



AGM TECHNOLOGY
ABT Enduro EFHP Series

EFTB12-150

12V150Ah(10hr)

Complying standards:

IEC60896-21/22 2004,
JIS C8704-1/2 2006,
Bs6290-41997,
JIS C8702-1/2 2003,
Eurobat Guide



High Performance

The ABT Enduro EFHP range of VRLA lead acid batteries have been designed specifically for use in applications which demand the highest levels of security and reliability. With proven compliance to the most rigorous international standards.

Enduro EFHP is recognized as premium battery for Telecom/IT, Power Utilities applications. Enduro's reputation for long service life combined with excellent high rate performance also makes it the number one choice for high integrity, high specification UPS systems. The Enduro EFHP front terminal monoblocs is compact design and standard footprint for 19" and 23" and ETST cabinet.

Mechanical Characteristics

| | SI Unit | English Unit |
|--|---------|--------------|
| Length | 551mm | 21.69inch |
| Width | 110mm | 4.33inch |
| Height | 320mm | 12.6inch |
| Total Height | 320mm | 12.6inch |
| Approx. Weight | 51.0Kg | 112.43lbs |
| Type of material for Box and lids : ABS Standard (FV0 Optional) | | |

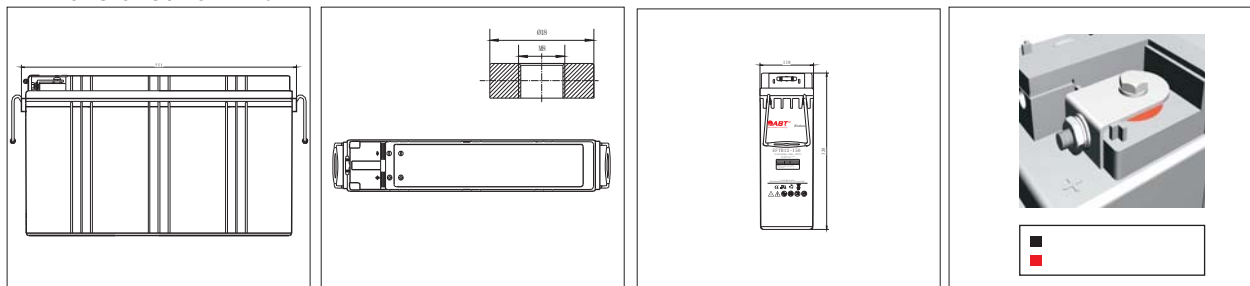
Product Characteristics

- Thick Pb-Ca-Sn alloy grids designed to resist corrosion and prolong life
- Low resistance microporous glass fibre separator
- Low specific acid density
- Centralized venting system for gas ventilation
- Flame arrestor to improve safety
- Rope handles for easy installation
- Pillar with brass insert where screwed an copper connector fitted with a bolt and stainless nut and washers
- Design life 12 years
- Low Self Discharge
- U. L. Component Recognition
- Six months shelf life at 20°C

Performance Characteristics

| | |
|------------------------------|--|
| Nominal Voltage | 12V |
| Number of Cell | 6 |
| Nominal Capacity 20°C (68°F) | 20 hour rate (7.8A, 10.8V) 156Ah 10 hour rate (15A, 10.8V) 150Ah 1 hour rate (100.5A, 9.60V)100.5Ah |
| Intensity | |
| Max. Discharge Current | 20°C (68°F) 700A(5s) |
| Short circuit current | 3200A |
| Maximum charge current | 30A(20% of rated capacity) |
| Internal Resistance | Fully Charged battery 20°C (68°F) 3.89mOhms |
| Mass Energy(Wh/kg) | 35.29 |
| Volumic Energy(Wh/L) | 92.81 |
| Self-Discharge | 3% of capacity declined per month at 20°C(average) |
| Operating Temperature Range | Discharge -20~60°C Charge -10~60°C Storage -20~60°C |
| Charge Methods: | Constant Voltage Charge 20°C (68°F) Cycle use 14.1-14.4V Temperature compensation -24mV/°C Standby use 13.5-13.74V Temperature compensation -20mV/°C |
| Terminal Type | Inserted Thread and bolt M8 ϕ 18 |
| Torque strength in Nm | 12~16 |
| Handle Type | Rope |

