

ESH 100-12

(AGM + Gel + FR)

Pasted High Technology
 Electrolyte Suspension
 For Longer Service Life

INTRODUCTION

ESH Series (Gel+FR) are designed for general-purpose high rate applications such as UPS, Telecom, and Electrical Utilities. With 10 years Design Life, the batteries comply to the most popular international standards. The series is engineered to provide performance reliability and consistency over the life of the product. The battery uses silica gel to immobilize the electrolyte inside the battery.

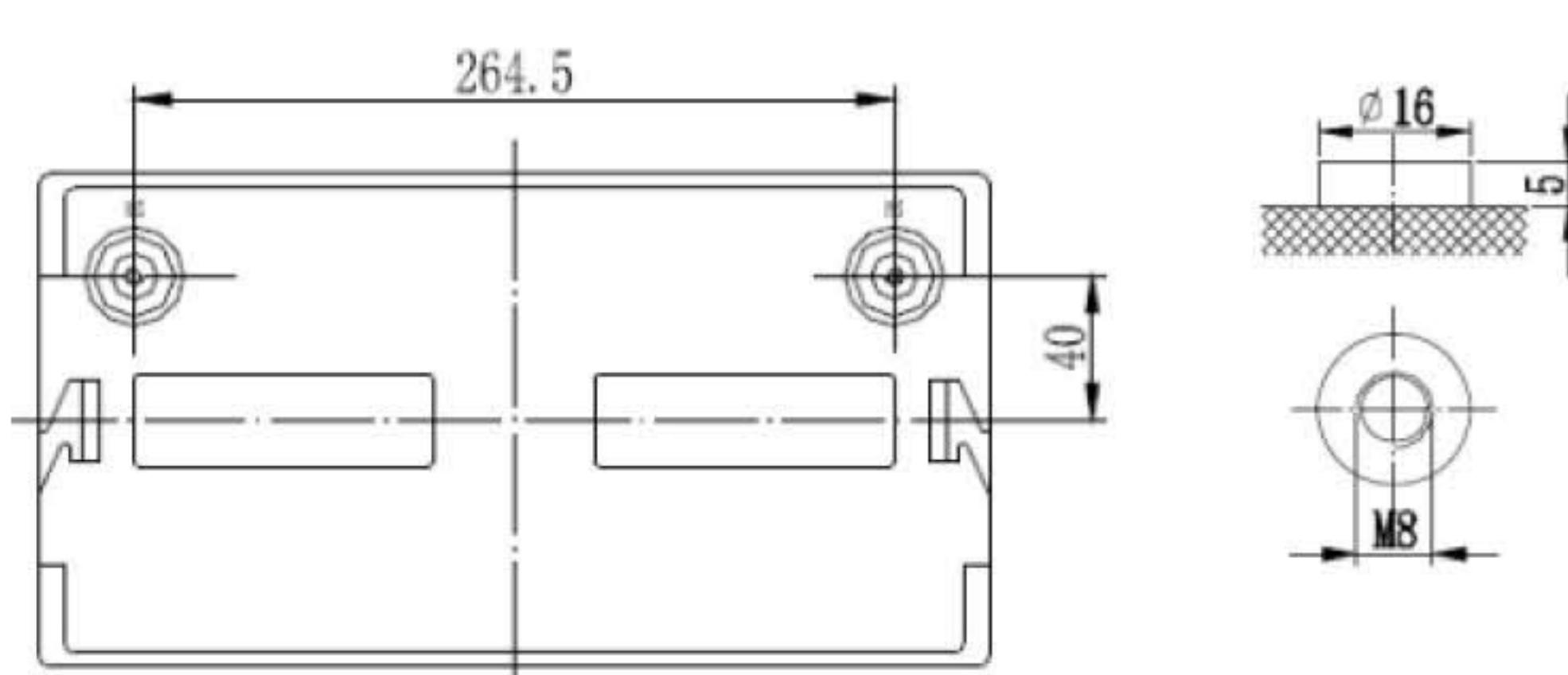
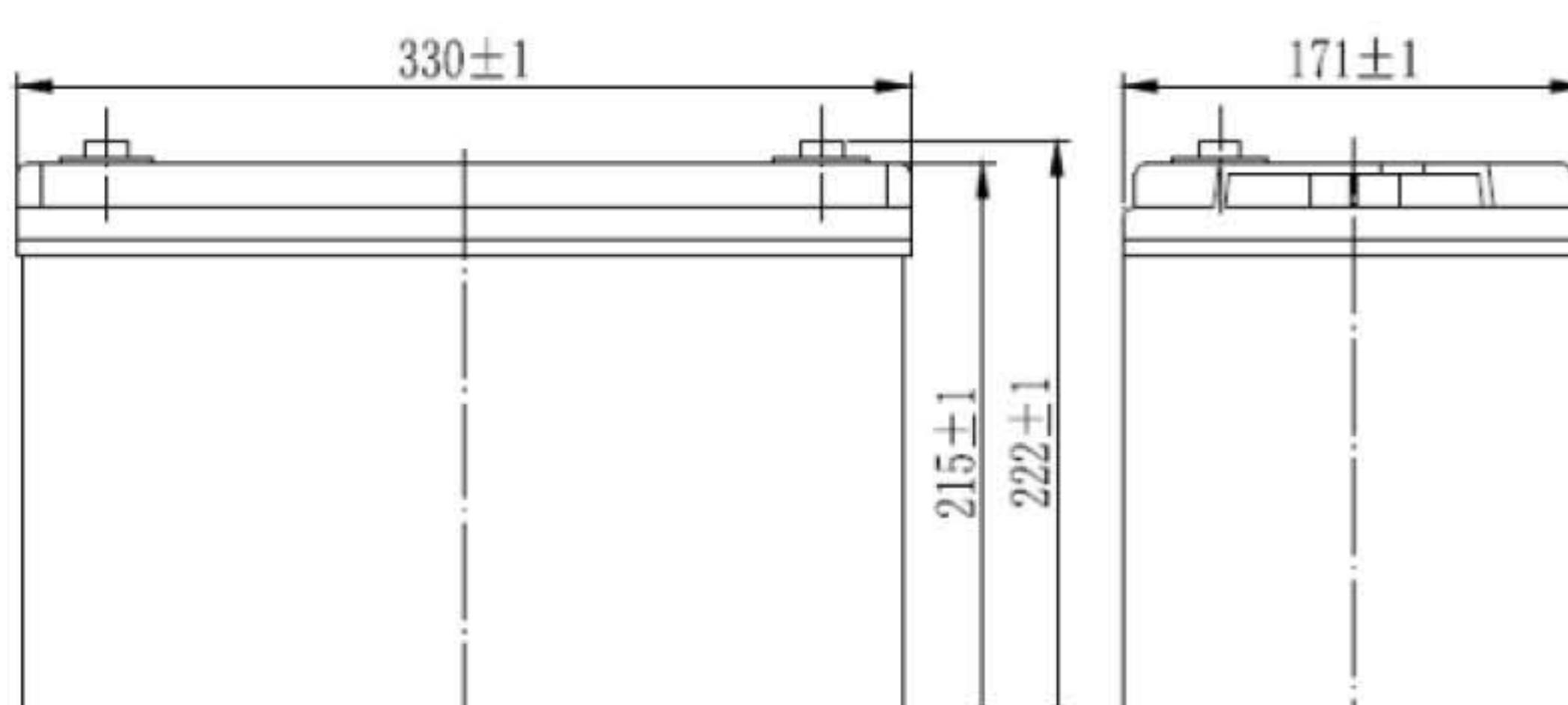
In order to stay in competition with the international battery market, Global has established capital and technical ties with the world's most renowned battery manufacturers, such as Yuasa Corporation of Japan, Hagen Batteries AG. of Germany, and SAFT of France.

