

**HBL®**  
An ISO 9001, ISO 14001 and  
OHSAS 45001 Certified Company

Reliability Redefined

**OPTIMUZ**  
SEALED MAINTENANCE FREE  
VRLA BATTERIES



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 facility with high quality standards which is accredited with ISO 9001, I 4001 and OHSAS 45001 certifications.

## Applications



### UPS Systems

Banking, Financial Services &  
Insurance IT/ITES



### Telecom

Optical Network Terminal  
Telecom Equipment



### Power Back up

CFL/LED Lamps  
Railway Emergency Light  
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 C 8702 -I

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

## Design and construction features

### Container and cover sealing

Heat sealing / Special epoxy sealing  
for better joint strength

### Separator

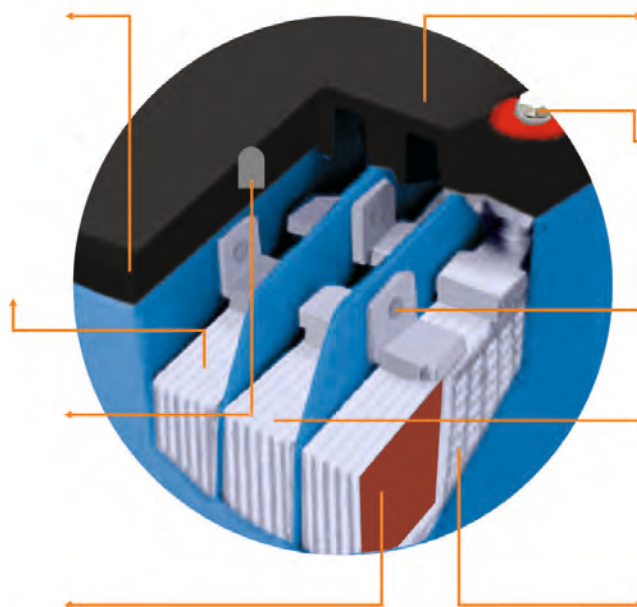
High porosity Absorbent  
Glass Mat separator (AGM)  
with low internal resistance

### 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 patrician 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

## Charge settings at 27°C

### Float Application

Boost 13.8-14.0 V; Float 13.4-13.5 V

### Cyclic Application

13.8-14.0 V

### Current limit

Minimum: 10% of Rated capacity

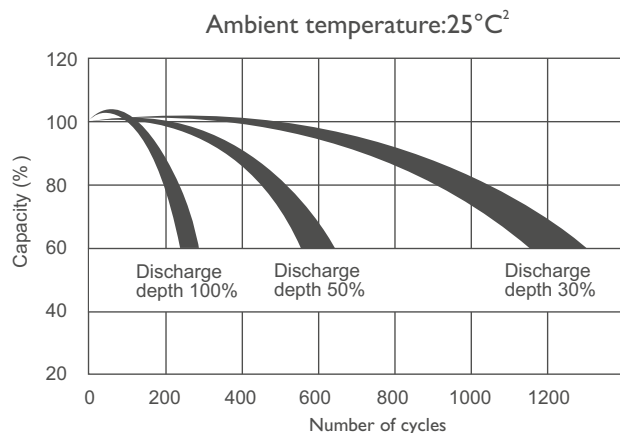
Maximum: 30% of Rated capacity

Temperature compensation for charge voltage Compensation of 18mV to be reduced for every 1°C rise in temperature and vice versa.



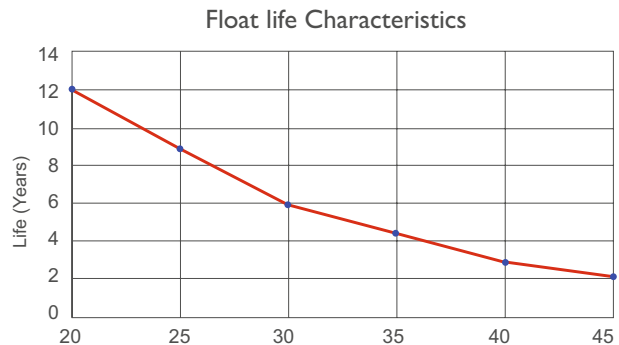
## Cycle life

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.



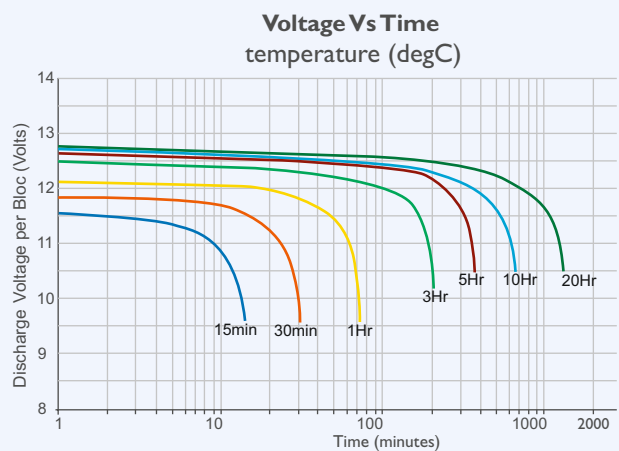
## Design float life

The float life of the battery is defined in calendar years at a standard temperature of 27°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.



## Discharge characteristics

The curves in the figure illustrate the typical discharge characteristics at an ambient temperature of 27°C. The C20 expresses the nominal capacity of the battery at 20 hr discharge rate.





## Product Specifications

MODEL	Capacity at 20 Hr, Ah	Dimensions in mm			Weight (Kg)
		Length	Width	Height	
OPTI 7	7	151	65	100	2.2
OPTI 12	12	151	98	100	3.8
OPTI 18	18	181	76	171	6.0
OPTI 26	26	166	125	175	9.0
OPTI 42	42	198	168	174	13.5
OPTI 65	65	350	168	176	20.0
OPTI 75	75	350	168	176	23.5
OPTI 85	85	410	175	225	26.5
OPTI 100	100	410	175	225	30.0
OPTI 120	120	410	175	225	33.0
OPTI 130	130	407	173	240	36.5
OPTI 150	150	444	173	250	42.5
OPTI 200	200	525	225	225	56.0
OPTIPLUS 200	200	535	225	240	60.5

## Constant Power Discharge Performance at 27°C

Watts per Block to end 10.5V							
10 min	15 min	30 min	1 Hour	3 Hours	5 Hours	10 Hours	20 Hours
161	130	80	51	21.3	14.5	7.9	4.24
277	222	138	87	36.5	24.9	13.5	7.3
415	333	207	131	55	37.3	20.2	10.9
674	512	310	193	79	54	29.2	15.7
922	741	482	305	128	87	47.2	25.4
1441	1157	747	471	197	135	73	39.4
1730	1389	861	544	228	156	84	45.4
1794	1437	916	573	236	161	93	51
1991	1625	1078	674	278	189	110	61
2389	1950	1294	809	333	227	132	73
2489	2196	1347	876	361	246	142	79
3186	2600	1725	1079	445	303	175	91
3982	3250	2156	1348	556	378	219	121
4622	3790	2460	1461	608	415	225	121

\* FR Container optional

\* High Wattage Model available: 720W (15 min @ 10.2 V)

\* OPTIPLUS C10 Models available: 100Ah, 120Ah, 150Ah, 160Ah, 200Ah

## Our presence



Manufactured by

**HBL®**

**HBL Engineering Limited**  
(formerly known as HBL Power Systems Limited)

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