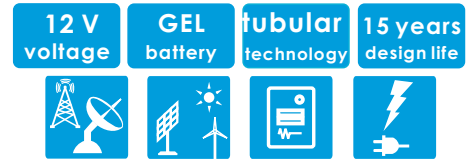


## Tubular Gel Front Access Series VRLA Battery

### TGF SERIES

BSB TGF Series Front Access Valve Regulated Lead Acid batteries are designed to meet the expectation of heavy duty, robust and reliable services at high temperature from both telecommunication networks and renewable energy systems. TGF batteries benefit from an optimized tubular plates and gelled electrolyte to offer both a long float life and deep cycle life.



### GENERAL FEATURES

- Sealed and maintenance free operation.
- Non-Spillable construction design.
- ABS containers and covers(UL94 V0, optional).
- Safety valve installation for explosion proof.
- High quality and high reliability.
- Super long service life.
- Lowest self discharge characteristic.
- Super reliability.



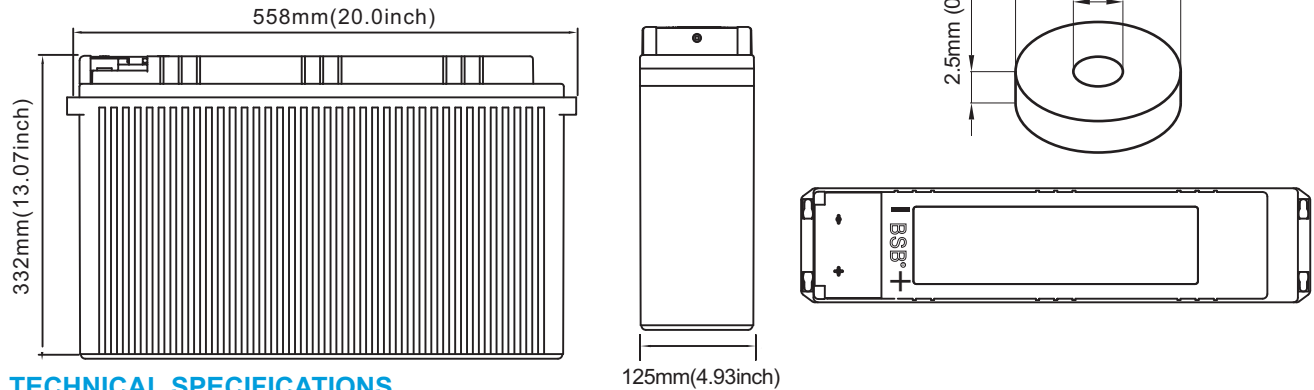
### AMBIENT TEMPERATURE

- Discharge: -40~65°C
- Charge: -30~65°C
- Storage: -25~45°C

### COMPLIED STANDARDS

- IEC 60896-21/22
- UL1989
- BS6290 Part 4

### BATTERY DIMENSIONS

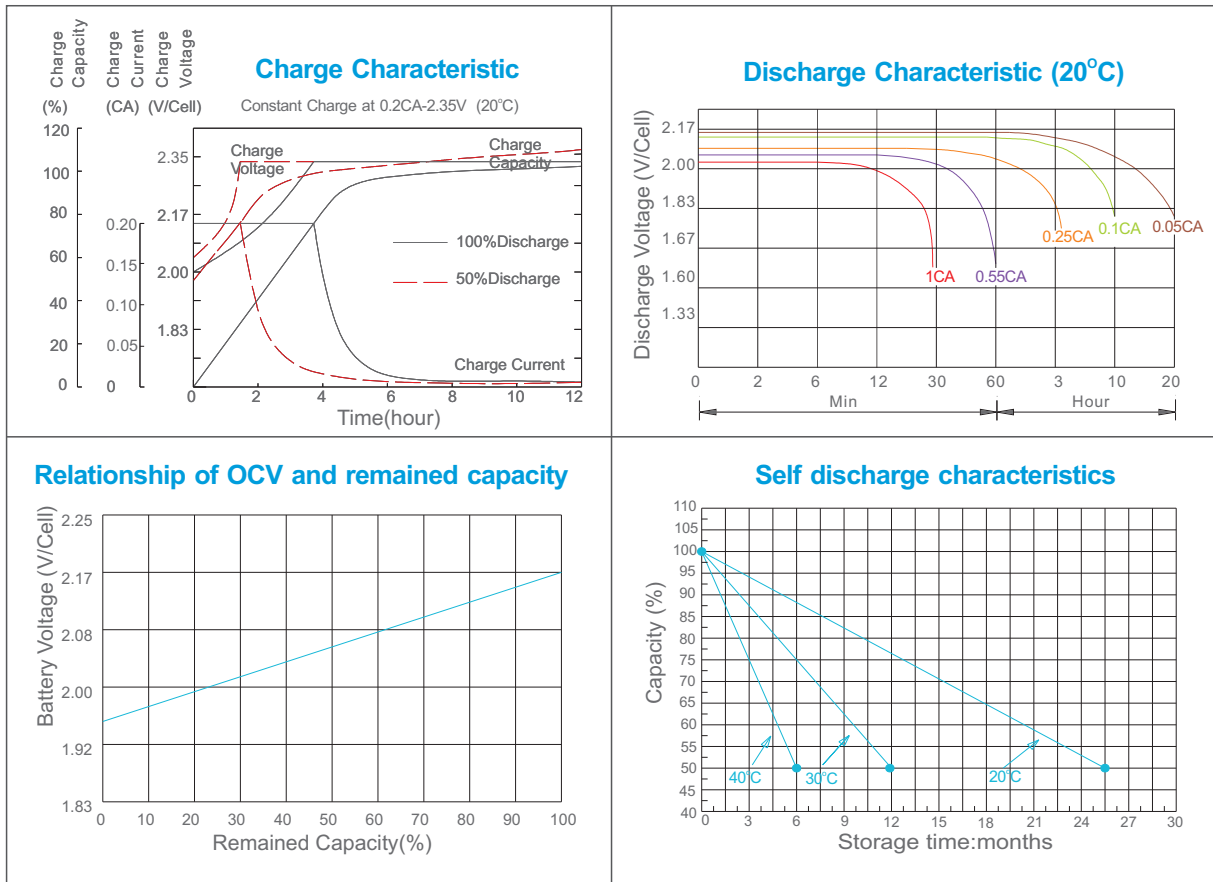


### TERMINAL DIMENSIONS

### TECHNICAL SPECIFICATIONS

|                              |   |                   |                                  |                    |
|------------------------------|---|-------------------|----------------------------------|--------------------|
| Battery Model                | TGF 12-150                                |                   |                                  |                    |
| Designed Floating Life(20°C) | 15 Years                                  |                   |                                  |                    |
| Capacity(20°C)               | 20HR(7.8A,1.80V)                          | 10HR(15A,1.80V)   | 5HR(25.5A,1.80V)                 | 1HR(82.5A,1.80V)   |
|                              | 156 Ah                                    | 150 Ah            | 125 Ah                           | 82.5 Ah            |
| Dimensions                   | Length                                    | Width             | Height                           | Total Height       |
|                              | 558mm (22.0 inch)                         | 125mm (4.92 inch) | 332mm (13.07 inch)               | 332mm (13.07 inch) |
| Approx. Weight               | 56 kg (123 lbs)                           |                   |                                  |                    |
| Terminal Type & Torque       | Female Φ16-M8 / 12 Nm                     |                   |                                  |                    |
| Internal Resistance          | Full charged at 20°C: 0.0073 Ohm          |                   |                                  |                    |
| Max. Charge Current          | 30A                                       |                   |                                  |                    |
