

OPzV Series

GFMJ-490H 2V490Ah (NG2-490)

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-SiO₂ micro-porous separator ensures low self-discharge rate
- Optional racking offers easy installation (vertical or horizontal)

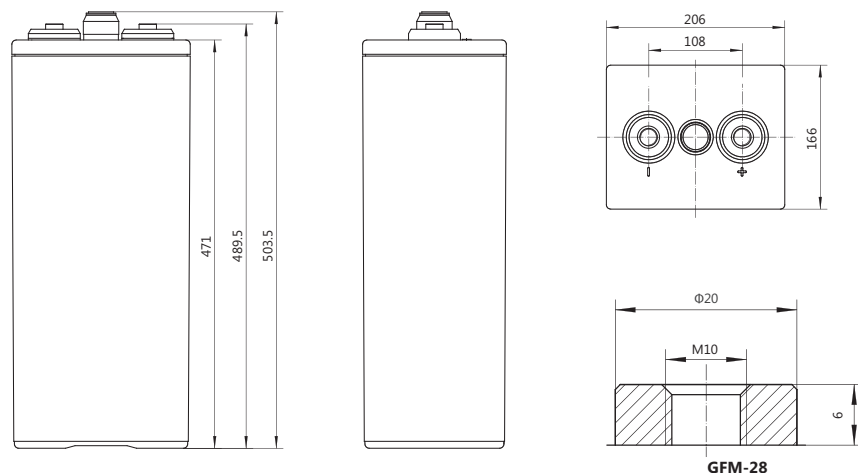
Applications

- 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

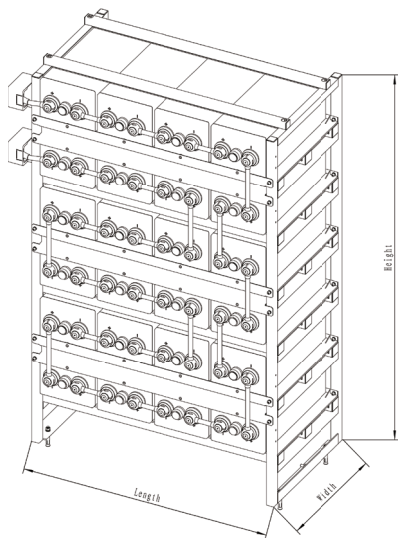
Battery Model	GFMJ-490H			
Design Life (years, 25°C)	20			
Capacity (Ah, 25°C)	10HR (49A, 1.80V)	5HR (83.3A, 1.80V)	3HR (122.5A, 1.80V)	1HR (245A, 1.80V)
	490	416.5	367.5	245
Dimensions (mm)	Length	Width	Height	Total Height
	166	206	471	503.5
Approx. Weight (kg)	38.0			
Reference Internal Resistance (mΩ)	0.5 (fully charged @ 25°C)			
Maximum Discharge Current (A/3 Sec.)	2852			
Self-Discharge (25°C)	≤ 3% per month			
Charge Voltage (V/cell, 25°C)	Cycle use		Float use	
	2.35 (-3.5mV/°C/cell), max charge current: 98A		2.25 (-3.5mV/°C/cell)	
Short Circuit Current (A)	4268			

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	682	634	578	503	406	283	186.5	144.2	99.3	84.1	63.7	51.4	28.0	24.08	13.23	6.85	5.74	2.94
1.70	630	592	537	477	391	270	181.3	136.5	93.9	79.4	62.4	50.7	27.6	23.44	13.05	6.79	5.70	2.88
1.75	592	566	519	451	365	258	177.8	129.4	89.0	76.4	59.9	49.8	27.2	22.99	12.89	6.72	5.64	2.84
1.80	557	540	498	433	349	245	169.4	122.5	83.3	71.2	57.7	49.0	26.5	22.60	12.74	6.65	5.59	2.81
1.85	533	504	470	410	322	234	160	116.0	79.9	68.8	54.6	47.7	25.6	21.9	12.56	6.54	5.50	2.77

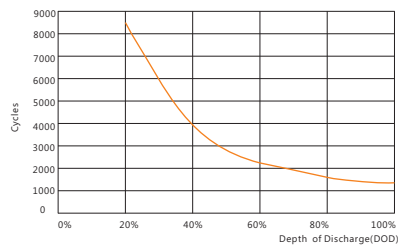
Constant Power Discharge Data (25°C, W/cell)																		
End Voltage (V/cell)	min					h												
	5	10	15	20	30	1	2	3	5	6	8	10	20	24	48	100	120	240
1.65	1156	1056	959	863	721	488.8	322.2	241.3	197.2	166.8	134.2	108.2	57.5	48.30	26.60	13.79	11.55	5.95
1.70	1111	1014	914	825	692	473.7	309.9	232.8	190.2	161.0	129.5	106.9	56.4	47.04	26.04	13.65	11.42	5.81
1.75	1038	973	873	792	667	462.0	302.6	227.9	185.5	156.3	126.0	102.9	55.5	46.20	25.83	13.51	11.30	5.71
1.80	972	887	786	755	629	452.7	294.0	224.2	172.7	145.8	121.3	100.5	54.5	45.08	25.48	13.30	11.20	5.63
1.85	895	775	706	641	559	436.3	283.0	214.4	157.5	138.8	112.6	94.9	52.7	43.96	25.13	13.09	11.09	5.56

Rack Layout

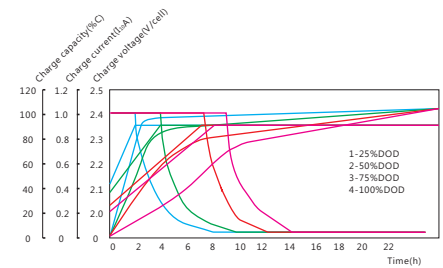


48V Standard Rack (Anti-seismic rack is optional)
 Rack material: powder-coated steel
 Height*width: 6*4/4*6 (optional)
 Ref. GFMJ-490H Rack (approx. weight: 980kg)

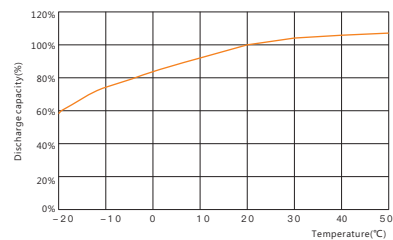
Performance Curve



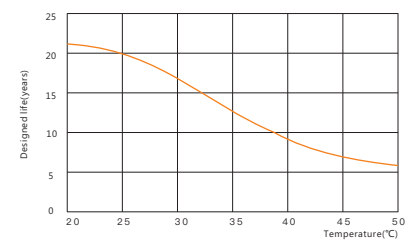
Cycle life vs. discharge depth



Charge vs. discharge depth



Capacity vs. temperature



Design life vs. temperature