

# VOLTA

BATTERIES

## OPzS (12V) Tubular Batteries

We are also pioneer in manufacturing 12V Tubular Plate Flooded Lead Acid Batteries (Deep Cycle, Solar & UPS applications). The production design of this battery is dissimilar to the existing SLI and UPS batteries. It has a Tubular Plate for positive and a thick negative plate for enhancing service life of battery.



**High Reliability,  
Suitable for Backup Supplies**



## OPzS (12V) Tubular Batteries

### Application

- Industrial/Commercial Sectors
- Electronic PABX System
- UPS/Inverter
- Wind and Solar Energy
- Solar Power Plants
- Telecommunication System

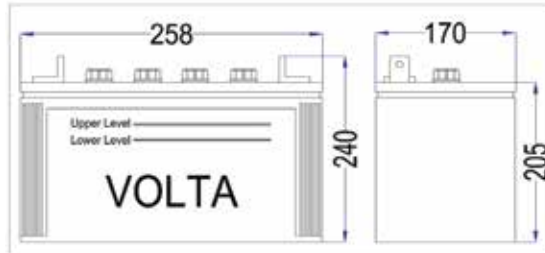
### Product Feature

- Tubular Positive Plates
- Paste Negative Plates
- Anti-Acid Polyester Gauntlets
- High Porosity and Low Electric Resistance PE Separators
- Float Type Vent Plug (Option)
- Bolt Nut Type Terminals
- Easy Carrying Handles

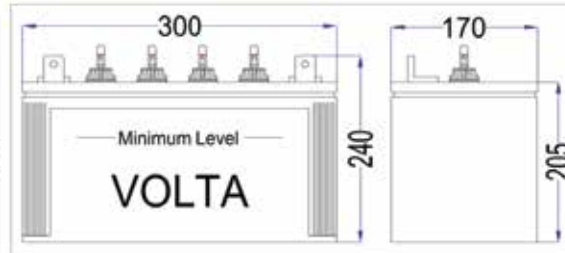
### Main Specification & Types

	Type	Volt	Overall Dimensions±2 (mm)				Approx. Weight (kg)	10 HR Capacity (AH)	Back up Time 154watts
			L	W	H	TH			
Solar Battery	TA600	12V	258	170	205	240	15	35	1hr 05min
Solar Battery	TA700	12V	300	170	205	240	20	55	2hr 05min

TA600



TA700



The open circuit voltage (OCV) versus percentage of energy stored in battery

OCV	Electolyte SPGR	Expected Remaining energy
Above 12.6 VOLT	1.260/25 °C	100%
12.35 VOLT	1.220/25 °C	75%
12.20 VOLT	1.190/25 °C	50%
12.00 VOLT	1.150/25 °C	25%
11.80 VOLT	1.120/25 °C	Discharged

### Charge

#### Constant Current Charge

Charge current : 0.1C10

Charge time : 12~13 hours

Specific gravity of electrolyte : 1.260 /25 °C (Fully charge)

#### Constant Volt Charge

Cycle Used: 14.4V ~14.7V

Stand by Used: 13.8V ~14.2V

Charge current: 0.1C10 (6A)~0.2C10(12A)

Sometimes using a battery that is too harsh, the 13.8V ups charger may not fully charge the battery.

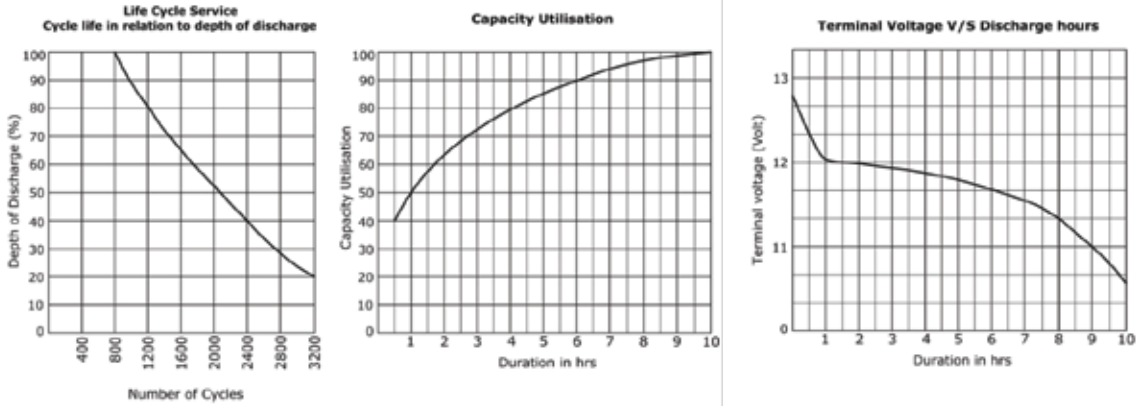
Then the battery should be boost charge for full charge.