| Max. Discharge Current(5S)   | 750A                                      |                   |                                  |                    |
| Short Circuit Current        | 1800A                                     |                   |                                  |                    |
| Self Discharge               | 2% of capacity declined per month at 20°C |                   |                                  |                    |
| Charge Voltage(20°C)         | Cycle use:14.1V-14.4V (-30mV/ °C)         |                   | Float use:13.5-13.7V (-18mV/ °C) |                    |
|                              | Capacity Affected by Temp.(10HR)          | 40°C              | 20°C                             | 0°C                |
|                              | 105%                                      | 100%              | 85%                              | 65%                |

**Tubular Gel Front Access Series VRLA Battery**



**Constant current discharge ratings at 20°C (unit: ampere)**

| F.V/Time | 15min | 30min | 1h   | 2h   | 3h   | 4h   | 5h   | 8h   | 10h  | 20h  |
|----------|-------|-------|------|------|------|------|------|------|------|------|
| 1.70V    | 189   | 130   | 84.1 | 51.1 | 38.3 | 30.8 | 26.4 | 18.4 | 15.8 | 8.33 |
| 1.75V    | 172   | 125   | 83.3 | 50.2 | 38.3 | 30.6 | 26.0 | 18.2 | 15.4 | 8.26 |
| 1.80V    | 153   | 116   | 80.0 | 48.7 | 38.3 | 30.4 | 25.6 | 18.0 | 15.0 | 8.05 |
| 1.83V    | 141   | 110   | 74.6 | 47.4 | 36.0 | 29.0 | 24.9 | 17.6 | 14.6 | 7.95 |
| 1.87V    | 124   | 100   | 69.3 | 44.8 | 34.0 | 27.8 | 24.1 | 16.5 | 14.0 | 7.80 |
| 1.90V    | 112   | 90.9  | 64.4 | 42.1 | 32.1 | 26.4 | 23.0 | 15.7 | 13.6 | 7.65 |

**Constant power discharge ratings at 20°C (unit: watts per cell)**

| F.V/Time | 15min | 30min | 1h  | 2h   | 3h   | 4h   | 5h   | 8h   | 10h  | 20h  |
|----------|-------|-------|-----|------|------|------|------|------|------|------|
| 1.70V    | 318   | 227   | 179 | 92.6 | 76.9 | 65.0 | 57.9 | 39.3 | 32.8 | 18.0 |
| 1.75V    | 281   | 221   | 162 | 90.4 | 76.6 | 64.0 | 56.4 | 38.6 | 31.3 | 17.5 |
| 1.80V    | 250   | 212   | 148 | 91.4 | 75.7 | 62.8 | 55.0 | 37.2 | 30.4 | 17.0 |
| 1.83V    | 238   | 199   | 142 | 91.0 | 75.1 | 61.7 | 53.6 | 36.6 | 29.9 | 16.7 |
| 1.87V    | 222   | 186   | 138 | 89.9 | 73.4 | 60.8 | 53.2 | 34.7 | 28.7 | 16.5 |
| 1.90V    | 211   | 169   | 133 | 86.1 | 70.9 | 58.6 | 51.3 | 34.1 | 27.8 | 16.8 |

**Headquarters and subsidiaries**

- BSB Power Company Limited (Headquarters) - China
- BSB Power Europe - France
- BSB Power Malaysia Sdn. Bhd - Malaysia
- PT. BSB Indonesia - Indonesia
- BSB Power (Thailand) Co., Ltd - Thailand
- BSB Power Company Pakistan (Private) Ltd - Pakistan

