH



\* Note : Above Backup comes after 4th Cycle.



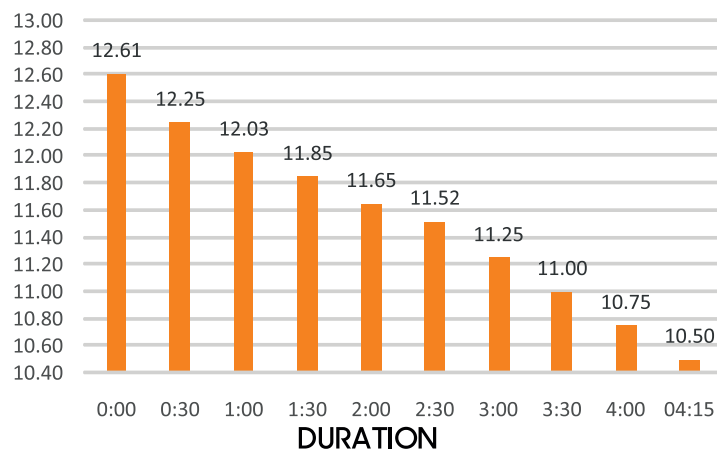
## EX-2000, 12V 200AH

OCV. :	12.59	BACK UP @ 400 WATTS
Sp.Gr.:	1.256	
Temp.:	26°C	

Duration	Voltage	Current	Sp. Gr.	Temperature in °C
0:00	12.61	32.87	1.257	26
0:30	12.25	32.55	1.252	26
1:00	12.03	32.00	1.245	26
1:30	11.85	31.52	1.239	27
2:00	11.65	31.81	1.231	27
2:30	11.52	31.2	1.223	27
3:00	11.25	31.00	1.212	27
3:30	11.00	30.89	1.202	28
4:00	10.75	30.06	1.200	28
04:15	10.50	-	1.200	29

## EX-2000, 12V 200AH

■ Voltage



\* Note : Above Backup comes after 4th Cycle.

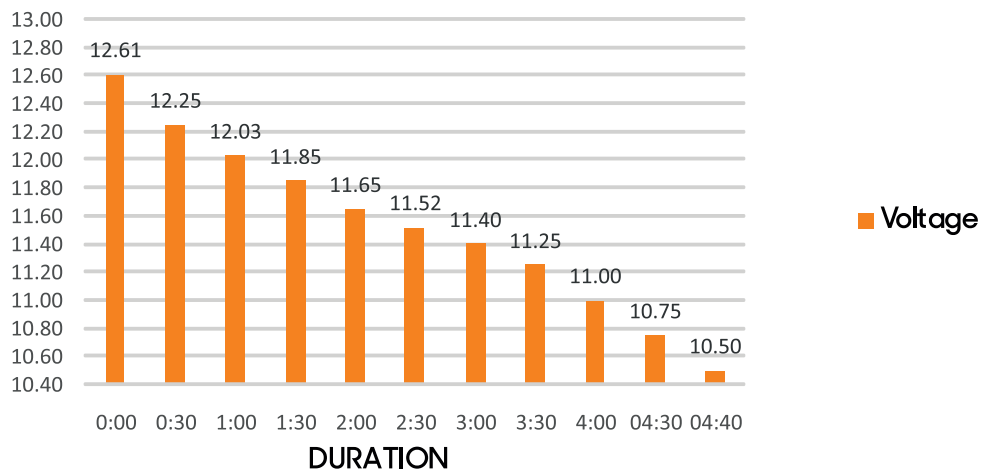


## EX-2200, 12V 220AH

OCV. :	12.63	BACK UP @ 400 WATTS
Sp.Gr.:	1.257	
Temp.:	26°C	

Duration	Voltage	Current	Sp. Gr.	Temperature in °C
0:00	12.61	32.87	1.257	26
0:30	12.25	32.55	1.252	26
1:00	12.03	32.00	1.245	26
1:30	11.85	31.52	1.239	27
2:00	11.65	31.81	1.231	27
2:30	11.52	31.20	1.223	27
3:00	11.40	31.20	1.223	27
3:30	11.25	31.00	1.212	27
4:00	11.00	30.89	1.202	28
04:30	10.75	30.06	1.200	28
04:40	10.50	-	1.200	29

## EX-2200, 12V 220AH



\* Note : Above Backup comes after 4th Cycle.



