

#### MHB MNG Series-- Storage-type Gelled Battery

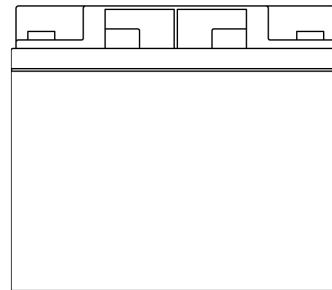
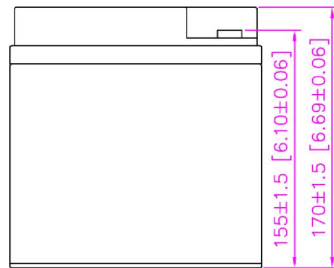
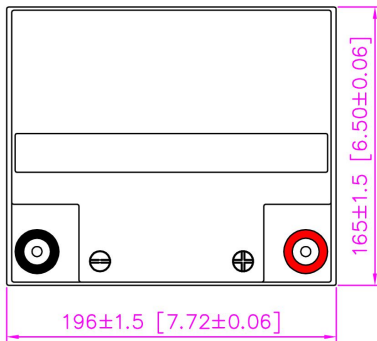
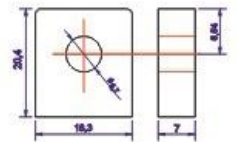
- completely sealed and maintenance-free, low self-discharge
- 100% precise quality testing, stable quality and high reliable performance
- Unique grid alloy formula, Gelled electrolyte formula and updated manufacturing technique
- Floating & standby use: up to 12 years
- Cycle use 1: More than 350 cycles at 100% DOD
- Cycle use 2: More than 1800cycles at 30% DOD

#### Application:

- Telecommunications
- UPS/EPS
- DC PowerSupply
- Solar system
- Wind Power System
- Auto Control Sytem

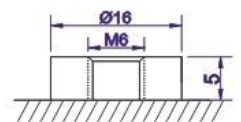
#### Construction:

- Component .....Raw material
- Positive .....Lead dioxide
- Negative .....Lead
- Container .....ABS
- Cover .....ABS
- Sealant .....Epoxy
- Safety valve .... Rubber
- Terminal .....Copper/Pb
- Separator .....Fiber glass
- Electrolyte ..... Gelled acid



M6 Bolt & Nut

T11 Terminal



M6 Bolt

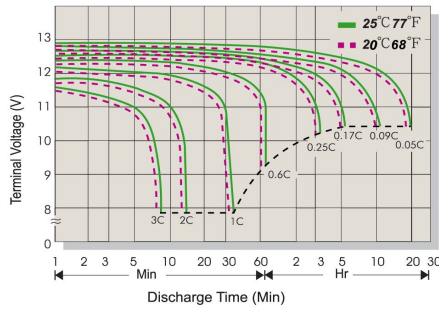
B4 Terminal

#### Speification:

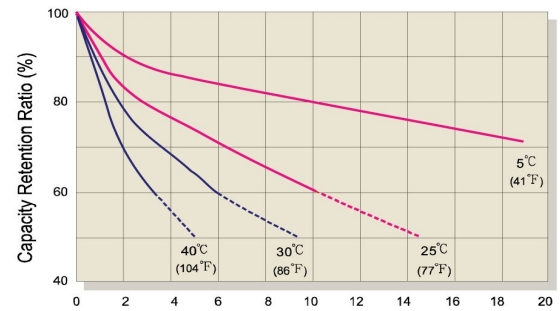
Battery Model	MNG 45-12 12V45AH			
Designed Floating Life	Up to 10 Years			
Capacity (25°C)	20HR(2.410A,10.8V)	10HR(4.500A,10.8V)	5HR(8.080A,10.5V)	1HR(24.990A,10.5V)
	48.20 AH	45.00 AH	40.40 AH	24.99 AH
Dimensions	Length	Width	Height	Total Height
	196 mm	165 mm	170 mm	170 mm
Approx. Weight	14.20 KG±3%			
Internal Resistance	Full charged at 25°C: ≤10.20 mΩ			
Self Discharge	2% of capacity declined per month at (25°C)			
Capacity Affected by Temp.(20HR)	40°C	25°C	0°C	-15°C
	102%	100%	85%	65%
Charge Voltage(25oC)	Cycle use		Float use	
	14.4-15.0V(-30mV/°C), max. Current: 12.00A		13.5-13.8V (-20mV/°C)	