Recommend boost charge: Voltage 14.1~14.4 volts,

TA700 Initial Current: 7A~14A

Charge Time: Till full charge (Electrolyte SP.GR~ 1.260/25 °C)

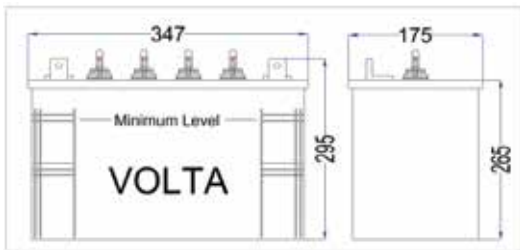
Charge Time: Till full charge (Electrolyte SP.GR~ 1.260/25 °C)



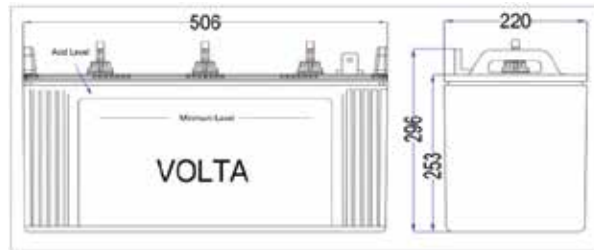
### Specification of Tubular Battery

	Type	Volt	Overall Dimensions±2 (mm)				Approx. Weight (kg)	10 HR Capacity (AH)	Back up Time	
			L	W	H	TH			154 watts	400 watts
Jumbo Tubuar (I)	TA1000	12V	347	175	265	295	30.5	80	Nil	1hr 05min
	TA1200	12V	347	175	265	295	37.7	125	Nil	1hr 40min
Jumbo Tubular (II)	TA1100	12V	506	220	253	296	41.0	90	Nil	1hr 15min
	TA1300	12V	506	220	253	296	45.9	110	Nil	2hr 00min
	TA1400	12V	506	220	253	296	47.6	135	Nil	2hr 20min
Low Height Tubular	TA1500	12V	506	220	253	296	48.9	150	Nil	2hr 40min
	TA1700	12V	502	190	352	380	46.9	140	Nil	2hr 30min
	TA2000	12V	502	190	352	380	53.5	170	Nil	3hr 20min
Tall Tubular	TA2500	12V	502	190	352	380	61.5	230	Nil	4hr 10min
	TA1800	12V	502	190	373	416	54.9	185	Nil	3hr 00min
	TA3000	12V	502	190	373	416	63.5	230	Nil	4hr 00min
									Nil	5hr 00min

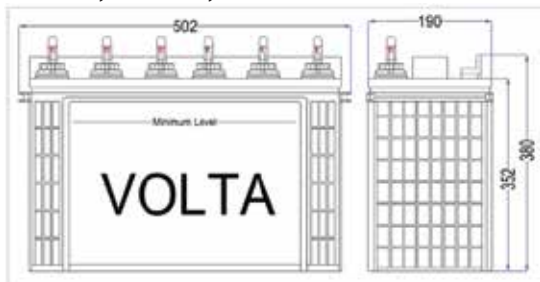
TA1000, TA1200



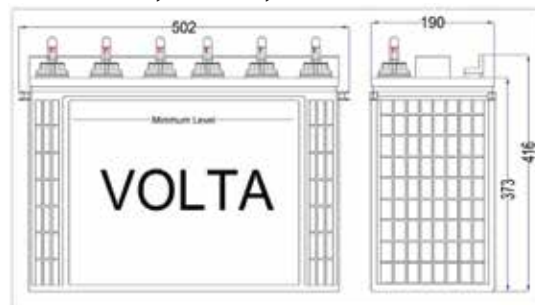
TA1100, TA1300, TA1400, TA1600



TA1500, TA1700, TA2000



TA1800, TA2500, TA3000



The open circuit voltage (OCV) versus percentage of energy stored in battery

OCV	Electolyte SPGR	Expected Remaining energy
Above 12.6 VOLT	1.260/20 °C	100%
12.35 VOLT	1.220/20 °C	75%
12.20 VOLT	1.190/20 °C	50%
12.00 VOLT	1.150/20 °C	25%
11.80 VOLT	1.120/20 °C	Discharged

Sometimes using a battery that is too harsh, the 13.8V ups charger may not fully charge the battery. Then the battery should be boost charge for full charge. Recommended boost charge : Voltage 14.1~14.4 volts.