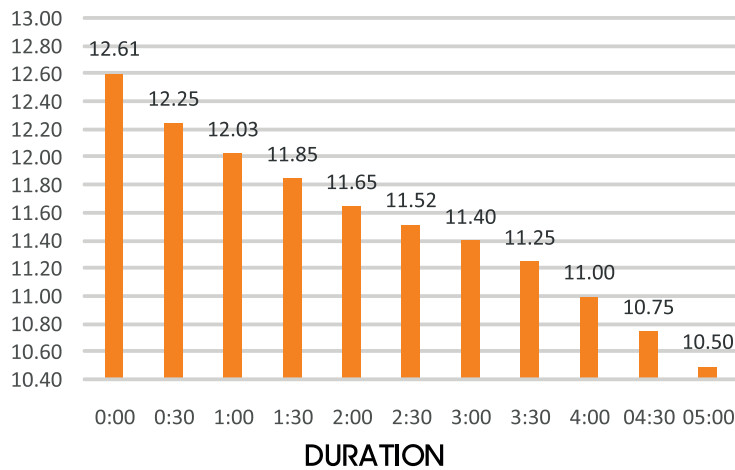
## EX-2400, 12V 240AH

OCV. :	12.63	<b>BACK UP @ 400 WATTS</b>
Sp.Gr.:	1.257	
Temp.:	26°C	

Duration	Voltage	Current	Sp. Gr.	Temperature in °C
0:00	12.61	32.87	1.257	26
0:30	12.25	32.55	1.252	26
1:00	12.03	32.00	1.245	26
1:30	11.85	31.52	1.239	27
2:00	11.65	31.81	1.231	27
2:30	11.52	31.20	1.223	27
3:00	11.40	31.20	1.223	27
3:30	11.25	31.00	1.212	27
4:00	11.00	30.89	1.202	28
04:30	10.75	30.06	1.200	28
05:00	10.50	-	1.200	29

## EX-2400, 12V 240AH

■ Voltage



\* Note : Above Backup comes after 4th Cycle.



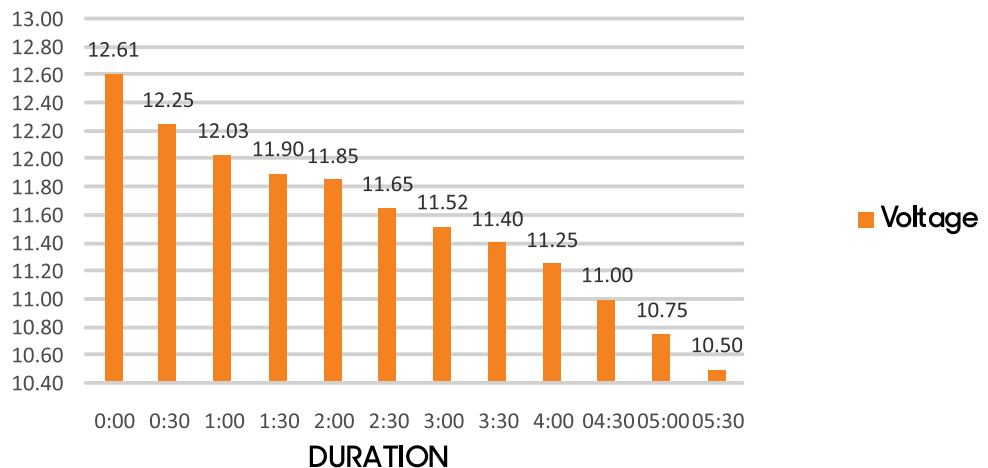


## EX-2600, 12V 260AH

OCV. :	12.69	BACK UP @ 400 WATTS
Sp.Gr.:	1.265	
Temp.:	26°C	

Duration	Voltage	Current	Sp. Gr.	Temperature in °C
0:00	12.61	32.87	1.257	26
0:30	12.25	32.55	1.252	26
1:00	12.03	32.00	1.245	26
1:30	11.90	32.15	1.242	27
2:00	11.85	31.52	1.239	27
2:30	11.65	31.81	1.231	27
3:00	11.52	31.20	1.223	27
3:30	11.40	31.20	1.223	27
4:00	11.25	31.00	1.212	27
04:30	11.00	30.89	1.202	28
05:00	10.75	30.06	1.200	28
05:30	10.50	-	1.200	29

## EX-2600, 12V 260AH



\* Note : Above Backup comes after 4th Cycle.

