

ASTERION HR-W series batteries are sealed, maintenance-free lead-acid batteries with gas recombination system (VRLA), manufactured using AGM technology (electrolyte absorbed in a separator).

The HR-W series relates to the ASTERION UPS series, designed specifically for use in uninterruptible power supplies for server and other similar systems. The HR-W series has high energy efficiency due to its use in the production of more massive plates.



Battery construction

| Element | Positive plate | Negative plate | Case | Lid | Valve | Terminal | Separator | Electrolyte |
|----------|----------------|----------------|------|-----|--------|----------|------------|-------------|
| Material | Lead dioxide | Lead | ABS | | Rubber | Copper | Fiberglass | Acid |

Specifications

| | |
|--|----------------------------|
| Nominal voltage..... | 12 V |
| Cell..... | 6 |
| Design life..... | 8 years |
| Nominal capacity (25°C) | |
| 15 min discharge constant power up to 1,7V/cell..... | 83,5 W |
| 20 hours rate (1 A; 1,75 V/cell)..... | 20 Ah |
| 10 hours rate (2,01 A; 1,75 V/cell)..... | 20,1 Ah |
| Self-discharge..... | 3% capacity per month 20°C |
| Internal resistance (25°C)..... | 9 mΩ |

Operating temperature range

| | |
|---------------------------------------|-------------|
| Discharge..... | -20÷60°C |
| Charge..... | -10÷60°C |
| Storage..... | -20÷60°C |
| Maximum discharge current (25°C)..... | 300A (5sec) |
| Cycle mode (2,35÷2,4 V/cell) | |
| Max.charge current..... | 6 A |
| Temperature correction factor..... | 30 mV/°C |
| Standby mode (2,25÷2,3 V/cell) | |
| Temperature correction factor..... | 20 mV/°C |

Application

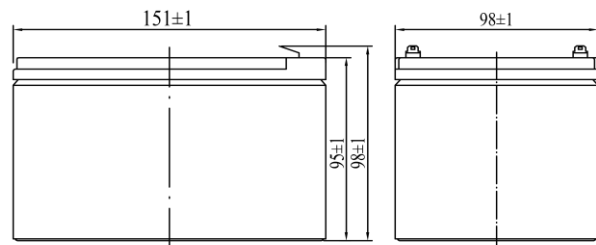
- Uninterruptable power supply
- Back up power supply
- Medical devices
- Portable devices
- Professional equipment

Performance & characteristics

- AGM technology allows to recombine 99% of the generated gas;
- No restrictions on air transportation;
- Compliance with the UL requirements;
- Lead plates, alloyed by calcium, provide high energy density;
- Maintenance-free. Do not require distillate topping;
- Long service life;
- The battery case is made of flame-retardant ABS plastic.

Dimensions (±2mm)

| | |
|--------------------------------|-----|
| Length, mm..... | 181 |
| Width, mm..... | 77 |
| Height, mm..... | 167 |
| Height over terminals, mm..... | 167 |
| Weight (±3%), kg..... | 6,5 |



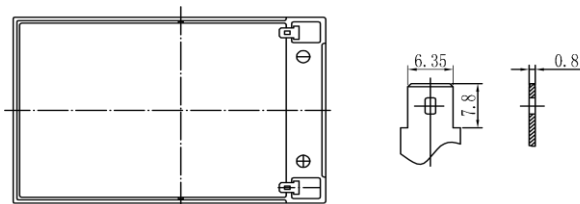
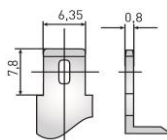
Layout

