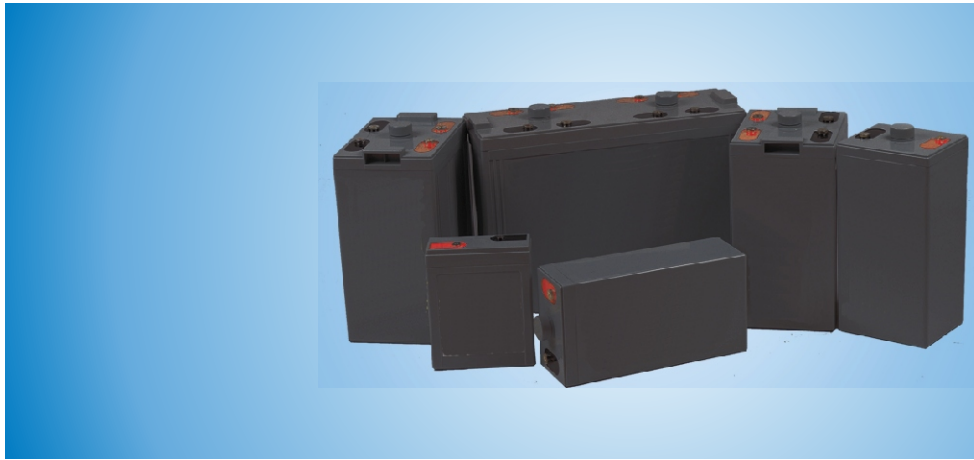




# **POWER-PLUS**

[www.interlinkpower.com.sg](http://www.interlinkpower.com.sg)



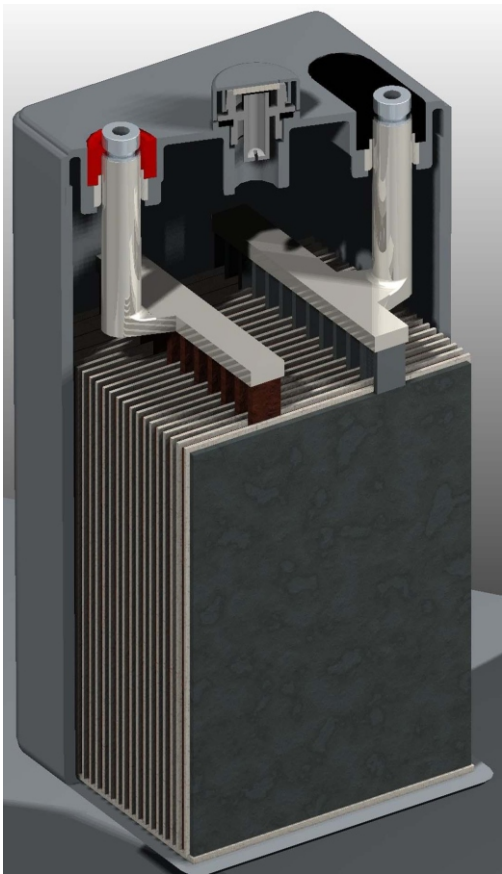
**Sealed Lead Acid 2 Volt Bloc  
AGM Range**

**CONSTRUCTION** - AGM battery construction is as shown in the diagram below. The positive and negative grids are cast from a calcium / tin lead alloy to reduce grid growth and corrosion. The active material is manufactured from high purity lead (99.9999%) to minimise the negative effects of impurities.

Separator is a mat of random woven acid resistant glass fibres, which acts as a sponge - soaking up and immobilising the electrolyte whilst maintaining good acid to plate contact and availability during discharge. "S wrapping" is employed to eliminate the risk of short circuits due to mossing and debris at the bottom of the cell.