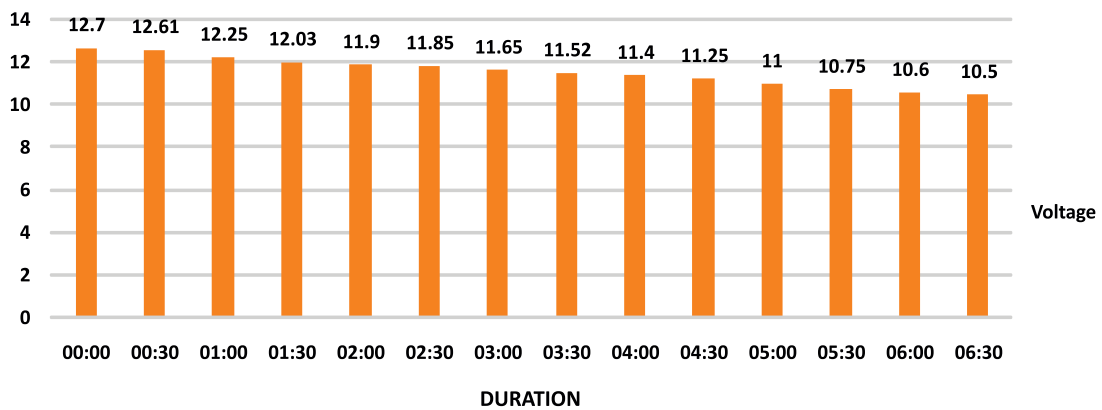


## EX-3000, 12V 300AH

OCV. :	12.69	BACK UP @ 400 WATTS
Sp.Gr.:	1.265	
Temp.:	26°C	

Duration	Voltage	Current	Sp. Gr.	Temperature in °C
00:00	12.7	33	1.265	26
00:30	12.61	32.9	1.257	26
01:00	12.25	32.87	1.245	26
01:30	12.03	32	1.242	27
02:00	11.9	32.15	1.239	27
02:30	11.85	31.52	1.231	27
03:00	11.65	31.81	1.223	27
03:30	11.52	31.2	1.22	27
04:00	11.4	31.2	1.212	27
04:30	11.25	31	1.202	28
05:00	11	30.89	1.2	28
05:30	10.75	30.06	1.195	29
06:00	10.6	30.05	1.19	29
06:30	10.5	30	1.185	29

## EX-300, 12V 300AH



\* Note : Above Backup comes after 4th Cycle.

