

OPzV

VALVE REGULATED
LEAD-ACID
BATTERIES



INDEX

INDUSTRIAL
SOLUTION
POWER

Enabling **Reliability**



The **OPzV** batteries are suitable for applications with deep discharge over long period, partial state of charge and where maintenance free operation is required.



ADVANTAGES OF OPzV TECHNOLOGY



NO STRATIFICATION DUE TO IMMOBILIZED ELECTROLYTE

Stratification is a major concern in flooded batteries as well as in Non Hybrid AGMs leading to reduced capacity, active material shedding and grid corrosion. Where in flooded cells the stratification can be overcome by end of charge gas evolution which is not possible in conventional VRLA. In OPzV Technology the electrolyte is totally immobilized and there is zero gradient of specific gravity along any axis of the battery leading to superior performance.



LONG SHELF LIFE

Calcium Tin Alloy impedes the self discharge and gives it long shelf life.



EXCELLENT HEAT DISSIPATION CHARACTERISTICS

OPzV Batteries have more electrolyte and less void volume in separator/electrolyte leading to less heat evolution by oxygen recombination compared to AGM batteries. Heat Dissipation in OPzV batteries is quite on the same level as in vented batteries due to surplus electrolyte and also because the OPzV remains in direct contact with the container walls. By this excellent heat dissipation is guaranteed.



PROTECTION AGAINST DEEP DISCHARGE FAILURES AND SOFT SHORTS

As a battery is discharged its specific gravity comes down and as lower acid density favors solubility of lead and lead sulfate so as the battery is deep discharged lead sulfate dissolves in the electrolyte and on subsequent recharge the lead ions reconvert to pure lead and form a dendritic growth on the plates causing soft shorts. OPzV batteries has surplus electrolyte and the acid density does not decrease too low during a deep discharge. Therefore there is less tendency of generating short circuits in OPzV batteries.



OPzV FEATURES



TUBULAR POSITIVE PLATES



ELECTROLYTE IN GEL FORM



FILLED AND CHARGED



VALVE REGULATED



ANTIMONY FREE ALLOY



**HIGH PRESSURE
DIE-CAST SPIN GRID**



**EXCELLENT
THERMAL MANAGEMENT**



READY TO INSTALL



VERSATILE IN MOUNTING



CONTAINER AND LID IN ABS;
OPTIONAL FLAME RETARDANT ABS AVAILABLE
(UL94 V-0) ON REQUEST.



OPzV BENEFITS



**PROVEN CYCLING
& DEEP CYCLING CAPABILITIES**



**NO STRATIFICATION
& NO FAILURE
DUE TO PSOC**



**READY TO USE,
EASIER TO INSTALL**



**NO WATER TOP UP
DURING SERVICE LIFE**



**LONG SHELF LIFE
DUE TO LOW SELF-DISCHARGE**



**RATE OF GRID CORROSION
IS VERY LOW**



ENHANCEMENT IN LIFE



**100% CAPACITY
ON FIRST DISCHARGE**



**CAN BE MOUNTED
BOTH IN HORIZONTAL
& VERTICAL ORIENTATION**



TECHNICAL PARAMETERS



PERFORMANCE

PARAMETERS	2 VOLT SINGLE CELL
Design Float Life at 25°C	20 years
Cycle Life at 25°C @ 80% DOD	1800
Cycle Life at 25°C @ 20% DOD	8800
Self Discharge	< 5% per month(25°C)
AH Efficiency	>95%
WH Efficiency	>85%
Operating Temperature	-20°C



CHARGING SPECIFICATION



BULK CHARGE

Bulk charging is performed at a raised voltage of 2.40 volts per cell. The charging time will be 6 to 20 hours depending on the state of charge condition during installations. The current is required to be limited to 20% of the battery Ah capacity (0.2 C10). The Bulk Charge Mode needs to shift to Absorption Mode when the cells reach 2.4 Volts.



ABSORPTION CHARGE

On completion of the Bulk Charge, the cells to be put in constant potential @ 2.4 Volts per Cell till current drops to 0.05C or Max of 4 hours.