Dimensions / Terminal



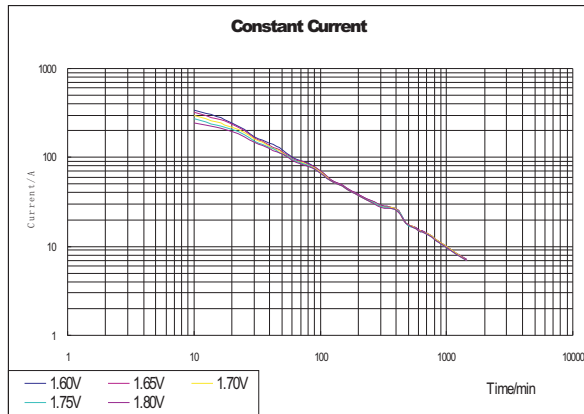
Constant Current Discharge Data (Amperes at 20°C / 68°F)

| End Volt. Per Cell | 5min | 10min | 15min | 20min | 25min | 30min | 35min | 40min | 45min | 50min | 1h | 1.5h | 2h | 2.5h | 3h | 4h | 5h | 6h | 7h | 8h | 9h | 10h | 12h | 24h |
|--------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| 1.60v | 480 | 343.7 | 267.8 | 231.5 | 195.1 | 158.8 | 146.6 | 134.4 | 124.8 | 116.3 | 100.5 | 78.8 | 57.0 | 48.2 | 40.3 | 31.6 | 26.1 | 21.6 | 19.2 | 17.9 | 16.3 | 15.2 | 13.0 | 7.05 |
| 1.65v | 447 | 324.3 | 256.7 | 222.1 | 187.5 | 152.9 | 140.5 | 128.2 | 118.3 | 111.4 | 99.0 | 77.7 | 56.4 | 47.7 | 39.7 | 31.3 | 25.9 | 21.6 | 19.2 | 17.9 | 16.3 | 15.1 | 12.9 | 7.05 |
| 1.70v | 411 | 308.4 | 237.2 | 213.2 | 181.0 | 148.7 | 136.9 | 125.1 | 115.7 | 108.9 | 96.6 | 76.1 | 55.5 | 47.0 | 39.5 | 31.0 | 25.8 | 21.4 | 19.1 | 17.5 | 16.2 | 15.1 | 12.8 | 6.99 |
| 1.75v | 360 | 297.9 | 223.2 | 203.9 | 173.4 | 142.8 | 132.0 | 121.1 | 112.6 | 106.2 | 94.8 | 74.9 | 54.9 | 46.6 | 39.5 | 31.0 | 25.7 | 21.4 | 19.0 | 17.5 | 16.2 | 15.1 | 12.8 | 6.96 |
| 1.80v | 324 | 285.5 | 209.3 | 194.4 | 165.5 | 136.7 | 126.9 | 117.2 | 109.7 | 103.9 | 93.6 | 74.1 | 54.6 | 46.4 | 39.2 | 30.7 | 25.5 | 21.2 | 18.8 | 17.5 | 16.0 | 15.0 | 12.8 | 6.87 |