E



Terminal type

Insert Ø5 mm

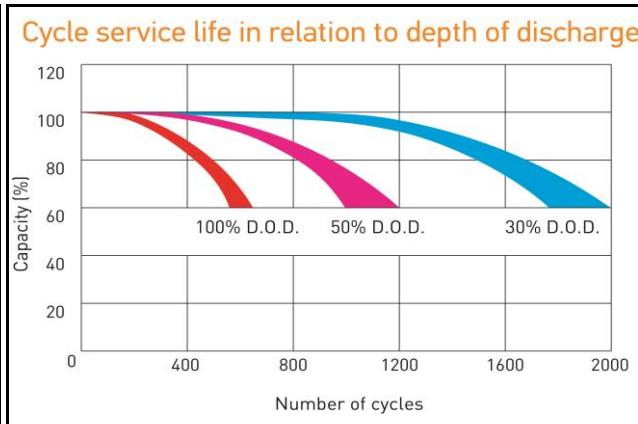
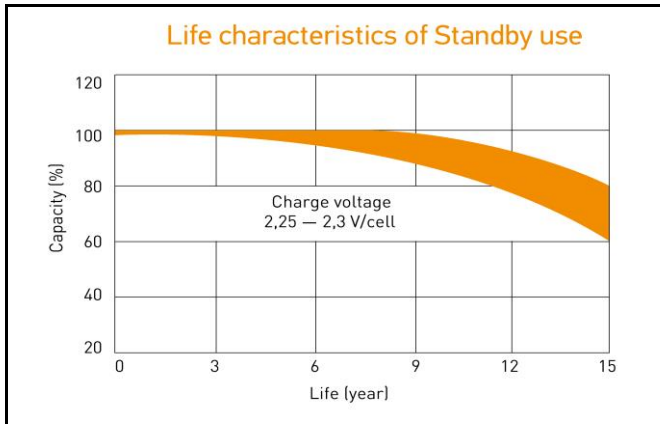
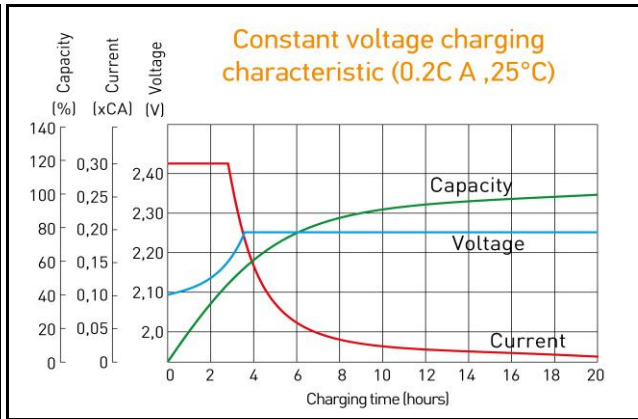
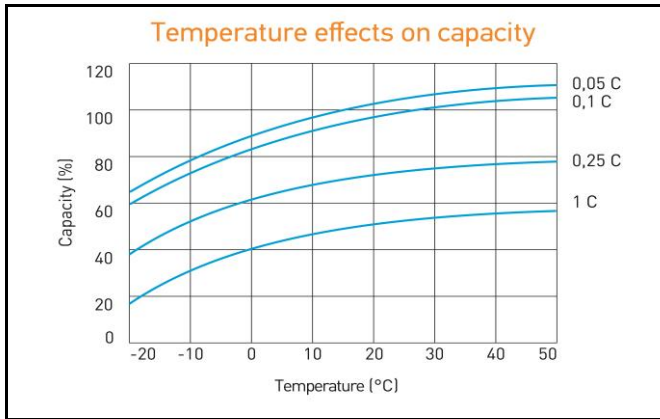


Discharge Constant Current, A (25°C)

| V/cell | 5 min | 10 min | 15 min | 30 min | 45 min | 1 h | 3 h | 5 h | 20 h |
|--------|-------|--------|--------|--------|--------|------|------|------|------|
| 1,60 | 90,7 | 66,4 | 50,3 | 29,9 | 21,0 | 16,0 | 6,13 | 3,91 | 1,07 |
| 1,65 | 88,5 | 64,7 | 49,7 | 28,5 | 20,2 | 15,5 | 6,10 | 3,87 | 1,07 |
| 1,70 | 87,0 | 63,0 | 48,9 | 27,7 | 19,7 | 15,2 | 6,04 | 3,75 | 1,04 |
| 1,75 | 80,4 | 58,1 | 45,1 | 27,3 | 19,4 | 14,9 | 5,96 | 3,65 | 1,00 |
| 1,80 | 75,7 | 57,3 | 42,5 | 26,5 | 19,0 | 14,7 | 5,83 | 3,61 | 0,95 |

Discharge Constant Power, W/cell (25°C)

| V/cell | 5 min | 10 min | 15 min | 30 min | 45 min | 1 h | 3 h | 5 h | 20 h |
|--------|-------|--------|--------|--------|--------|------|------|------|------|
| 1,60 | 172 | 116 | 86,3 | 51,5 | 37,6 | 29,8 | 11,6 | 7,27 | 1,95 |
| 1,65 | 167 | 115 | 85,1 | 50,7 | 37,1 | 29,2 | 11,5 | 7,18 | 1,93 |
| 1,70 | 164 | 113 | 83,5 | 50,1 | 36,4 | 28,5 | 11,4 | 7,09 | 1,91 |
| 1,75 | 161 | 112 | 77,8 | 48,5 | 35,2 | 27,6 | 11,3 | 7,00 | 1,83 |
| 1,80 | 158 | 108 | 73,3 | 47,4 | 34,5 | 27,2 | 11,2 | 6,99 | 1,77 |



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