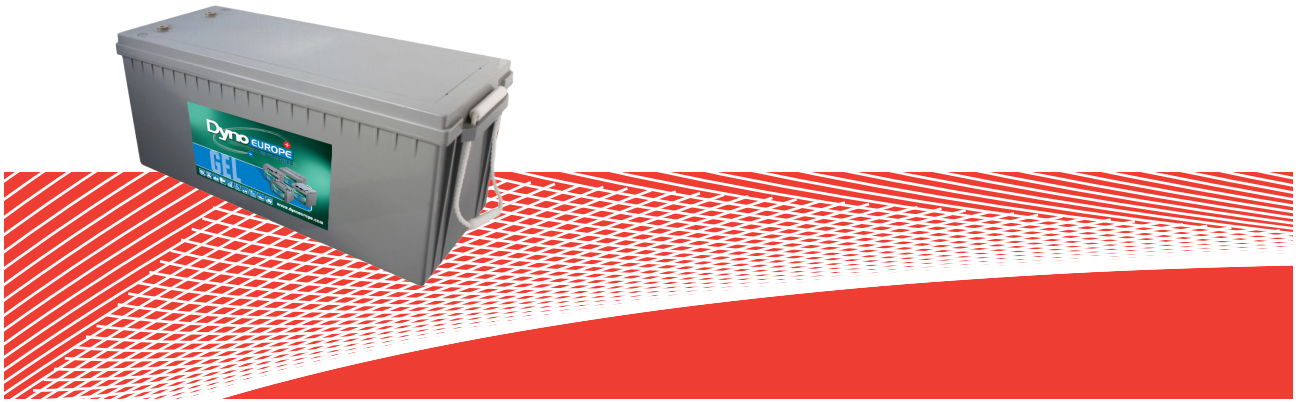


# TECHNICAL DATA SHEET

## DGY12-160EV

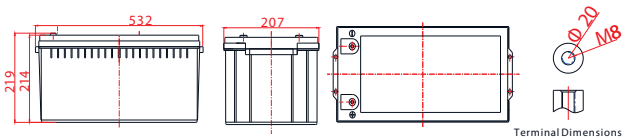


### General Features

- > Nanosilica colloidal electrolyte and high tin positive plate alloy design to enhance battery performance
- > Relatively rich electrolyte, high temperature and low temperature performance is superior
- > Long cycle life, excellent deep cycle discharge ability
- > Excellent charge acceptance ability
- > Precision sealing technology
- > Long life



Dimension: 532(L)×207(W) ×214(H)×219(TH) Unit: mm



### Applications

- > Electric vehicle
- > Electric wheelchair
- > Electric scooter
- > Electric play car for children
- > Garbage truck
- > Patrol car

### Specification

|                             |  |
|-----------------------------|--|
| Nominal Voltage             | 12V  |
| Nominal Capacity            | 180Ah  |
| Design life                 | 5 years  |
| Terminal                    | M8   |
| Approx. Weight              | Approx 53.0kg (117lbs)                         |
| Container Material          | ABS  |
| Rated Capacity              | 180Ah → 20Hour Rate (9.00A to 10.5V)           |
|                             | 173Ah → 10Hour Rate (17.3A to 10.5V)           |
|                             | 155Ah → 5Hour Rate (31.0A to 10.5V)            |
| Internal resistance         | Full charged at 25°C: 4.2 mΩ                   |
| Max. Discharge Current      | 1800A(5S)                                      |
| Operating Temperature       | Discharge: -40 ~60°C (-40~ 140°F)              |
|                             | Charge: -20 ~50°C (-4~ 122°F)                  |
|                             | Storage: -20 ~50°C (-4~ 122°F)                 |
| Charge current:             | 36.0A  |
| Charge Method Float Charge: | 13.5-13.8V, recom. 13.8V(-18mV/ °C)<br>(25 °C) |
| Cycle charge:               | 14.28-14.4V, recom. 14.4V(-30mV/ °C)           |
| Self discharge              | 3% of capacity declined per month at 25°C      |

# TECHNICAL DATA SHEET

## DGY12-160EV

### Constant Current Discharge Characteristics Unit: A (25°C, 77°F)

| F.V/Time | 10MIN | 15MIN | 30MIN | 1HR  | 2HR  | 3HR  | 4HR  | 5HR  | 8HR  | 10HR | 20HR |
|----------|-------|-------|-------|------|------|------|------|------|------|------|------|
| 1.60V    | 393   | 316   | 194   | 109  | 65.1 | 50.7 | 39.8 | 33.8 | 21.7 | 18.0 | 9.33 |
| 1.65V    | 362   | 295   | 184   | 106  | 62.9 | 49.2 | 38.6 | 32.8 | 21.5 | 17.8 | 9.28 |
| 1.70V    | 336   | 278   | 174   | 102  | 61.3 | 47.1 | 37.4 | 31.9 | 21.2 | 17.5 | 9.16 |
| 1.75V    | 308   | 260   | 167   | 99.0 | 58.9 | 45.9 | 36.4 | 31.0 | 20.9 | 17.3 | 9.00 |
| 1.80V    | 280   | 238   | 161   | 94.6 | 56.9 | 45.0 | 35.5 | 30.6 | 20.5 | 17.1 | 8.91 |
| 1.85V    | 219   | 197   | 137   | 84.5 | 52.0 | 41.9 | 33.3 | 28.2 | 19.3 | 16.1 | 8.83 |