Initial Current (TA1000 : 9A, TA1400 : 13.5A, TA1600 : 12A, TA1500: 11A, TR1700: 14A,

TA1800 :12A, TA2500 :16A, TA3000 : 20A)

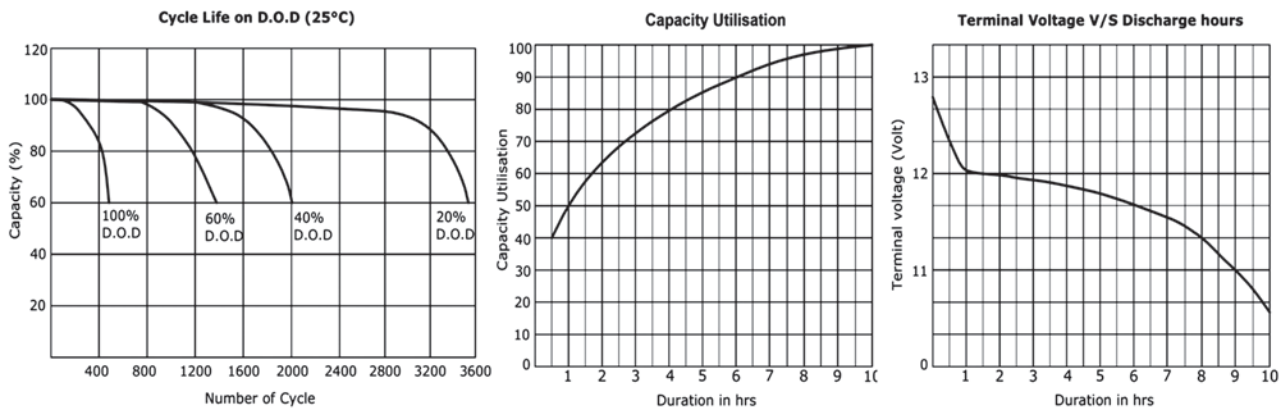
Time : Till full charge (Electolyte SPGR~ 1.260/20°C)

Tubuar Battery Back Up Time @25 °C

Battery	Battery Q'ty	Tube light	Fan	PC	TV	CFL	Inverter ratings	Back Up Time
TA1000	1	1	3	0	1	4	650 VA	85 min
TA1200	1							130 min
TA1100	1							100 min
TA1300	1							170 min
TA1400	1							180 min
TA1600	1							205 min
TA1500	1							190 min
TA1700	1							230 min
TA2000	1							290 min
TA1800	1							260 min
TA2500	1							310 min
TA3000	1							390 min
TA1000	1							2
TA1200	1	100 min						
TA1100	1	90 min						
TA1300	1	160 min						
TA1400	1	175 min						
TA1600	1	190 min						
TA1500	1	180 min						
TA1700	1	200 min						
TA2000	1	250 min						
TA1800	1	220 min						
TA2500	1	240 min						
TA3000	1	300 min						
TA1000	2	7	7	1	0	0	1500 VA	
TA1200	2							100 min
TA1100	2							85 min
TA1300	2							160 min
TA1400	2							175 min
TA1600	2							190 min
TA1500	2							180 min
TA1700	2							200 min
TA2000	2							230 min
TA1800	2							210 min
TA2500	2							250 min
TA3000	2							290 min

Battery	Battery Q'ty	Tube light	Fan	PC	TV	CFLS	Inverter ratings	Back Up Time
TA1000	2	5	7	0	1	7	1500 VA	80 min
TA1200	2							120 min
TA1100	2							115min
TA1300	2							145 min
TA1400	2							165mm
TA1600	2							205mm
TA1500	2							190 min
TA1700	2							200 min
TA2000	2							235 min
TA1800	2							210 min
TA2500	2							250 min
TA3000	2							320 min

Table shows the back up time of the tubular batteries according to the electrical load.at 25°C  
The back up time of the used battery is different from the above mentioned data.  
Also, If it is more than 25 degrees, back up time is reduced due to internal damage of the battery.



Pakistan Accumulators (Pvt) Limited

Factory: Plot # 20, 21, 22 Phase III, Industrial Estate, Hattar, Distt. Haripur KPK, Pakistan

UAN: +92-51-111-22-00-22, Fax: +92-51-2855164 | URL: www.volta.com.pk | Email: VRLA@volta.com.pk

\*All data and specifications are subject to change without any prior notice.