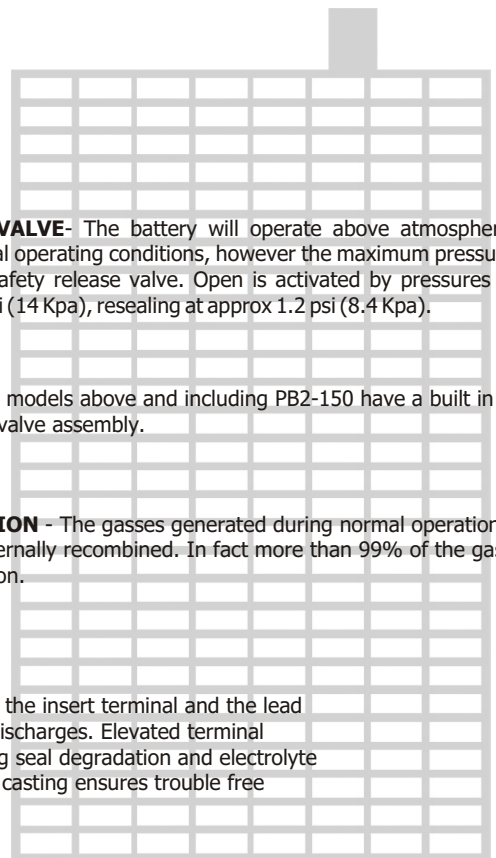
The purpose of the separator is to maintain a constant distance between the positive and negative plates, thus removing the possibility of short circuits whilst allowing the active material to fully react with the electrolyte. The random weaving also results in an open structure, which offers minimal resistance to the flow of electrolyte during filling.

A compression platform at the bottom of the cell allows expansion and contraction of the plates.



AGM construction with case removed and cover cut away to show internal battery parts.

**ELECTROLYTE FILLING** -Special production and QC systems are utilised to ensure the electrolyte saturation is optimised for each battery. The battery design and construction negates the need for electrolyte addition and the battery remains maintenance free throughout its design life.

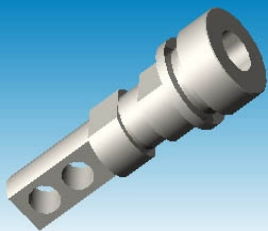


**SAFETY RELEASE VALVE**- The battery will operate above atmospheric pressure under normal operating conditions, however the maximum pressure is governed by the safety release valve. Open is activated by pressures in excess of approx. 2 psi (14 Kpa), resealing at approx 1.2 psi (8.4 Kpa).

**Flame Arrester** - All models above and including PB2-150 have a built in flame arrester in the valve assembly.

**GAS RECOMBINATION** - The gasses generated during normal operation of the battery are internally recombined. In fact more than 99% of the gas achieves recombination.

**TERMINAL CONSTRUCTION** - The contact quality between the insert terminal and the lead post is of vital importance during short duration / high Amp discharges. Elevated terminal temperatures are the result of poor contact, eventually causing seal degradation and electrolyte leaks. Power Plus design and assembly technique for terminal casting ensures trouble free operation for the design life of the battery.



### AGM Vs Gel

Each battery has advantages and disadvantages, it is therefore important to choose the right battery for the application.

#### Advantages of AGM Batteries:

- Lower initial cost when compared to Gelled Electrolyte cells.
- Ideal for starting and stationary applications.
- Superior performance for shorter duration / higher current discharges.
- Smaller size battery can be used for higher rate discharges.

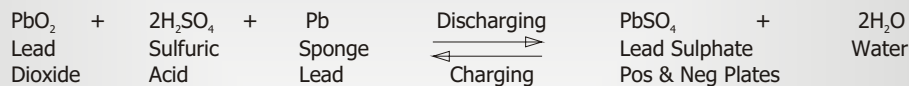


### Applications

- Float service
- Uninterruptible Power Supplies
- Medical
- Telecommunications
- Switch Gear
- Photovoltaic
- Solar
- Wind
- Control Systems
- Cellular Radio Stations
- Cathodic Protection
- Navigation Aids
- Marine equipment
- Electric Power Systems

Discharge Time	Capacity temperature correction Factor to be applied to Data at 20 Degrees C									
	0 °C	5 °C	10 °C	15 °C	20 °C	25 °C	30 °C	35 °C	40 °C	
5 minutes to 59 minutes	0.8	0.86	0.91	0.96	1	1.037	1.063	1.085	1.1	
1 Hour to 100 Hours	0.86	0.9	0.93	0.97	1	1.028	1.05	1.063	1.07	

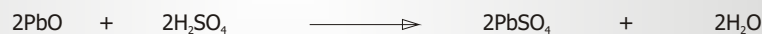
**CHEMICAL REACTION**- The chemical reaction for the Discharge / Recharge process is represented by the following formula:



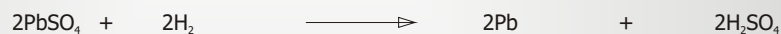
Under normal float charge conditions the oxygen passes through the separator from the positive to the negative plate where it reacts with the negative active material to form lead oxide.



