

**HBL**<sup>®</sup>  
An ISO 9001, ISO 14001 and  
OHSAS 18001 Certified Company

Since  
**1977**  
Design. Development. Manufacturing

Reliability Redefined

**OPTIMUZ**

**SEALED MAINTENANCE FREE  
VRLA BATTERIES**



## Why OPTIMUZ

Today's global businesses demand a 24X7 uptime environment making Uninterrupted Power Supplies (UPS) an integral part of the infrastructure. Batteries are the single most critical element of UPS system. HBL takes pride in positioning itself as the industry leader in manufacturing reliable, safe, high-quality Sealed Maintenance Free batteries for UPS applications.

HBL has a state of the art manufacturing facilities with high quality standards and is accredited with ISO 9001, 14001 and OHSAS 18001.



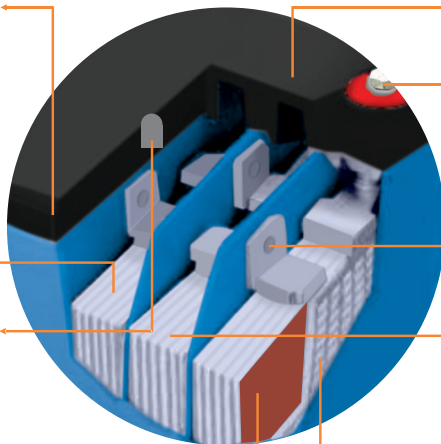
## Design and construction features

**Container and cover sealing**  
Heat sealing / Special epoxy sealing  
for better joint strength

**Separator**  
High porosity Absorbent  
Glass Mat separator (AGM)  
with low internal resistance

**Safety valve**  
Self releasing, pressure  
regulating EPDM valve

**Positive plate**  
Flat pasted plate with corrosion  
resistant cyclic lead alloy



**Container**  
High impact PP/ABS container  
for better strength

**Terminals**  
High conductivity brass terminals  
for better electrical conductivity

**Inter Cell Welding (ICW)  
or Over partition joint**  
Withstands high rate performance

**Electrolyte**  
High purity sulphuric acid along with  
additives to maximize shelf life and  
to improve heat dissipation

**Negative plate**  
Flat pasted plate with lead calcium  
alloy for maintenance free  
characteristics

## Applications

### UPS Systems

Banking, Financial Services & Insurance  
IT / ITES

### Telecom

Optical Network Terminal  
Telecom Equipment

### Power Back up

CFL/LED Lamps  
Railway Emergency Lighting  
Solar Power Equipment  
Medical Instruments  
Fire & Security Alarm Systems

## Feature Benefit Snapshot

### Cyclic grid alloy for positive plate

Higher cycle life

### Radial Grids

Low internal resistance  
Quick recharge  
High discharge performance

### AGM Separator

Greater compression  
Longer Life

### Copper alloy screw type terminals

Better electrical conductivity  
Absolute Positive contact  
Zero Wear & Tear

### Deep Discharge Capability

Withstands frequent & long power failures

### Low self discharge

Longer shelf life

### Product Conformance

JIS 8702C

**OPTIMUZ** is the first choice for  
IT, Banking, Educational institutions &  
Industries

## Charge settings at 25°C

### Dual Setting

Boost 14.0V Float 13.7V

### Single Setting 13.8V

### Cyclic 14.1V

### Current Limit (% of rated capacity)

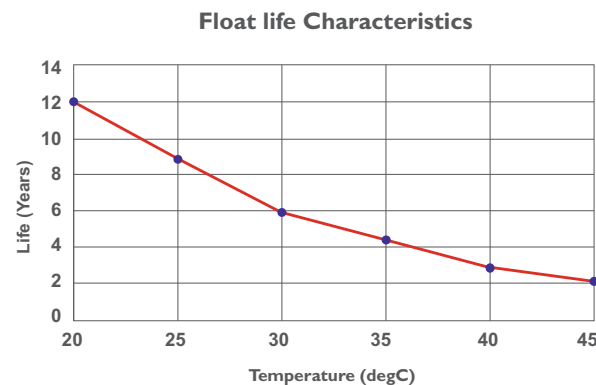
Minimum : 10%  
Maximum : 20%

### Temperature compensation for charge voltage

Compensation of 18mv to be reduced for every 1°C rise in temperature and vice versa.