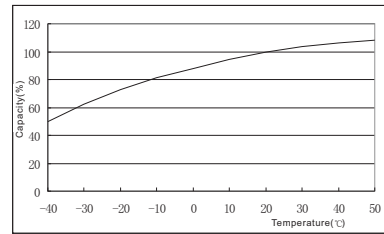
Constant Power Discharge Data (Watts per cell at 20°C / 68°F)

| End Volt. Per Cell | 5min | 10min | 15min | 20min | 25min | 30min | 35min | 40min | 45min | 50min | 1h | 1.5h | 2h | 2.5h | 3h | 4h | 5h | 6h | 7h | 8h | 9h | 10h | 12h | 24h |
|--------------------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|------|------|------|------|------|------|------|------|------|------|
| 1.60v | 778 | 557.7 | 464.0 | 406.5 | 349.0 | 291.5 | 266.2 | 240.9 | 222.7 | 213.6 | 198.8 | 141.0 | 111.2 | 92.1 | 79.2 | 63.1 | 54.1 | 46.2 | 40.1 | 36.0 | 33.1 | 30.8 | 26.3 | 13.5 |
| 1.65v | 750 | 546.2 | 452.0 | 395.6 | 339.3 | 282.9 | 259.3 | 235.8 | 219.1 | 209.4 | 193.1 | 137.4 | 107.8 | 90.0 | 78.3 | 62.2 | 53.2 | 45.1 | 39.4 | 35.4 | 32.7 | 30.6 | 26.1 | 13.5 |
| 1.70v | 716 | 534.6 | 439.9 | 385.3 | 330.6 | 276.0 | 253.0 | 230.0 | 213.8 | 205.2 | 191.3 | 135.4 | 106.1 | 88.8 | 77.0 | 61.3 | 52.2 | 44.4 | 38.8 | 35.3 | 32.7 | 30.4 | 26.1 | 13.4 |
| 1.75v | 647 | 523.1 | 427.8 | 374.3 | 320.9 | 267.4 | 246.1 | 224.8 | 210.2 | 201.0 | 185.6 | 132.4 | 104.6 | 87.3 | 75.8 | 60.5 | 51.6 | 43.9 | 38.3 | 35.1 | 32.3 | 30.2 | 26.1 | 13.4 |
| 1.80v | 599 | 511.5 | 414.0 | 362.3 | 310.5 | 258.8 | 238.6 | 218.5 | 204.8 | 195.6 | 180.0 | 129.8 | 102.9 | 86.0 | 74.7 | 59.6 | 50.8 | 43.4 | 37.8 | 34.7 | 32.2 | 30.0 | 26.1 | 13.4 |

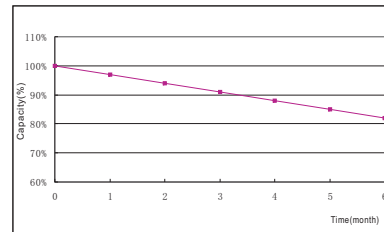
Constant Current Discharge Curve



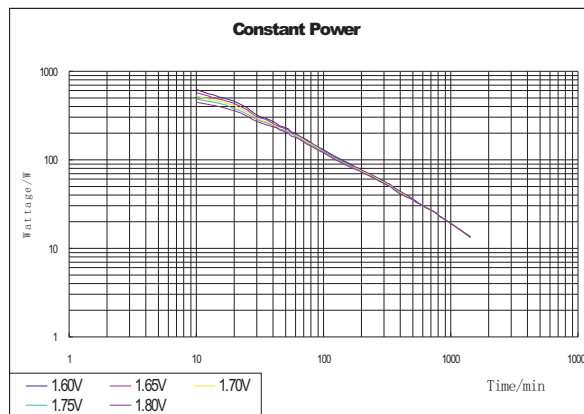
Capacity Vs Temperature



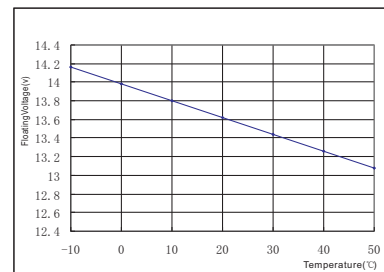
Self Discharge



Constant Power Discharge Curve



Floating Charge Voltage Vs Temperature



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ABT VRLA Battery: Available Power Range From 7Ah to 3000Ah

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