### Constant Power Discharge Characteristics Unit: W/cell (25°C, 77°F)

| F.V/Time | 10MIN | 15MIN | 30MIN | 1HR | 2HR | 3HR  | 4HR  | 5HR  | 8HR  | 10HR | 20HR |
|----------|-------|-------|-------|-----|-----|------|------|------|------|------|------|
| 1.60V    | 670   | 551   | 353   | 205 | 123 | 96.3 | 76.7 | 64.1 | 42.3 | 35.3 | 18.6 |
| 1.65V    | 645   | 535   | 344   | 202 | 120 | 93.9 | 74.8 | 62.3 | 42.0 | 35.0 | 18.5 |
| 1.70V    | 602   | 507   | 328   | 196 | 117 | 90.3 | 72.4 | 60.8 | 41.5 | 34.3 | 18.3 |
| 1.75V    | 560   | 478   | 316   | 190 | 113 | 88.1 | 70.7 | 59.4 | 40.8 | 33.9 | 18.0 |
| 1.80V    | 516   | 442   | 306   | 183 | 110 | 87.6 | 69.4 | 58.6 | 40.1 | 33.6 | 17.8 |
| 1.85V    | 409   | 371   | 263   | 164 | 101 | 81.7 | 65.3 | 54.2 | 37.9 | 31.7 | 17.6 |

Disclaimer: Manufacturers have the right to self-modify the parameters of the product updates, please keep in touch with manufacturers to obtain the latest information

### Charger recommendations

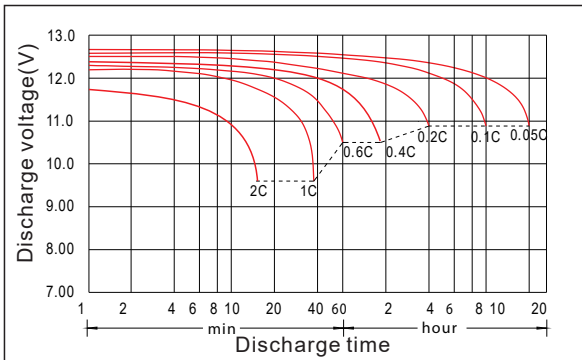
| Type of charger  | Zivan           | AQHF WP    | AQHF24-30FC G2 |
|------------------|-----------------|------------|----------------|
| Matching profile | AGM<br>=BA1+CU2 | AMG<br>SLA | AGM            |

**Max. charging current 2.4Vpc**

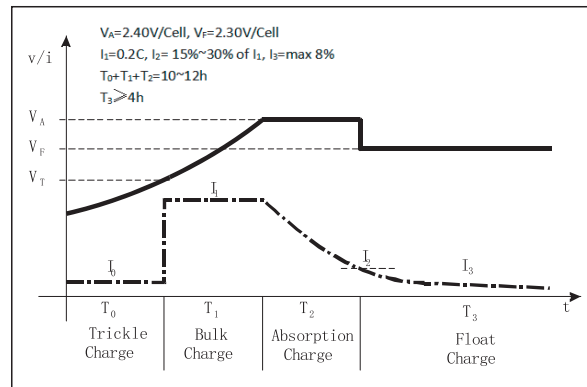
# TECHNICAL DATA SHEET

**DGY12-160EV**

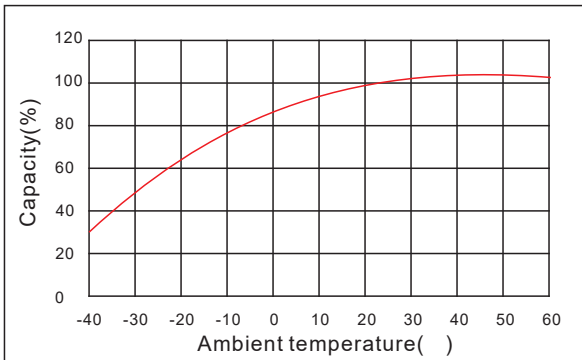
## Discharge characteristic



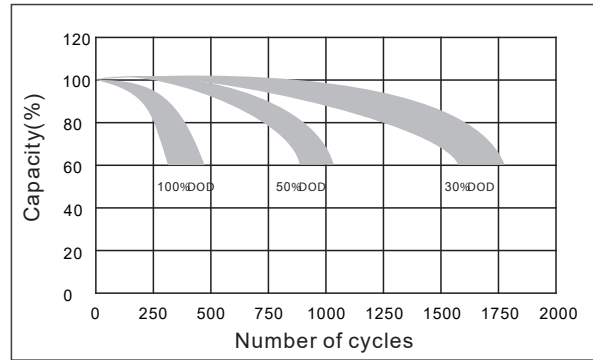
## Charging characteristic



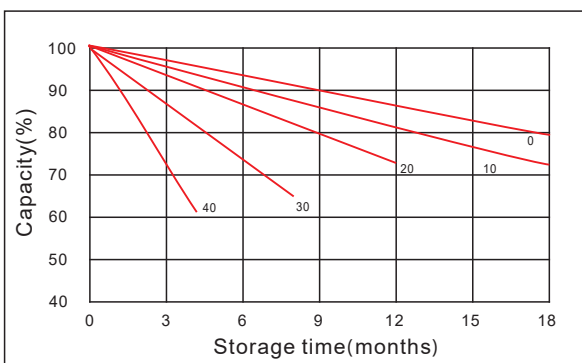
## The effect of temperature on capacity



## The effect of discharge depth on cycle life



## Curves of self-discharge



## Curves of open circuit voltage vs. capacity