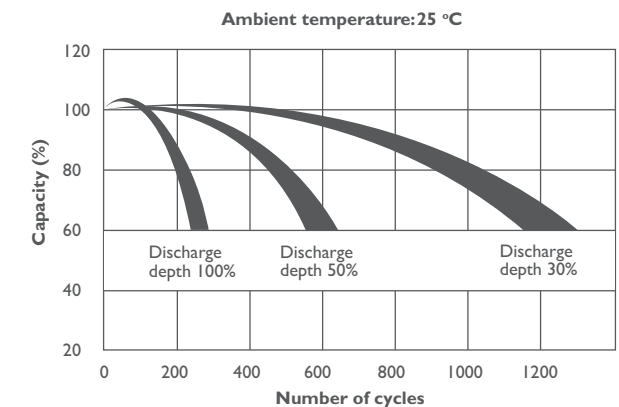
## Design Float life

The float life of the battery is defined in calendar years at a standard temperature of 25°C, when floated with a charge voltage of 2.25 volts per cell. The expected float life of batteries at various average ambient temperatures, when floated with a voltage of 2.25 volts per cell is shown in graph.



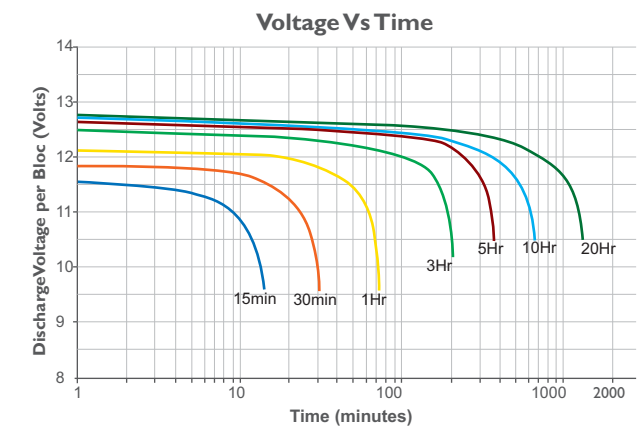
## Cycle life

Battery cycle life is highly dependent on the depth of discharge, recharge and ambient temperature that the battery experiences during each cycle. The number of cycles related to the depth of discharge with respect to % capacity is shown in graph.



## Discharge characteristics

The curves in the figure illustrate the typical discharge characteristics at an ambient temperature of 25°C. The C20 expresses the nominal capacity of the battery at 20 hr discharge rate.



## Constant Current Discharge Performance

Bty. Model	Discharge Current 1.75VPC (Amps)							
	10 min	15 min	30 min	1 Hour	3 Hour	5 Hour	10 Hour	20 Hour
OPTI 26	49.0	39.5	25	16	6.4	4.3	2.41	1.30
OPTI 42	79	64	41	25.7	10.4	6.8	3.9	2.10
OPTI 65	123	99	63	39.7	16.1	10.8	6.0	3.25
OPTI 100	189	152	97	61	24.8	16.6	9.3	5.0
OPTI 120	226	182	117	73	29.7	19.9	11.1	6.0
OPTI 150	283	228	146	92	37.2	24.9	13.9	7.5
OPTI 200	377	304	194	122	49.5	33.2	18.6	10.0

## Constant Power Discharge Performance

Bty. Model	Discharge Watts / Cell to 1.75VPC (Watts)							
	10 min	15 min	30 min	1 Hour	3 Hour	5 Hour	10 Hour	20 Hour
OPTI 26	90	74	48.4	31	12.7	8.6	4.83	2.62
OPTI 42	145	120	78	50	20.5	13.5	7.8	4.24
OPTI 65	225	185	121	77	31.7	21.4	12.1	6.6
OPTI 100	346	285	186	119	48.8	32.9	18.6	10.1
OPTI 120	415	342	223	143	58.5	39.5	22.3	12.1
OPTI 150	519	428	279	178	73.1	49.4	27.9	15.1
OPTI 200	692	571	372	238	98	66	37.1	20.2

## Product Specifications

Model	Dimensions ( in mm ) +/- 5 mm			Weight in kg. (+/-5%)
	Length	Width	Height	
OPTI 26	166	125	175	9.00
OPTI 42	198	168	174	13.5
OPTI 65	350	168	176	21.0
OPTI 100	410	175	225	32.0
OPTI 120	407	173	240	36.0
OPTI 150	525	220	225	47.0
OPTI 200	535	225	239	62.0



## Our Sales Offices



Manufactured and marketed by:

**HBL**

HBL Power Systems Limited

[www.hbl.in](http://www.hbl.in)