

# OPzV Series

## GFMJ-600H 2V600Ah (NG2-600)

OPzV series are valve regulated lead-acid cells which use a combination of tubular positive plate woven gauntlets, pasted negative plate design and gel electrolyte using advanced filling techniques in production which assure superior service life and excellent battery reliability. The battery has excellent cyclic performance and charge acceptance ability. It can be used in high-low temperature environment and poor grid condition.



### Benefits

- Very long life according to EUROBAT Classification
- 1500+ cycles at 80% DOD
- High rate discharge performance
- High gas recombination efficiency
- Maximum charge efficiency
- GEL state electrolyte prevents leakage and layering
- Low resistance PVC-SiO<sub>2</sub> micro-porous separator ensures low self-discharge rate
- Optional racking offers easy installation (vertical or horizontal)

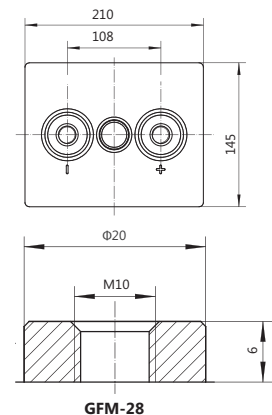
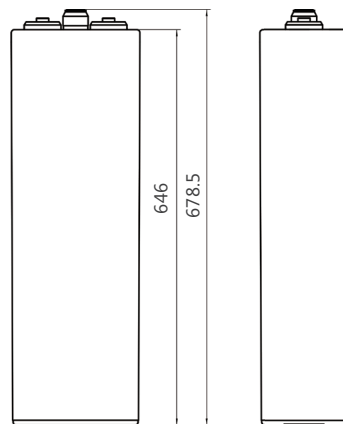
### Applications

- Telecommunications
- Energy storage system
- Hybrid power system
- Power system
- UPS

### Standards

- IEC 60896-21/22
- IEC 61427
- DIN 43539-T5
- DIN 40742
- EUROBAT guide

### Drawing



### Specifications

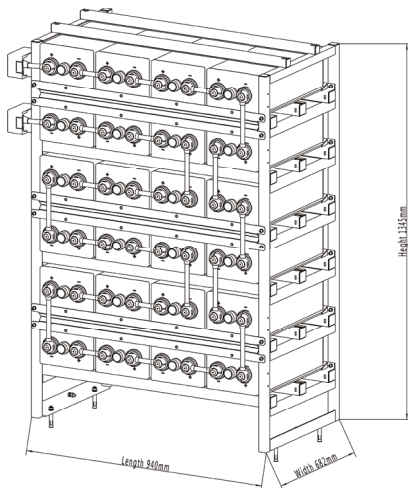
Battery Model	GFMJ-600H			
Design Life (years, 25°C)	20			
Capacity (Ah, 25°C)	10HR (60A, 1.80V)	5HR (102A, 1.80V)	3HR (150A, 1.80V)	1HR (300A, 1.80V)
	600	510	450	300
Dimensions (mm)	Length	Width	Height	Total Height
	145	206	646	678.5
Approx. Weight (kg)	46.5			
Reference Internal Resistance (mΩ)	0.54 (fully charged @ 25°C)			
Maximum Discharge Current (A/3 Sec.)	3496			
Self-Discharge (25°C)	≤ 3% per month			
Charge Voltage (V/cell, 25°C)	Cycle use		Float use	
	2.33 (-3.5mV/°C/cell), max charge current: 120A		2.25 (-3.5mV/°C/cell)	
Short Circuit Current (A)	4606			

## Discharge Data

Constant Current Discharge Data (25°C, A)																		
End Voltage (V/cell)	min					h												
	5	10	15	20	30	1	2	3	5	6	8	10	20	24	48	100	120	240
1.65	803	723	668	613	504	346	226.0	176.6	121.6	103.0	79.6	67.8	35.5	30.50	16.10	7.78	6.54	3.39
1.70	769	670	623	578	483	330	214.0	167.2	115.0	97.2	76.4	65.4	34.7	29.90	15.98	7.70	6.51	3.38
1.75	710	632	583	538	468	316	202.0	158.4	109.0	93.6	73.4	63.0	33.0	28.80	15.78	7.64	6.48	3.36
1.80	665	597	547	499	426	300	190.8	150.0	102.0	87.2	70.6	60.0	32.2	27.67	15.60	7.57	6.45	3.34
1.85	617	541	500	453	400	286	181	142.0	97.8	84.2	66.8	56.8	31.3	26.8	15.38	7.42	6.42	3.33

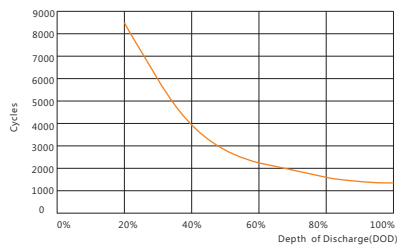
Constant Power Discharge Data (25°C, W/cell)																		
End Voltage (V/cell)	min					h												
	5	10	15	20	30	1	2	3	5	6	8	10	20	24	48	100	120	240
1.65	1345	1228	1116	1012	852	592.6	394.5	295.5	241.4	204.3	164.3	132.4	70.4	61.20	32.50	15.70	13.10	6.80
1.70	1292	1179	1063	970	816	574.2	379.5	285.0	232.9	197.1	158.6	130.9	69.0	59.60	32.00	15.40	13.02	6.77
1.75	1230	1132	1025	934	792	564.0	370.5	279.0	227.1	191.4	154.3	126.0	68.0	57.57	31.60	15.27	12.97	6.71
1.80	1165	1065	963	881	760	549.0	362.0	274.5	211.4	178.6	148.6	123.0	66.7	55.50	31.20	15.14	12.90	6.67
1.85	1096	949	864	784	684	528.9	346.5	262.5	192.9	170.0	137.9	116.1	64.6	53.83	30.70	15.00	12.86	6.63

## Rack Layout

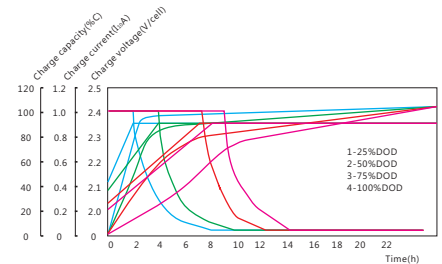


48V Standard Rack (Anti-seismic rack is optional)  
 Rack material: powder-coated steel  
 Height\*width: 6\*4/4\*6 (optional)  
 Ref. GFMJ-600H Rack (approx. weight: 1220kg)

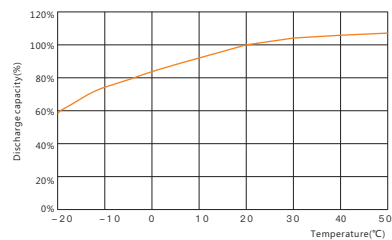
## Performance Curve



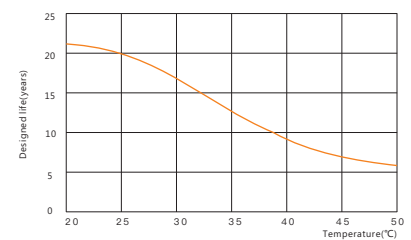
Cycle life vs. discharge depth



Charge vs. discharge depth



Capacity vs. temperature



Design life vs. temperature