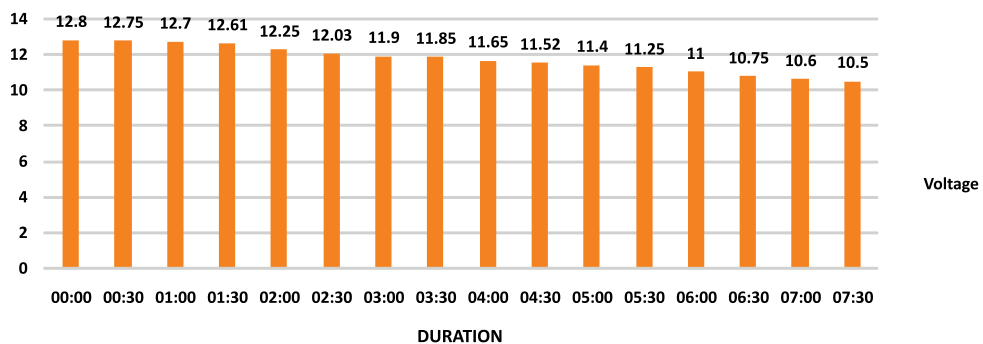


## EX-3300, 12V 330AH

OCV. :	12.69	<b>BACK UP @ 400 WATTS</b>
Sp.Gr.:	1.265	
Temp.:	26°C	

Duration	Voltage	Current	Sp. Gr.	Temperature in °C
00:00	12.8	33	1.275	26
00:30	12.75	33	1.27	26
01:00	12.7	33	1.265	26
01:30	12.61	32.9	1.257	26
02:00	12.25	32.87	1.245	26
02:30	12.03	32	1.242	27
03:00	11.9	32.15	1.239	27
03:30	11.85	31.52	1.231	27
04:00	11.65	31.81	1.223	27
04:30	11.52	31.2	1.22	27
05:00	11.4	31.2	1.212	27
05:30	11.25	31	1.202	28
06:00	11	30.89	1.2	28
06:30	10.75	30.06	1.195	29
07:00	10.6	30.05	1.19	29
07:30	10.5	30	1.185	29

## EX-330, 12V 330AH



\* Note : Above Backup comes after 4th Cycle.



## FEATURES

- Rugged Performance
- Low Self Discharge
- More Electrolyte per Ampere Hour
- Ultra Low Maintenance
- High temperature Performance

**Turbosun Solar Batteries** are C10 rated deep cycle batteries specially designed for use in solar system and home application to last longer and are rugged enough to be used in all weather conditions, Turbosun Solar batteries are highly stable, safe, durable and rechargeable for larger number of cycles and gives longer backup.



Model	Capacity @C10	Voltage	Container Type	External Dimensions in mm (max)			Gross Weight Kg. (+-2%)	Battery Back-up 400W
				Height (+-3mm)	Width (+-2mm)	Length (+-3mm)		
TS-100	100 AH	12 V	IT-700	370	225	510	53.00	01H:40MIN
TS-150	150 AH	12 V	IT-700	370	225	225	58.00	03H:00MIN
TS-180A	180 AH	12 V	IT-700	370	225	225	60.00	03H:20MIN
TS-200A	200 AH	12 V	IT-700	370	225	225	64.00	03H:30MIN
TS-200A	200 AH	12 V	IT-700	370	225	225	65.00	03H:50MIN
TS-220A	220 AH	12 V	IT-700	370	225	225	66.00	04H:30MIN
TS-220A	220 AH	12 V	IT-700	370	225	225	68.00	04H:40MIN
TS-240A	240 AH	12V	IT-700	370	225	225	70.00	05H:15MIN
TS-250A	250 AH	12V	IT-700	370	225	225	73.00	05H:50MIN
TS-260A	260 AH	12V	IT-700	370	225	225	75.00	06H:15MIN
TS-280A	280 AH	12V	IT-700	370	225	225	76.00	06H:30MIN
TS-300A	300 AH	12V	IT-700	370	225	225	79.00	07H:00MIN
TS-330A	330 AH	12V	IT-700	370	225	225	82.00	07H:30MIN

- Ultra Low Maintenance
- More Backup
- High Cyclic Life
- High Pressure Spine Casting
- Thicker Tubular Plate Design
- More Electrolyte per Ampere Hour

**TURBOSUN** range Tall Tubular Inverter batteries are designed to operate in extreme climate variations and frequent long power cuts. It is a perfect fit at an affordable price to match every budget. The batteries are constructed with rugged lead plate cast under high pressure to ensure that every battery performs flawlessly even in frequent and long power cuts.

