

THERMAL

B A T T E R I E S

HBL[®]



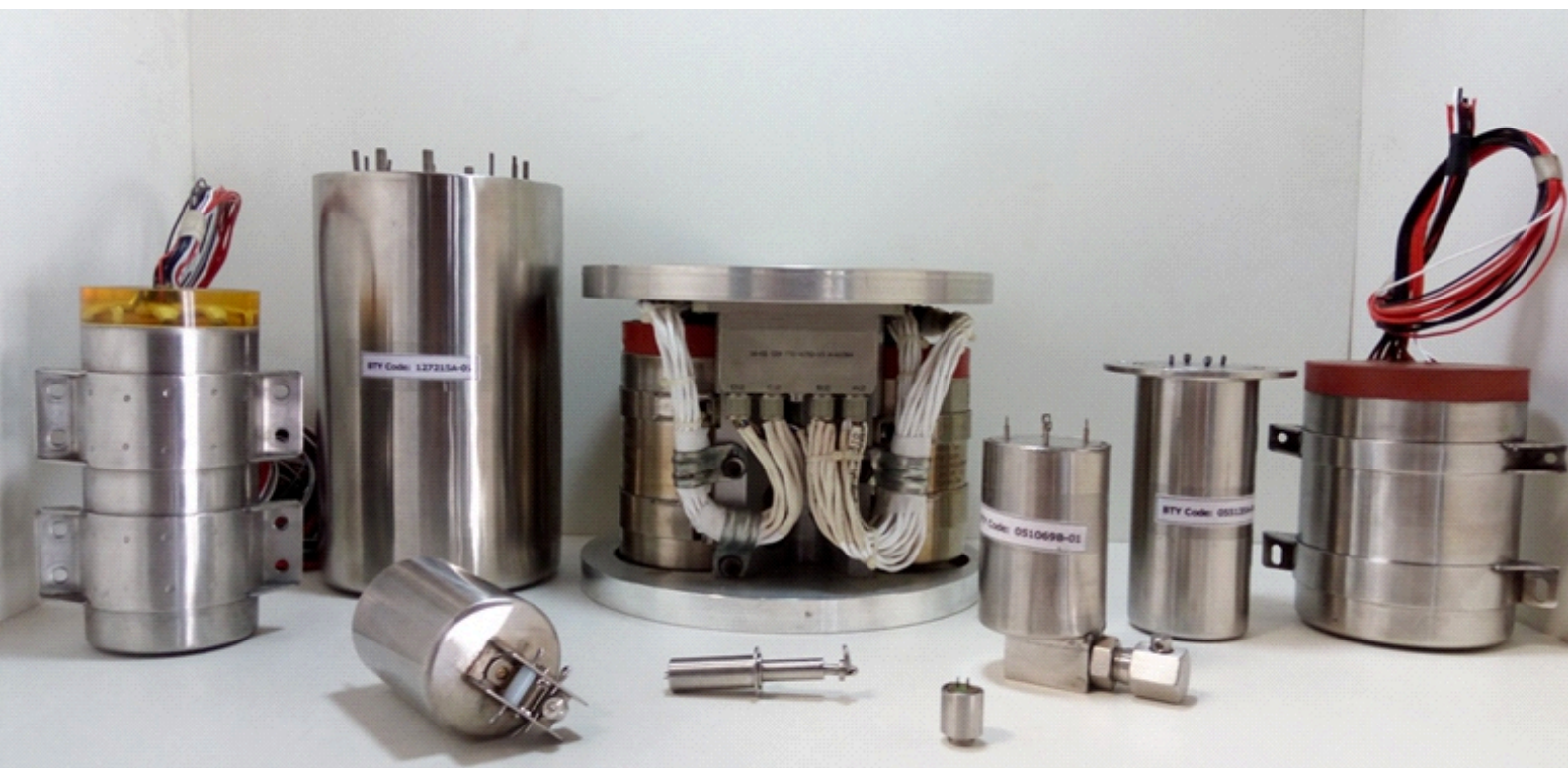
The Company

HBL Power Systems Limited is the undisputed leader in the field of specialised batteries and DC power systems in India. HBL's batteries and electronic products are the preferred choice in a host of critical applications in Railways, Defence, Telecommunications, Non-conventional energy and other core Industrial sectors.