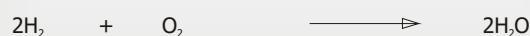
In the acid conditions the lead oxide reacts with the sulfuric acid to form lead sulphate.



The lead sulphate formed on the negative is then reduced to lead and sulfuric acid by the evolving hydrogen.



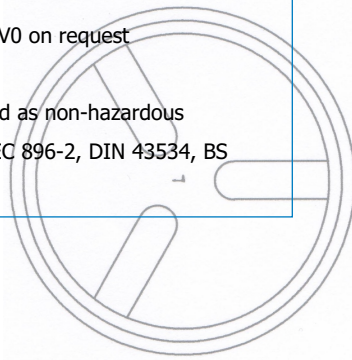
If the equations are resolved and like terms cancelled out on both sides of the equation the result is:





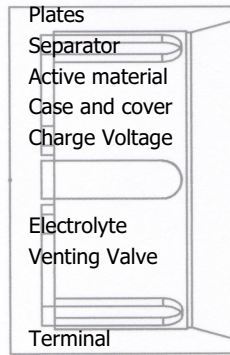
### Innovative Features

- Completely maintenance free, sealed construction eliminates the need for watering
- Increased durability and deep cycle ability for heavy demand applications
- Fully tank formed plates
- Analytical Grade electrolyte
- Spill proof / leak proof
- Valve regulated Max internal pressure 2.5 psi
- Multi-position usage
- ABS Case and cover - V0 on request
- Low self discharge
- FAA and IATA approved as non-hazardous
- Built to comply with IEC 896-2, DIN 43534, BS 6290 Pt4, Eurobat.

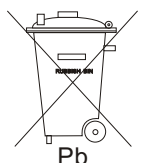
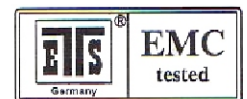
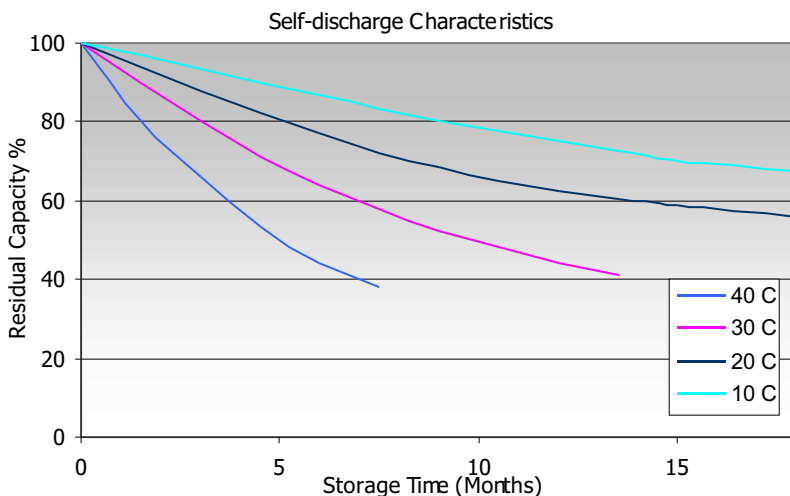