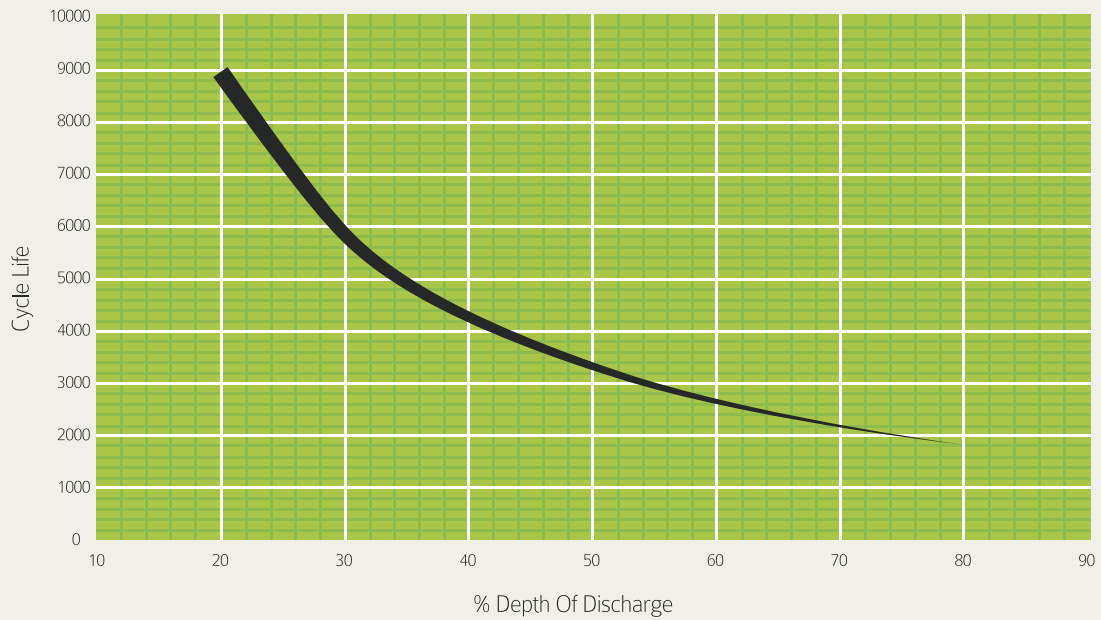
FLOAT CHARGE

The cells are then to be put on Float at 2.28 Volts per cell.

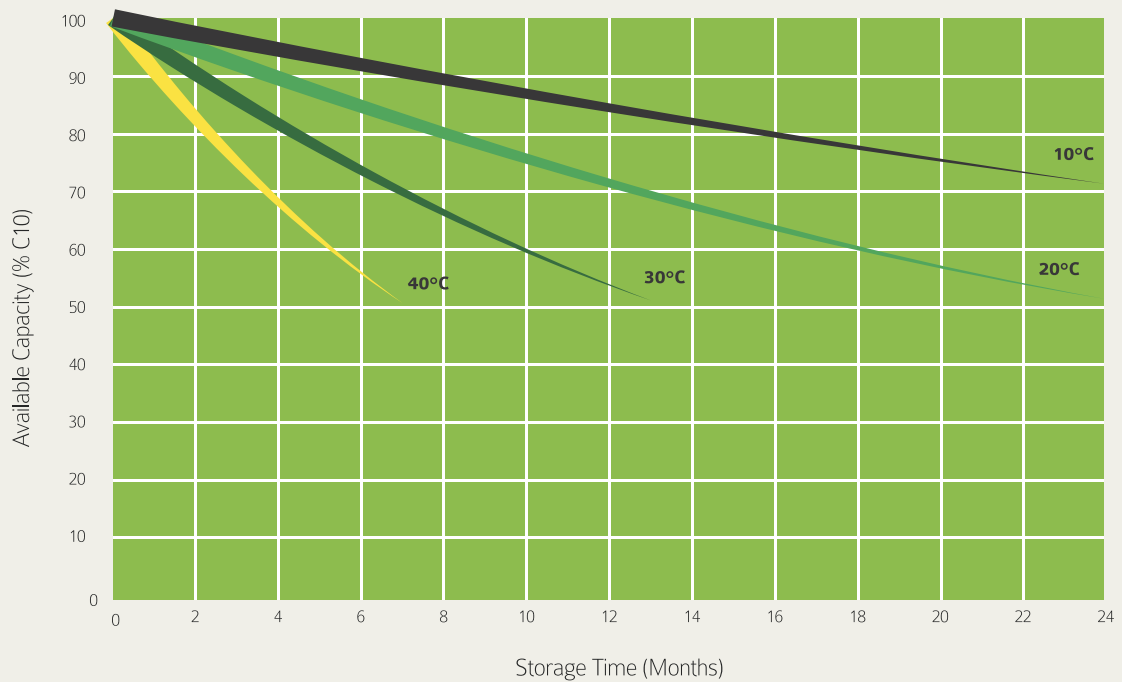


BATTERY CHARACTERISTIC

● CYCLE LIFE VERSUS DOD



● STORAGE TIME VERSUS CAPACITY @ Different Temperature / SHELF LIFE





OPzV CATALOGUE

Type	Nominal Voltage (V)	Nominal Capacity C ₁₀ 1.8V/C 20° (Ah)	Discharge Current I ₁₀ (A)	Length (l) ± 3mm mm	Width (b) ± 3mm mm	Height (h) ± 5mm mm	Weight ± 5%kg Kg
4 OPzV 200	2	200	20	103	206	378	18.0
5 OPzV 250	2	250	25	124	206	378	21.5
6 OPzV 300	2	300	30	145	206	378	25.3
5 OPzV 350	2	350	35	124	206	496	28.1
6 OPzV 420	2	420	42	145	206	496	34.2
7 OPzV 490	2	490	49	166	206	496	39.0
6 OPzV 600	2	600	60	145	206	670	49.0
8 OPzV 800	2	800	80	210	191	670	63.7
10 OPzV 1000	2	1000	100	210	233	670	76.7
12 OPzV 1200	2	1200	120	210	275	670	90.0
12 OPzV 1500	2	1500	150	210	275	821	118.0
16 OPzV 2000	2	2000	200	214	399	798	160.0
20 OPzV 2500	2	2500	250	212	489	798	200.0
24 OPzV 3000	2	3000	300	212	578	798	240.0



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* Wherever we own the brand

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