TECHNICAL FEATURES

1. 10 years Design Life @ 25°C
2. V0 Class Flame Retardant ABS Container
3. Lead-tin-Calcium alloy grid for long service life, in Float and Cyclic
4. Lower Internal Resistance
5. High Power Density
6. High Reliability
7. Low Pressure Venting System
8. Heavy-Duty Grids
9. High Recovery Capacity
10. Absorptive Glass Mat System (AGM System)
11. Proven Silica Gel Technology improves Battery Cyclic Life

APPLICATIONS

1. UPS Application
2. Telecom Application
3. Medical Instruments
4. Camera & Photographic
5. Personal Computers
6. Lighting Equipment
7. Security Alarm System



SPECIFICATION

| | | |
|-----------------------|--------------|-------------------|
| Nominal Voltage | | 12V |
| Capacity (10HR, 25°C) | | 100Ah |
| Dimension | Length | 330mm (12.99inch) |
| | Width | 171mm (6.73inch) |
| | Height | 215mm (8.46inch) |
| | Total Height | 222mm (8.74inch) |
| Approx Weight | | 32.0kg (70.5bs) |
| Design Life | | 10 Years |

CHARACTERISTICS

| | | |
|--|--------------|--------------------------------|
| Capacity 25°C(77°F) | 10 Hour Rate | 100 Ah |
| | 5 Hour Rate | 88 Ah |
| | 1 Hour Rate | 64.8 Ah |
| Internal resistance | | 4.5mΩ |
| Self-discharge (20°C) | 1 month | 3% of capacity declined |
| | Discharge | -20°C~60°C |
| | Charge | -10°C~60°C |
| Storage | | -20°C~60°C |
| Maximum discharge current | | 900A(5s) |
| Short Circuit Current | | 2200A |
| Maximum charging current | | 30A |
| Charge Methods (Constant Voltage Charge 77°F(25°C)) - Cyclic Use | 100% Charge | Cycle Use 2.30VPC to 2.35V |
| | 100% Charge | Temp. compensation - 30mV/°C |
| Charge Methods (Constant Voltage Charge 77°F(25°C)) - Standby Use | 100% Charge | Standby Use 2.25VPC to 2.27VPC |
| | 100% Charge | Temp. compensation - 20mV/°C |

CONSTANT CURRENT DISCHARGE (Amperes) at 25°C

| End Point Volts/Cell | 10min | 15min | 30min | 1h | 3h | 5h | 10h | 20h |
|-------------------------|--------|--------|--------|-------|-------|-------|-------|------|
| 1.60V | 233.00 | 192.00 | 107.00 | 64.80 | 26.50 | 18.60 | 10.40 | 5.46 |
| 1.65V | 218.00 | 182.00 | 104.00 | 63.70 | 25.90 | 18.30 | 10.30 | 5.43 |
| 1.70V | 202.00 | 173.00 | 100.00 | 62.70 | 25.40 | 18.00 | 10.20 | 5.40 |
| 1.75V | 188.00 | 161.00 | 96.50 | 61.60 | 24.80 | 17.60 | 10.10 | 5.35 |
| 1.80V | 173.00 | 150.00 | 94.50 | 60.70 | 24.10 | 17.20 | 10.00 | 5.30 |

CONSTANT POWER DISCHARGE (Watts per cell) at 25°C

| End Point Volts/Cell | 10min | 15min | 30min | 45min | 1h | 2h | 3h | 5h |
|-------------------------|--------|--------|--------|--------|--------|-------|-------|-------|
| 1.60V | 406.00 | 332.00 | 202.00 | 147.00 | 129.00 | 72.50 | 51.10 | 35.70 |
| 1.65V | 386.00 | 327.00 | 196.00 | 143.00 | 127.00 | 71.20 | 50.60 | 35.50 |
| 1.70V | 365.00 | 316.00 | 190.00 | 140.00 | 126.00 | 69.90 | 50.00 | 35.30 |
| 1.75V | 346.00 | 305.00 | 184.00 | 137.00 | 122.00 | 68.60 | 49.40 | 35.10 |
| 1.80V | 324.00 | 294.00 | 178.00 | 134.00 | 118.00 | 68.00 | 48.50 | 34.70 |

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Note:

1) Continuous prolonged use at elevated temperature will reduce the battery life by approximately one half for every 8°C above 25°C.