

Valve Regulated Lead-acid Batteries

GBC a joint venture collaboration was formed in the year 2009 in Dammam, Kingdom of Saudi Arabia to manufacture specialised batteries under technology transfer and brand license from HBL Power Systems Ltd., India.

HBL has more than 30 years of experience in the field of Specialized Batteries & DC Power Systems. **AEC** has tremendous experience in DC systems (Industrial & Electronics). **Abdullah H. Al Shuwayer** Company in Industrial Electrical Systems, contracting & other industrial activities.

Features:

- ▶ Horizontal plate stacking eliminates acid stratification
- ▶ Ventilated module provides greater heat dissipation to optimize cell life
- ▶ Extra space provided for grid growth to enhance battery life
- ▶ Low self discharge - < 0.5% per week @ 25° C
- ▶ Design life - 20 years in float service @ 25° C, certified by CSA (Canadian Standard Association)
- ▶ Seismic UBC zone IV certified Steel Racks (for specific layouts)
- ▶ Cycle Life - 1200 Cycles at 80% DoD @ 25° C
- ▶ Wide Operating temperature - -20° C to +55° C

Applications

- ▶ Telecommunications
- ▶ Power
- ▶ Oil and Gas
- ▶ Solar Photovoltaic Systems
- ▶ Process Control Systems
- ▶ UPS
- ▶ Emergency Lighting
- ▶ Railways

Benefits to Customers:

- ▶ Maintenance free - No water top-up required throughout its life
- ▶ No Corrosive fumes - No special battery room required
- ▶ Cells are tested for Heat Sealing leaks.
- ▶ Safe to use - leak and explosion proof
- ▶ Modular steel tray for easy installation
- ▶ Eco-friendly cadmium-free alloy for ease of recycling



Applicable Standards

- * IEC/EN 60896-21 & 22 * BS 6290 Part-IV
- * Classified as Long Life according to EUROBAT guide 1999

Construction:

- **Positive Plate:** Flat plate with Lead-calcium Tin grid alloy.
- **Negative Plate:** Flat plate with Lead-calcium grid alloy.
- **Container:** High impact Polypropylene co-polymer, Flame-retardant UL 94 V0/28% LOI is optional.
- **Separator:** Absorbent Glass Mat separator (AGM).
- **Electrolyte:** High purity Sulphuric acid.
- **Safety Valve:** Self resealing, pressure regulated and explosion proof.
- **Terminals:** High conductivity Lead plated inserts.
- **Inter Cell Connectors:** High Conductivity lead plated copper

Electrical Characteristics

- Type of charging : Constant voltage, current limited to 20% of rated capacity
- Float Voltage : 2.250 ± 0.005 V/cell @ 25° C
- Boost Voltage : 2.300 ± 0.005 V/cell @ 25° C

Range

Module Type	Nominal Capacity(Ah) at C10	No of basic cells per module	Discharge current in Amps				Module Dimensions & Weight			
			8 Hr	5 Hr	3 Hr	1 Hr	Length (+/-10mm)	Depth (+/-10mm)	Height (+/-10mm)	Weight (kg+/- 5%)
T-80 HP	80	8	9.5	13.4	20.5	44.9	775	315	193	59
T-100 HP	100	8	11.9	16.7	25.6	56.2	775	315	251	66
T-120 HP	120	8	14.3	20.0	30.7	67.4	775	315	251	74
T-160 HP	160	8	19	27	41	90	762	445	185	98
T-200 HP	200	8	24	33	51	112	770	445	220	119
T-240 HP	240	8	29	40	61	135	770	445	248	139
T-280 HP	280	8	33	47	72	157	770	445	288	155
T-300 HP	300	8	36	50	77	169	770	445	311	167
T-320 HP	320	8	38	53	82	180	770	445	311	179
T-360 HP	360	8	43	60	92	202	770	445	338	199
T-400 HP	400	4	48	67	102	225	770	445	211	118
T-440 HP	440	4	52	73	113	247	770	445	224	131
T-480 HP	480	4	57	80	123	270	770	445	252	137
T-500 HP	500	4	59	83	128	281	770	445	252	143
T-520 HP	520	4	62	87	133	292	770	445	252	149
T-560 HP	560	4	67	93	143	315	770	445	281	159
T-600 HP	600	4	71	100	153	337	770	445	281	169
T-650 HP	650	4	77	109	166	365	770	445	296	180
T-680 HP	680	3	81	114	174	382	590	705	240	155
T-760 HP	760	3	90	127	194	427	590	705	240	164
T-850 HP	850	3	101	142	217	478	590	705	240	176
T-925 HP	925	3	110	154	237	520	590	705	273	193
T-1000 HP	1000	3	119	167	256	562	590	705	273	209
T-1100 HP	1100	3	131	184	281	618	594	705	324	225
T-1200 HP	1200	3	143	200	307	674	594	705	324	240
T-1250 HP	1250	3	148	209	320	702	594	705	324	252
T-1360 HP	1360	3	162	227	348	764	600	705	369	269
T-1440 HP	1440	3	171	240	368	809	600	705	369	284
* T-1500 HP	1500	3	178	250	384	843	600	705	369	302
* T-1600 HP	1600	3	190	267	409	899	590	705	240	176
* T-1700 HP	1700	3	202	284	435	955	590	705	240	176
* T-1850 HP	1850	3	220	309	473	1039	590	705	273	193
* T-2000 HP	2000	3	238	334	512	1124	590	705	273	209
* T-2200 HP	2200	3	261	367	563	1236	594	705	324	225
* T-2350 HP	2350	3	279	392	601	1320	594	705	324	240
* T-2500 HP	2500	3	297	417	639	1404	594	705	324	252
* T-2650 HP	2650	3	315	442	678	1489	600	705	369	269
* T-2800 HP	2800	3	333	467	716	1573	600	705	369	284
* T-3000 HP	3000	3	356	501	767	1685	600	705	369	302
* T-3225 HP	3225	3	383	538	825	1812	594	705	324	225
* T-3500 HP	3500	3	416	584	895	1966	594	705	324	240
* T-3900 HP	3900	3	463	651	997	2191	600	705	369	269
* T-4000 HP	4000	3	475	668	1023	2247	600	705	369	269
* T-4200 HP	4200	3	499	701	1074	2360	600	705	369	284
* T-4300 HP	4300	3	511	718	1100	2416	600	705	369	284
* T-4500 HP	4500	3	534	751	1151	2528	600	705	369	302
* T-5000 HP	5000	3	594	835	1279	2809	594	705	324	252
* T-5500 HP	5500	3	653	918	1407	3090	600	705	369	284
* T-5800 HP	5800	3	689	968	1483	3258	600	705	369	302

● Nominal capacity is at a discharge rate of 10 hours to an end voltage of 1.80 V at 25 deg C.

● * Indicates parallel models

● Dimensions given are as per horizontal stacking arrangement. The battery modules can be stacked to different combinations of height and length depending on space availability, specific configuration and floor loading requirement.

● Other special design and configurations of battery systems for specific application shall be provided on request. The above table is not exhaustive. Cells of intermediate capacities are also available.

● In accordance with its policy of continuous improvement the company reserves the right to change specifications and designs without notice. Illustrations, data, dimensions and weights given in this brochure are for guidance only and cannot be held binding on the company.



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