

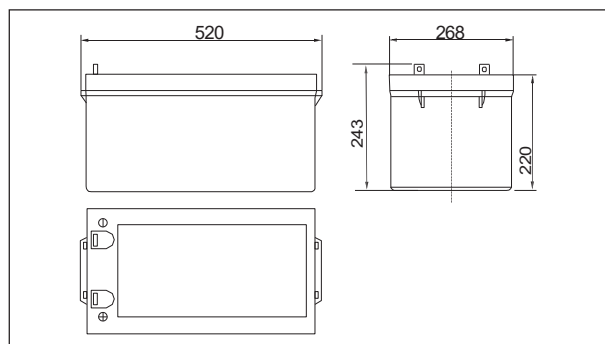
# VMP

## VPD12-250 12V250Ah

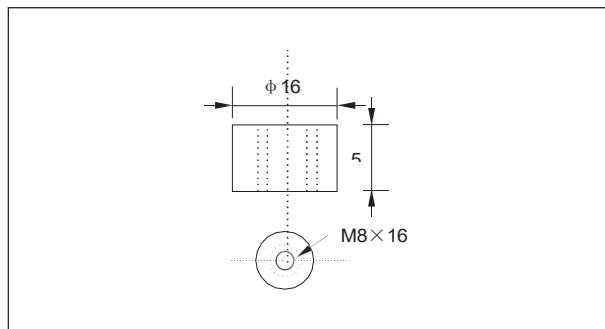
### Specifications

|                               |              |        |
|-------------------------------|--------------|--------|
| Nominal Voltage               |              | 12V    |
| Rated capacity (10 hour rate) |              | 250Ah  |
| Dimensions                    | Length       | 521mm  |
|                               | Width        | 269mm  |
|                               | Height       | 220mm  |
|                               | Total Height | 224mm  |
| Approx. Weight                |              | 69.0kg |

### Outer dimensions (mm)



### Terminal Type (mm)



### Construction

| Component    | Positive plate | Negative plate | Container | Cover | Separator | Electrolyte   | Safety valve | Terminal |
|--------------|----------------|----------------|-----------|-------|-----------|---------------|--------------|----------|
| Raw material | Lead dioxide   | Lead           | ABS       | ABS   | AGM       | Sulfuric acid | Rubber       | Copper   |

### Constant Current Discharge Characteristics Unit:A(25°C)

| F.V/Time | 15min | 30min | 60min | 2h   | 3h   | 4h   | 5h   | 6h   | 8h   | 10h  | 20h  |
|----------|-------|-------|-------|------|------|------|------|------|------|------|------|
| 9.60V    | 420   | 251   | 155   | 91.4 | 65.8 | 52.5 | 44.9 | 39.0 | 30.9 | 25.5 | 13.5 |
| 9.90V    | 410   | 246   | 152   | 90.8 | 65.4 | 52.2 | 44.6 | 38.8 | 30.7 | 25.4 | 13.5 |
| 10.2V    | 395   | 239   | 148   | 90.0 | 65.0 | 51.9 | 44.3 | 38.5 | 30.5 | 25.3 | 13.4 |
| 10.5V    | 381   | 233   | 144   | 88.7 | 64.5 | 51.5 | 44.0 | 38.3 | 30.3 | 25.2 | 13.3 |
| 10.8V    | 361   | 224   | 139   | 86.4 | 62.6 | 50.0 | 42.7 | 37.1 | 29.3 | 25.0 | 13.3 |

### Constant Power Discharge Characteristics Unit:W(25°C)

| F.V/Time | 15min | 30min | 60min | 2h   | 3h  | 4h  | 5h  | 6h  | 8h  | 10h | 20h |
|----------|-------|-------|-------|------|-----|-----|-----|-----|-----|-----|-----|
| 9.60V    | 4612  | 2819  | 1761  | 1058 | 774 | 618 | 530 | 461 | 367 | 304 | 162 |
| 9.90V    | 4501  | 2763  | 1735  | 1052 | 769 | 614 | 527 | 458 | 364 | 303 | 162 |
| 10.2V    | 4335  | 2678  | 1691  | 1042 | 764 | 610 | 524 | 455 | 362 | 302 | 161 |
| 10.5V    | 4187  | 2613  | 1638  | 1027 | 759 | 606 | 520 | 452 | 359 | 301 | 160 |
| 10.8V    | 3966  | 2517  | 1585  | 1001 | 736 | 587 | 504 | 439 | 349 | 299 | 159 |

Note: The above characteristics data can be obtained within three charge or discharge cycles.