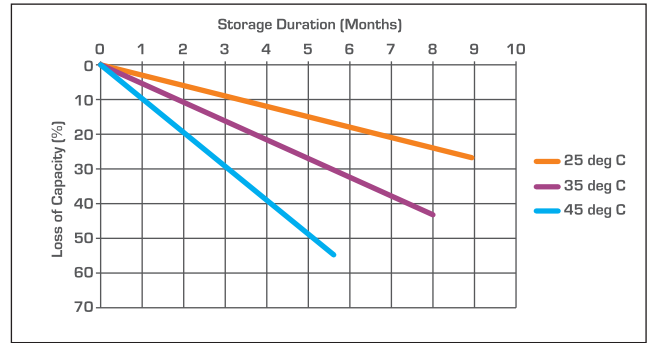
## INVERTER BATTERY



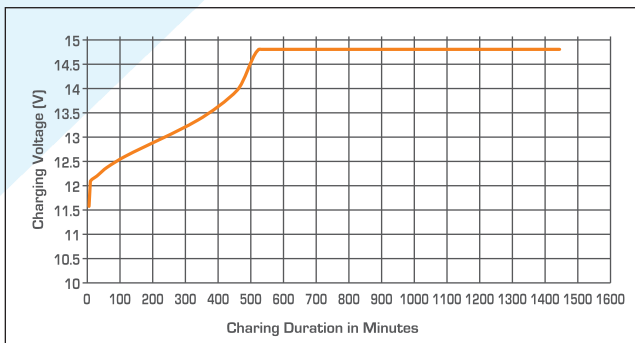


- Poly Components Material :- Polypropylene Co polymer
- Watering system :- Individual to every cell in Monobloc
- Color :- Red
- Testing Parameters :- IS 13369:1992 & IEC 60896-11

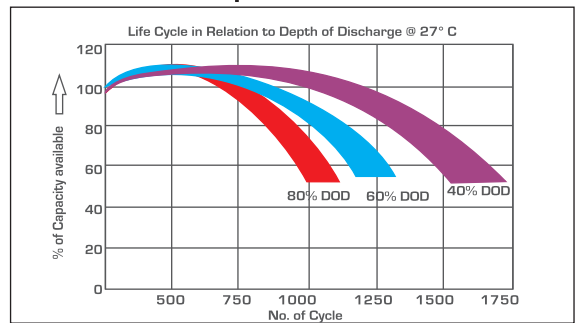
## Self Discharge Characteristics @ Different Temperature



## Charging Profile



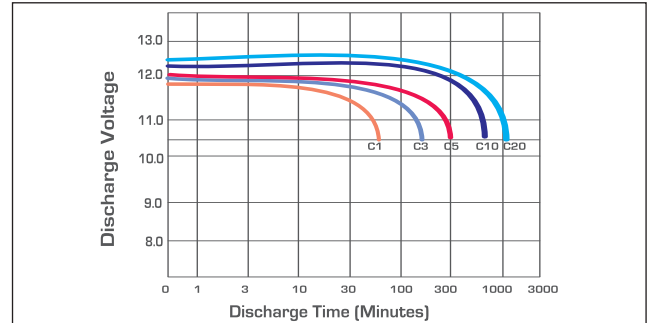
## Expected Life



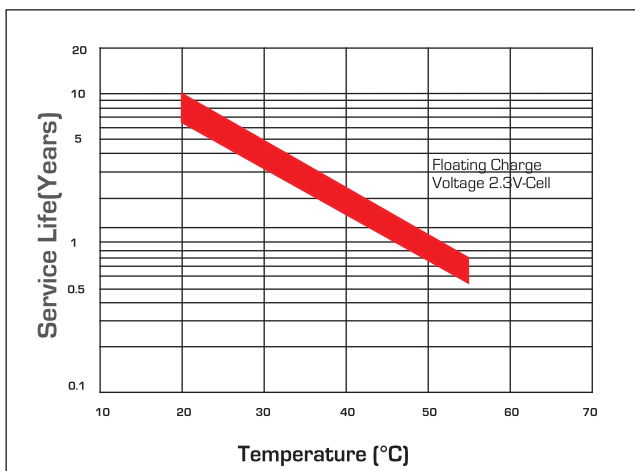
## State of Charge Measure of Open-circuit Voltage @ 27°C

State of Charge	Specific Gravity	Voltage
100%	1.245-1.275	12.55V-12.70V
75%	≤ 1.225	≤ 12.4V
50%	≤ 1.190	≤ 12.1V
25%	≤ 1.155	≤ 12.0V
0%	1.120	11.8V

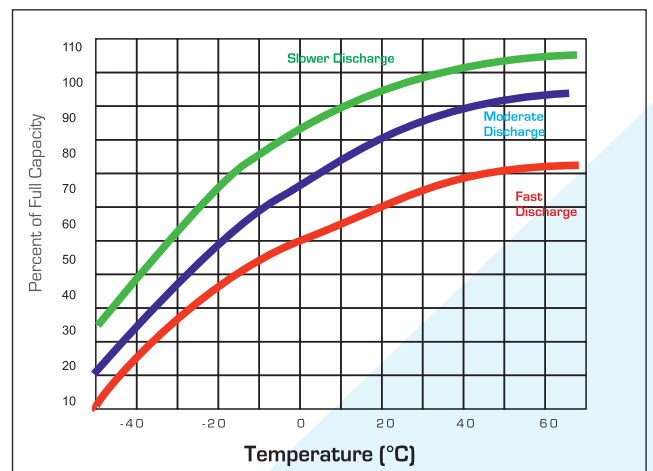
## Discharging Characteristics at various rates @ 27°C