## FUJIAN MINHUA POWER SOURCE CO., LTD.

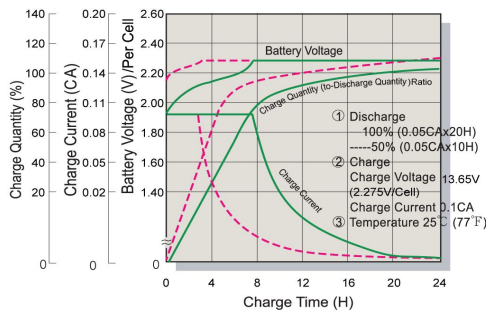
### Terminal Voltage (V) and Discharge Time



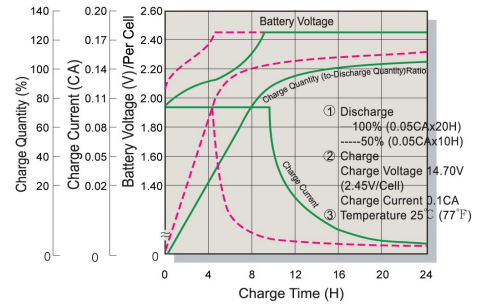
### Capacity Retention Characteristic



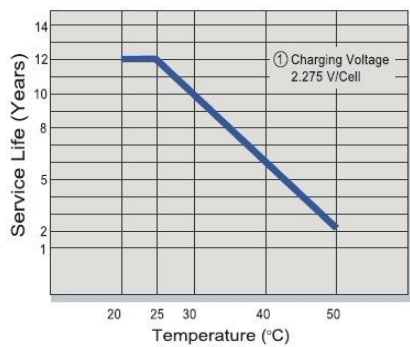
### Battery Voltage and Charge Time for Standby Use



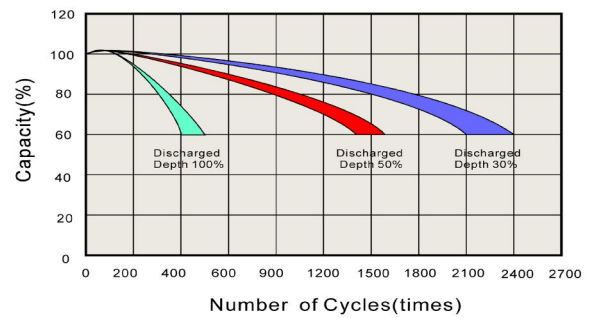
### Battery Voltage and Charge Time for Cycle Use



### Tickle(or Float) Service Life



### Cycle Service Life



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

F.V/Time	5Min	10Min	15Min	30Min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	10Hr	20Hr
1.80V/Cell	142.8	97.1	66.5	40.45	24.78	15.47	12.03	9.46	8.02	5.36	4.50	2.41
1.75V/Cell	144.0	98.0	67.1	40.79	24.99	15.60	12.13	9.54	8.08	5.40	4.57	2.45
1.70V/Cell	147.6	100.4	68.8	41.81	25.62	15.99	12.43	9.78	8.29	5.54	4.64	2.49
1.67V/Cell	151.2	102.9	70.4	42.83	26.24	16.38	12.73	10.01	8.49	5.67	4.70	2.52
1.60V/Cell	157.9	107.4	73.6	44.74	27.41	17.11	13.30	10.46	8.87	5.92	4.77	2.56

### Constant Power Discharge (CP,Unit:W) at 25°C(77°F)

F.V/Time	5Min	10Min	15Min	30Min	1Hr	2Hr	3Hr	4Hr	5Hr	6Hr	10Hr	20Hr
1.80V/Cell	278.5	189.4	129.7	78.9	48.3	30.16	23.45	18.44	15.63	10.44	8.78	4.71
1.75V/Cell	280.8	191.0	130.8	79.5	48.7	30.42	23.65	18.60	15.77	10.53	8.91	4.78
1.70V/Cell	287.8	195.8	134.1	81.5	50.0	31.18	24.24	19.06	16.16	10.80	9.04	4.85
1.67V/Cell	294.9	200.6	137.3	83.5	51.2	31.94	24.83	19.53	16.55	11.06	9.17	4.92
1.60V/Cell	308.0	209.5	143.5	87.2	53.5	33.36	25.94	20.40	17.29	11.55	9.30	4.99