

# OPzV Series

## 7 OPzV 490 2V490Ah

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

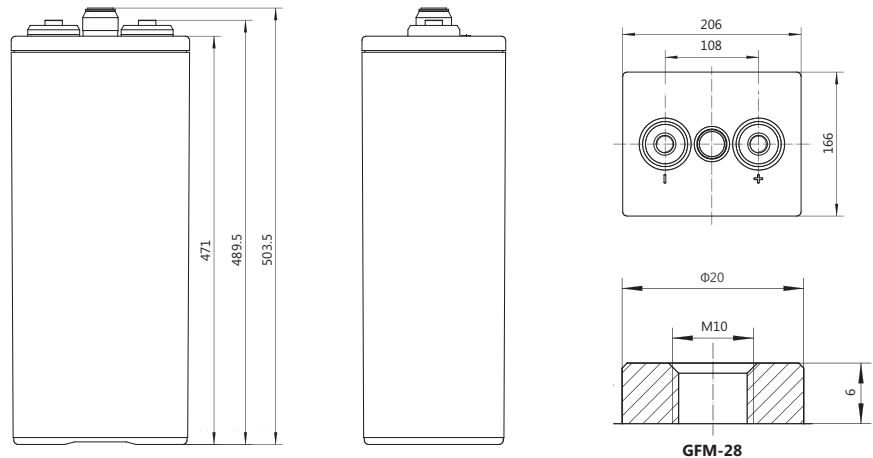
### Applications

- 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

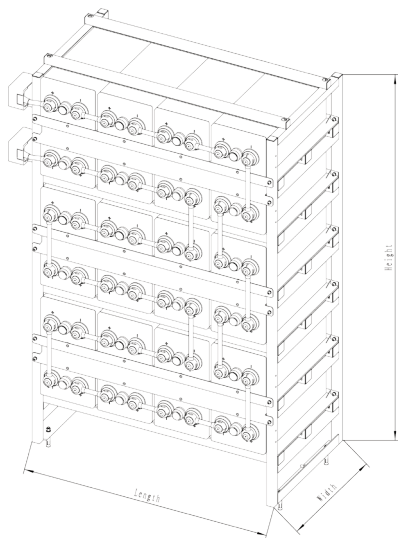
Battery Model	7 OPzV 490			
Design Life (years, 25°C)	20			
Capacity (Ah, 25°C)	10HR (49A, 1.80V)	5HR (83.3A, 1.80V)	3HR (122.5A, 1.80V)	1HR (245A, 1.80V)
	490	416.5	367.5	245
Dimensions (mm)	Length	Width	Height	Total Height
	166	206	471	503.5
Approx. Weight (kg)	37.3			
Reference Internal Resistance (mΩ)	0.41 (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)	h												
	1	2	3	5	6	8	10	20	24	48	100	120	240
1.65	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	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	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	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	234	160	116.0	79.9	68.8	54.6	47.7	25.6	21.9	12.56	6.54	5.50	2.77

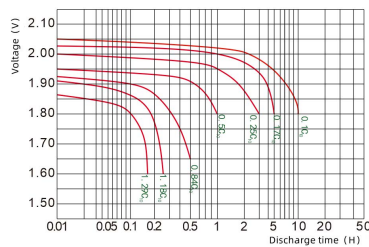
Constant Power Discharge Data (25°C, W/cell)													
End Voltage (V/cell)	h												
	1	2	3	5	6	8	10	20	24	48	100	120	240
1.65	488.8	322.2	241.3	197.2	166.8	134.2	108.2	57.5	48.30	26.60	13.79	11.55	5.95
1.70	473.7	309.9	232.8	190.2	161.0	129.5	106.9	56.4	47.04	26.04	13.65	11.42	5.81
1.75	462.0	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	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	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

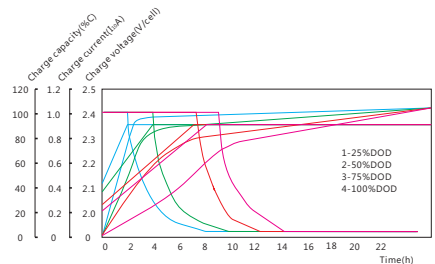


48V Standard Rack (Anti-seismic rack is optional)  
 Rack material: powder-coated steel  
 Height\*width: 6\*4/4\*6 (optional)  
 Ref. 7 OPzV 490 Rack (approx. weight: 980kg)

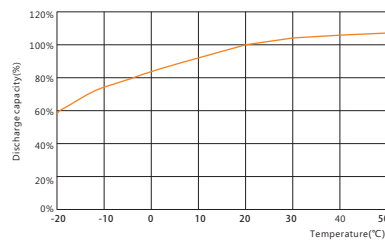
## Performance Curve



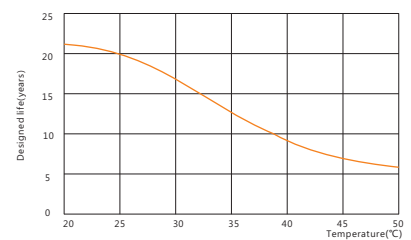
Discharge voltage vs. discharge time



Charge vs. discharge depth



Capacity vs. temperature



Design life vs. temperature

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