## Service (Float) Life and Temperature



## Expected Capacity vs Temperature



## TECHNICAL FEATURES OF TALL TUBULAR BATTERIES

- Suitable for all inverters
- High quality and reliability
- Exceptional deep discharge recovery
- Low maintenance
- Long service life
- TT ranges meets IS:13369 with latest amendments

## PRODUCT HIGHLIGHTS OF TALL TUBULAR BATTERIES

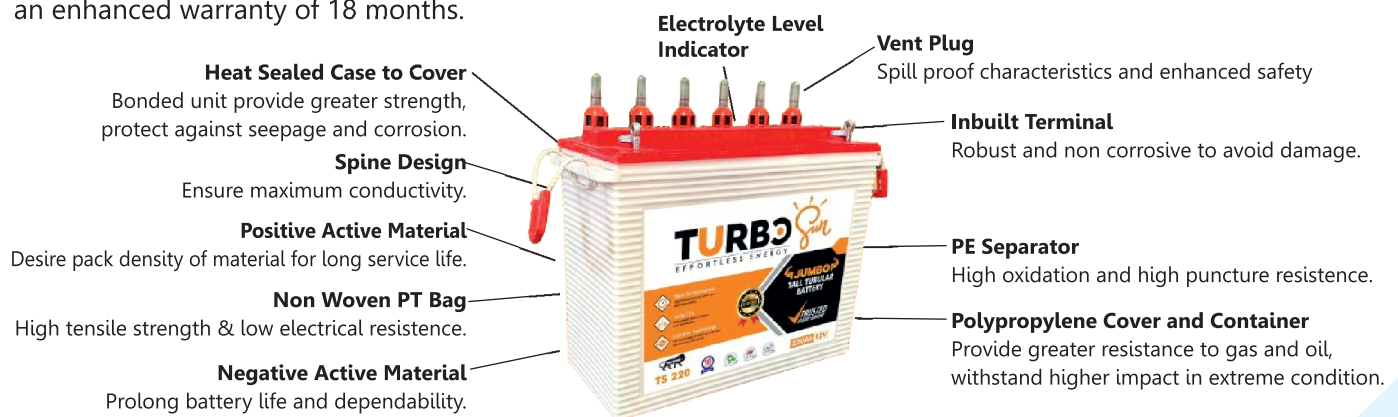
- **Tubular Technology:** Thick tubular plate spines are low antimony and cost in pressure die casting machine (PDC) for high capacity and long cycle life.
- **Low Maintenance:** The extra electrolytes, low antimony alloy and micro porous ceramic vent plug cum sealed float vent plug to reduce the topping up frequency.
- **Terminal Design:** Inbuilt extra thicker terminal gives extra strength to avoid damage and breakage during the transportation and service life.
- **Plate Pickling and Paste Formulation:** The exclusive method gives frequent and long power outage, good charge acceptance even deep discharge, low self discharge and long life deep cycle.
- **Factory Fresh Charge:** Ensure optimal quality and ready for use.

## NORMAL RE-CHARGING INSTRUCTION OF TALL TUBULAR BATTERIES

- Recharging through the inverter at constant voltage of 14.4V with limited current, After reached the 14.4V the battery should continue recharge in float charging mode at constant voltage or 13.5V

Turbosun Tall Tubular series is product of joint efforts of in-house R&D.

Turbosun Tall Tubular Rechargeable batteries are designed to withstand frequent and long power cuts with an enhanced warranty of 18 months.



## Our vision and missions

Turbosun Tubular vision is to be recognized as a leading of high-quality batteries globally, delivering innovative and sustainable solutions to meet the evolving needs of customers. We want to be the global supplier for high quality battery exporters who prioritize operational excellence while keeping their customers satisfied all over the world.

(GOVT. RECOGNISED EXPORT HOUSE)

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