## DEEP CYCLE BATTERY



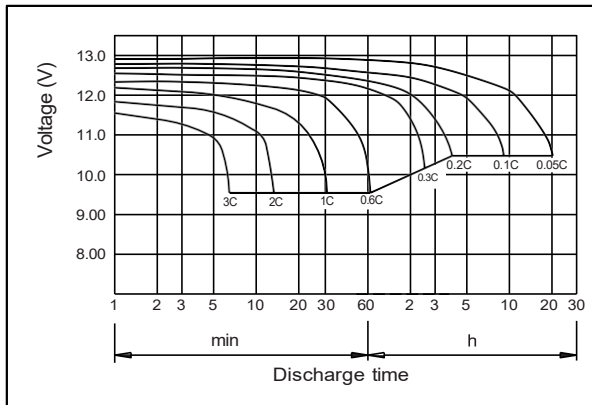
### Characteristics

|                                           |             |                                                       |
|-------------------------------------------|-------------|-------------------------------------------------------|
| Capacity (25°C)                           | 10HR(10.8V) | 250Ah                                                 |
|                                           | 3HR(10.8V)  | 187.5Ah                                               |
|                                           | 1HR(10.5V)  | 137.5Ah                                               |
| Terminal type                             |             | T18                                                   |
| Internal resistance (Fully charged, 25°C) |             | Approx. 3m Ω                                          |
| Capacity affected by temperature (10HR)   | 40°C        | 102%                                                  |
|                                           | 25°C        | 100%                                                  |
|                                           | 0°C         | 85%                                                   |
|                                           | -15°C       | 65%                                                   |
| Self-discharge (25°C)                     | 3month      | Remaining Capacity: 91%                               |
|                                           | 6month      | Remaining Capacity: 82%                               |
|                                           | 12month     | Remaining Capacity: 65%                               |
| Nominal operating temperature             |             | 25°C                                                  |
| Operating temperature range               | Discharge   | -15°C~50°C                                            |
|                                           | Charge      | -10°C~50°C                                            |
|                                           | Storage     | -20°C~50°C                                            |
| Float charging voltage(25°C)              |             | 13.50 to 13.80V<br>Temperature compensation: -18mV/°C |
| Cyclic charging voltage(25°C)             |             | 14.50 to 15.00V<br>Temperature compensation: -30mV/°C |
| Maximum charging current                  |             | 75A                                                   |
| Terminal material                         |             | Copper                                                |
| Maximum discharge current                 |             | 1500A(5 sec.)                                         |
| Designed floating life(20°C)              |             | 10years                                               |

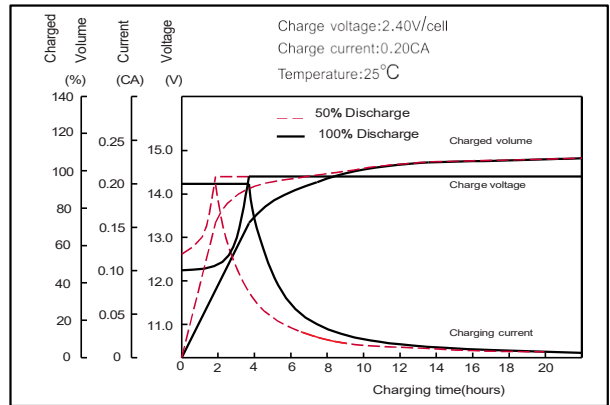
# VPD12-250 12V250Ah

VMP

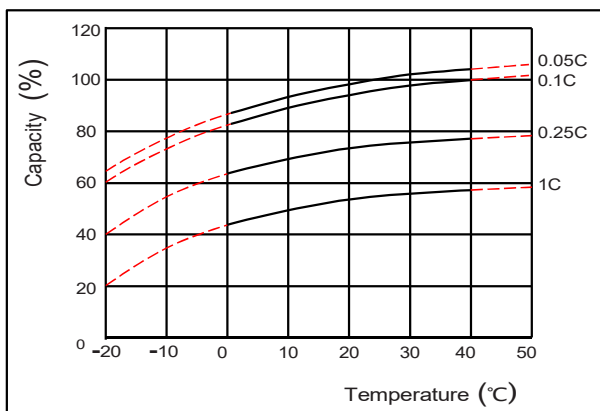
## Discharge characteristics(25°C)