Thermal Battery

HBL batteries are used worldwide by various defence organizations. We offer wide range of batteries [5-150V]. We supply custom – built batteries. The technology is based on Lithium alloy and Iron Disulphide. The technical specifications of batteries are :

Diameter	:	13 to 127mm.
Height	:	15 to 250mm.
Voltage	:	5 to 150V
Capacity	:	milli Watt to 16KWatt.
Operating Life	:	1second to 30 minutes
Operating temperature	:	-54°C to +71°C
Activation System	:	Electric /Mechanical primer (percussion)
Shock	:	20 - 250g for 8 ms
Random Vibration	:	Upto 14 grms (higher levels can be supplied)
Acceleration	:	Upto 90 g
Spin	:	Upto 3000 rpm



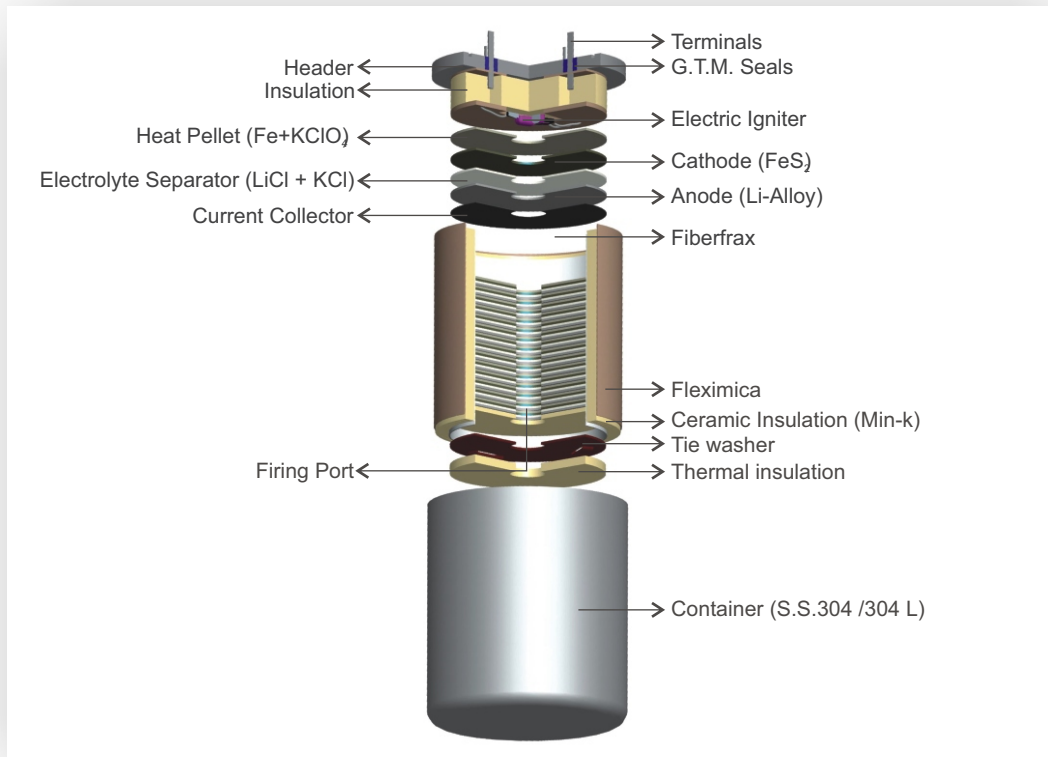
The actual applications

Short range and long range missiles - Air to Air, Surface to Air.

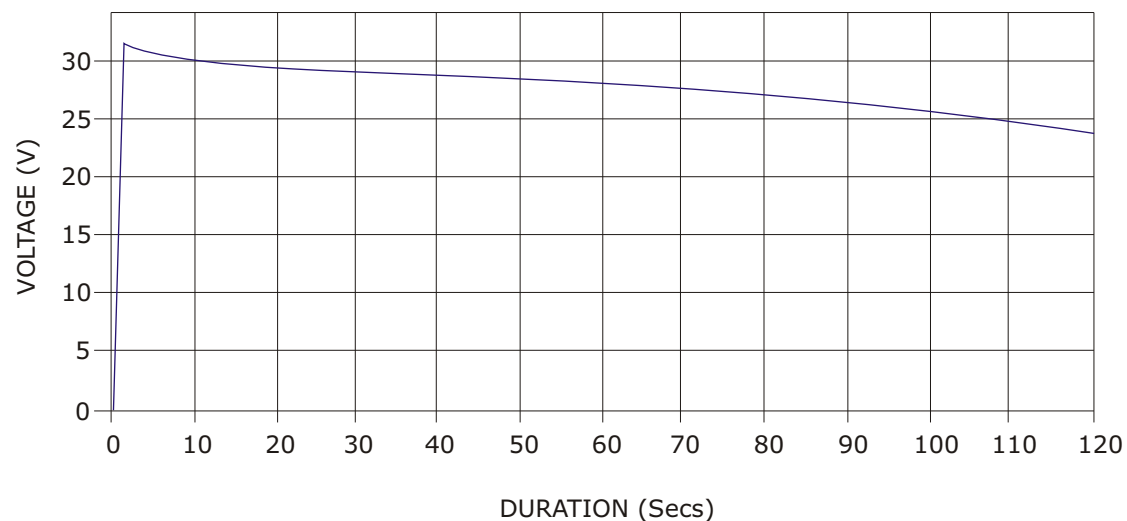
Anti- tank missiles, Rockets, Guided bombs.

