

High-Energy Battery for BESS



The Torrent battery is the fruit of many years of research and development. It is the perfect combination of a new technology and innovative design.

This provide performances far beyond the traditional SLA (Sealed Lead Acid) battery. The Torrent battery can discharge with 20C and fast recharge within 20 minutes, which is faster than Lithium battery.

Already matured technology now available

Torrent Batteries TES Series TES12-100



Nominal Voltage (V)	12V					
Nominal Capacity (25°C)	100Ah @ 3 HR-rate					
Dimension	(L) 770mm x (W) 128mm x (H) 143mm					
Weight	29.7 kg					
Terminal Type	M10 threaded connection					
Internal Resistance	1.4mΩ					
Specific Energy Density	≥40Wh/Kg					
Capacity (25°C)	10h Rated Capacity	110 Ah				
	Reserve Capacity	230 Min				
	Cranking Amp	2000 A				
	Cold Cranking Amp	1500 A				
Charging current vs Charging time						
Charging current (Amps)	50	125	250	370		
Charging time (Min.)	210	150	100	75		
Discharge current vs Discharge time						
Discharge current (Amps)	33.3	47.9	84.6	100	300	600
Discharge time (Min.)	180	120	60	50	11	5
Cut-off discharge voltage (V)	10.5	10.5	10.5	9.6	9.6	8.4

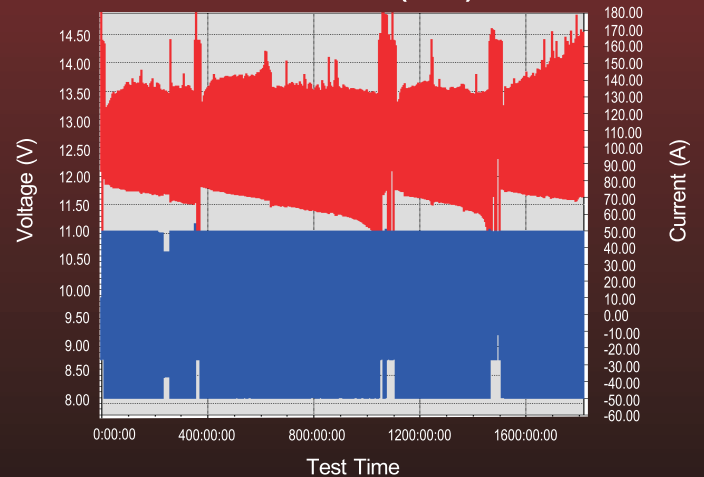
Thanks to the Torrent Technology, the TES series has the ability to run on a long-term partial state of charge (PSOC) while keeping it's high power, has high resistance to shock & explosion-proof. The internal structure is designed to provide the highest reliability and service life amongst today's energy storage solutions.

It is recommended to be used in Wind Power / PV Energy Storage System, Micro-Grid Energy Storage Systems and Smart Grid Energy Storage System.

Features

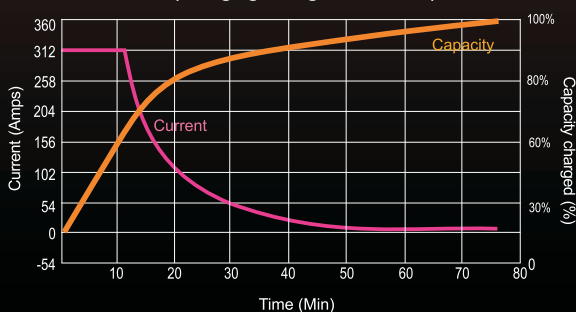
- ➔ Wide temperature operation range: -40°C to 60°C
- ➔ Long service life: 650 cycles at 100% DOD (25°C)
- ➔ High Specific Energy Density: 40 Wh/Kg (30% higher than SLA battery)
- ➔ High Power: Start current can reach 1800 A (4 times higher than SLA battery)
- ➔ Quick charge: 3C current charge and 80% charged in 20 min. (To be 100% charged, it only needs 75 min.)
- ➔ 3C discharge ≥ 4 min. @ -18°C
- ➔ High resistance in low temperature: 75% capacity at -18°C
- ➔ Strong shock-resistant capacity: can bear shock of acceleration of more than 10g
- ➔ Safe and maintenance free

PSOC Test Curve (25°C)



3C Charge Characteristic

(Charging voltage limit: 14.4V)



Cycle Life Chart (C3, 100% DOD, 25°C)