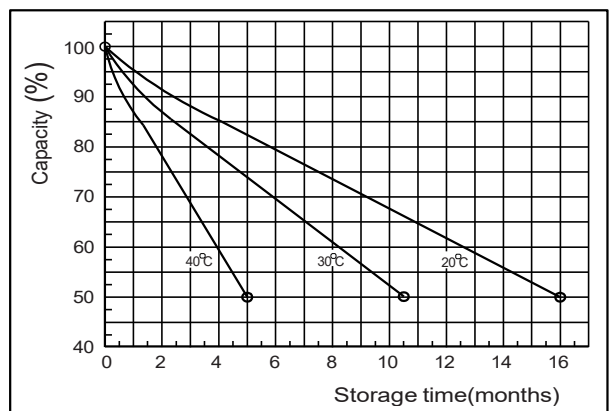
## Charging characteristics (25°C)



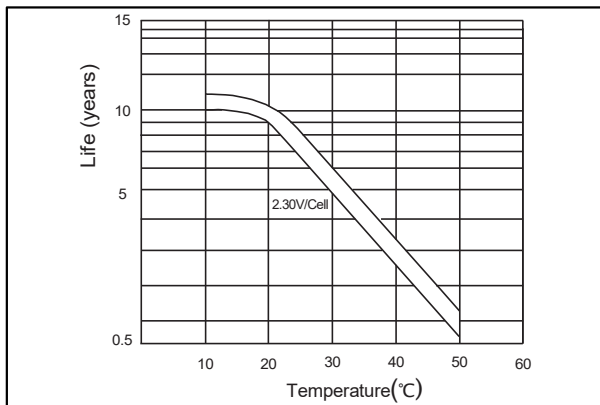
## Temperature effects on Capacity



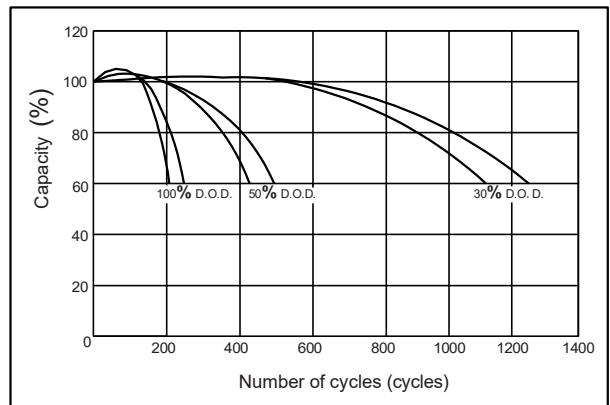
## Self-discharge characteristics



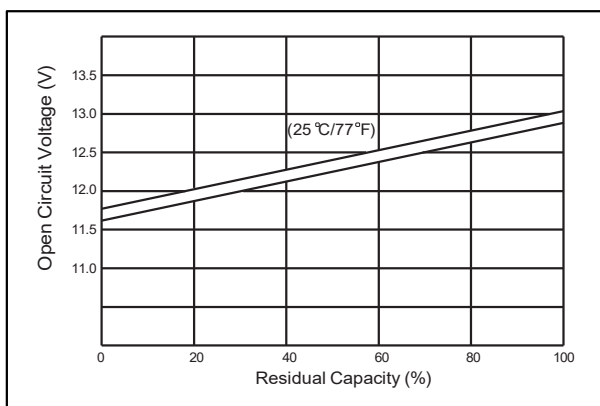
## Floating life on Temperature



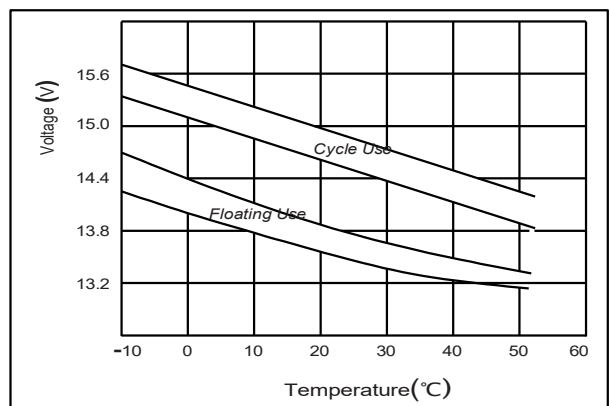
## Cycle life on D.O.D (25°C)



## The relationship for OCV and Capacity (25°C)



## The relationship for Charging voltage and Temperature



MH47211