Submarine Torpedo engine priming

Typical battery Construction



Typical Discharge characteristics



Technical Specifications

Battery CODE	Power	No of Sections	Operating Voltage	Life	Activation Time (Max)	Operating Temp.		Weight (max) gm	Primer Type
	Watts		Volts	Sec	m.sec	Max °C	Min °C		
127192A-01	15000	One	135 to 87	105	800	35	-4	5700	Electric Igniter
112228A-01	4000	One	43.4	300	2000	63	-35	6500	Electric Igniter
034052B-01	9	Two	+9/-9	27	500	60	-20	135	Electric Igniter
042075A-01	168	One	42±4	27	500	60	-20	300	Electric Igniter
044060A-01	182	One	28±4	27	500	60	-20	500	Electric Igniter
047145A-01	500	One	28±4	60	1400	55	-20	570	Electric Igniter
055135A-01	672	One	56 to 64	30	1400	71	-40	800	Electric Igniter
047135A-01	196	One	28±4	100	1400	71	-40	530	Electric Igniter
050135A-01	196	One	28±4	165	1400	71	-40	580	Electric Igniter
063120B-01	160	Two	40±5	480	1500	35	0	1000	Electric Igniter
44135A-01	336	One	56±8	50	1400	55	-40	530	Electric Igniter
044135B-01	145	Two	19.5 to 25	120	1400	55	-40	530	Electric Igniter
055135A-02	336	One	28±4	100	1400	71	-40	800	Electric Igniter
047135A-02	280	One	28±4	100	1400	71	-40	530	Electric Igniter
047070B-01	175	Two	15±2	40	600	55	-30	300	Electric Igniter
047070A-01	175	One	28±4	40	600	55	-30	300	Electric Igniter
013035A-01	5	One	5 minimum	0.5	200	55	-30	30	Percussion
063135A-01	336	One	28±4	165	1400	71	-40	1050	Electric Igniter
055135A-03	280	One	28±4	165	1400	71	-40	800	Electric Igniter
055135A-04	672	One	28±4	150	1000	55	-30	670	Electric Igniter
080190A-01	4843.75	One	38.75± 11.25	55	2000	55	-20	2500	Electric Igniter
055170A-01	525	One	32±5	140	1000	55	-20	1000	Electric Igniter
080135A-01	700	One	28±4	200	1000	55	-20	3000	Electric Igniter
055055B-01	150	Two	19.5±3	40	500	55	-30	330	Electric Igniter
034064A-01	56	One	28±4	40	500	55	-30	180	Electric Igniter
034082B-01	35	Two	20 - 27	13.3	650	71	-54	185	Electric Igniter
043068B-01	180	Two	+15/-15±2	40	600	55	-30	300	Electric Igniter
041065A-01	6	One	14.5 to 19	90	300	85	-45	566	I Percussion
045075A-01	81	One	22.5±4.5	40	500	50	-40	290	Electric Igniter
032091A-01	80	Two	20 to 26	31	1500	73	-32	210	Electric Igniter
031059C-01	65	Three	12 +3.5/-1	21	1000	50	-50	125	Electric Igniter
076075B-01	130	two	+/- 15 to 22.5	30	1750	50	-50	950	Electric Igniter

-The above batteries are available with short lead times.

-Customised designs available on request.
(These batteries involve design and development.)

CODE: Alpha Numeric

Digits: First three: Diameter (mm) Second three: Height(mm) Last three: Type
Alpha: A=Single section B=Two sections C=Three sections etc

* Also available in L x B x H : 175mm x 175mm x 220mm

HBL®

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