

# OPzV

VALVE REGULATED  
LEAD-ACID  
BATTERIES



## DYNEX

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.



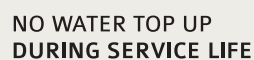
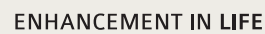
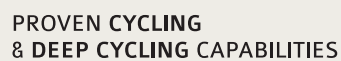
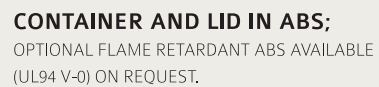
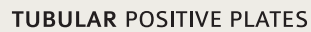
### EXCELLENT HEAT DISSIPATION CHARACTERISTICS

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.





## SPECIFICATION

- IEC/EN 60896-21 & 22 IEC 61427
- BS 6290 PART IV IEEE 1188, 1189 SPECIFICATION
- EUROBAT GUIDE 1999 - CLASSIFIED AS 'LONG LIFE'



## CAPACITY RANGE

- 250 Ah - 3000 Ah DESIGN LIFE: 18 YEARS
- CYCLE LIFE: 80% DOD - 1800 CYCLES / 50% DOD - 3400 CYCLES
- LONG LIFE PRODUCT FOR SENSITIVE & HIGH RELIABILITY APPLICATION





## OPzV APPLICATIONS



### TELECOMMUNICATIONS



WIRELESS



TRANSMISSION



SWITCHING



### SPV



RURAL  
ELECTRIFICATION



HYBRID  
POWER SYSTEMS



HOME  
LIGHTING



STREET  
LIGHTING



### RAILWAYS



RAILWAY  
SIGNALING



TELE  
COMMUNICATION



EPABX  
SYSTEM



SCADA  
SYSTEM



## 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.



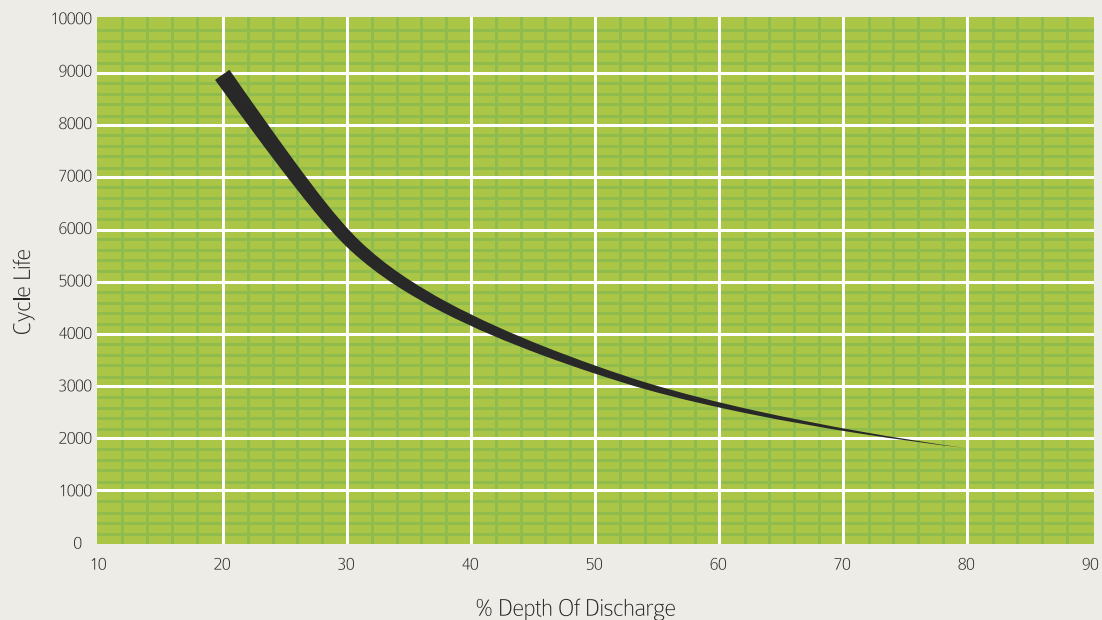
### FLOAT CHARGE

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

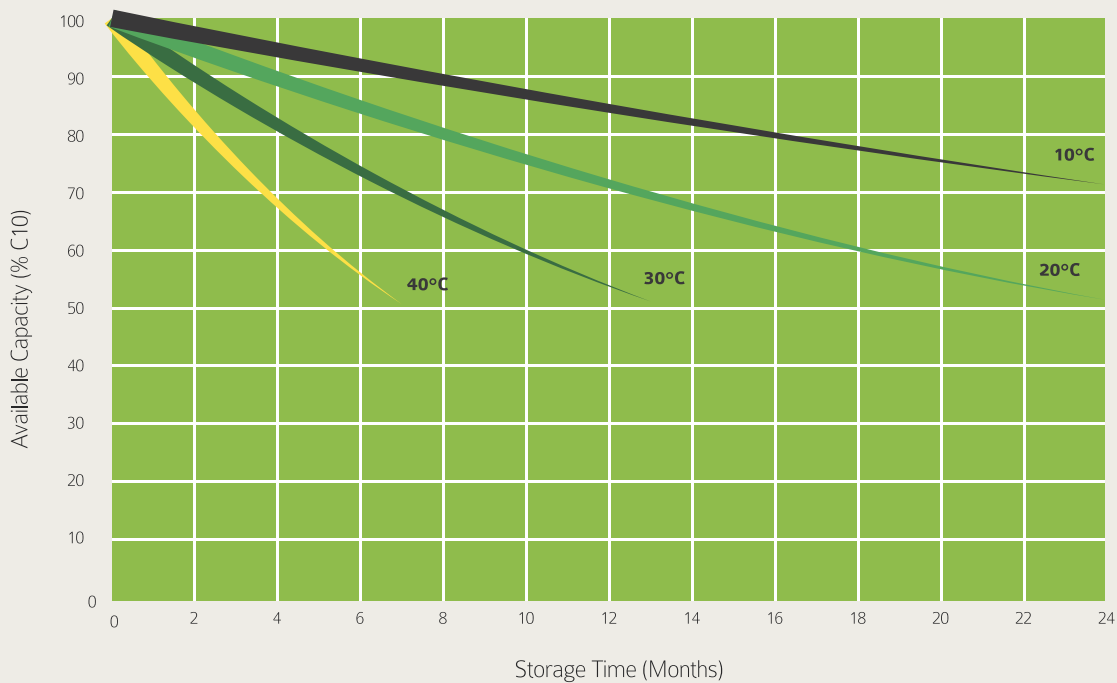


## BATTERY CHARACTERISTIC

### ● CYCLE LIFE VERSUS DOD



### ● STORAGE TIME VERSUS CAPACITY @ Different Temperature / SHELF LIFE







## OPzV CATALOGUE

Type	Nominal Voltage (V)	Nominal Capacity C <sub>10</sub> 1.8V/C 20° (Ah)	Discharge Current I <sub>10</sub> (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





QUICK  
NOTES

Handwriting practice lines consisting of 20 horizontal dashed lines.



## QUICK NOTES

Global Presence

Norway  
UK  
Canada  
Croatia  
Poland  
Greece  
Malta  
Israel  
Jordan  
Egypt  
Bahrain  
Qatar  
Peru  
Argentina  
Mali  
Nigeria  
Botswana  
South Africa  
Zambia  
Tanzania  
Mozambique  
Kenya  
Mauritius  
UAE

Sri Lanka  
Malaysia  
New Zealand  
Australia  
Singapore  
Indonesia  
Brunei  
Philippines  
Thailand  
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Vietnam  
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\* Wherever we own the brand

**DYNEX**

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