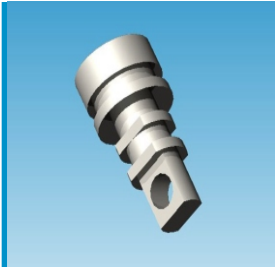
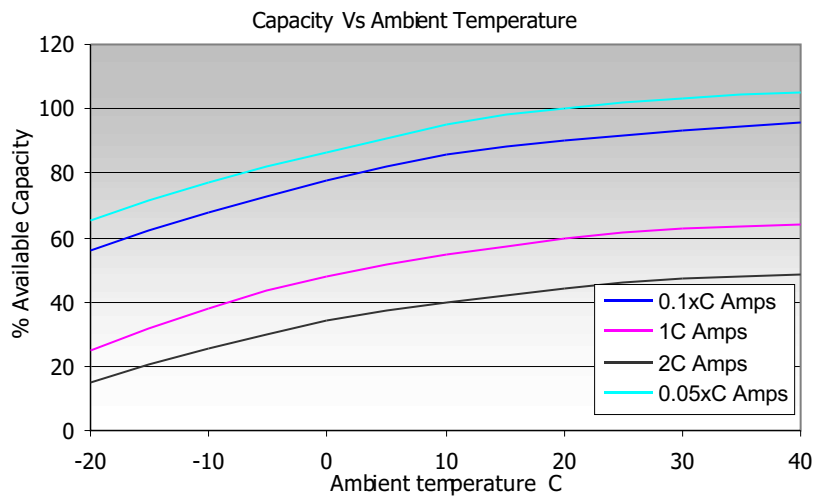
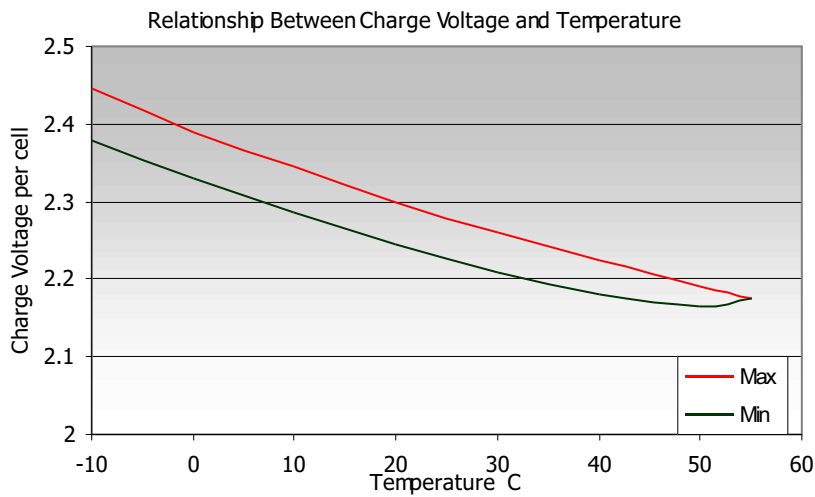
### Specifications

Nominal Voltage	2 Volts
Design Life	18 Years
Operating Temperature	-20 °C to 50 °C
Grid alloy	Calcium / Tin lead alloy
Plates	Flat Pasted
Separator	Absorbant Glass Mat
Active material	Very high purity lead
Case and cover	ABS (VO on request)
Charge Voltage	Float 2.27 - 2.30 VPC @25 °C Cycling 2.35 @25 °C
Electrolyte	Max. 2.4 VPC Max ripple 0.05C (A) Sulphuric acid Analytical grade purity
Venting Valve	EPDM Rubber 1.5 to 2 psi (10.5 - 14 KPa) release pressure. Resealing at 1 psi (7 KPa)
Terminal	Epoxy sealed by extended mechanical paths
Torque setting	The recommended torque value for all types is 5-7 Nm
Cables	Connectors supplied as standard, cables on request.



Power Plus keenly encourages environmental awareness; PLEASE follow guidelines for the recycling /disposal of lead.





## CHARGING CHARACTERISTICS

**Floating** - The optimum float voltage for a battery is temperature dependant, at 15 - 24°C the recommended value is 2.27 - 2.30V. It is recommended that battery installation sites are temperature controlled, however float voltage can be increased or decreased to compensate for temperature variations. Adjustment is calculated at +/- 3 mV per degree C.

Operating Temperature	Recommended Applied Float Voltage VPC
0-9	2.33 - 2.35
10-14	2.30 - 2.33
15-19	2.27 - 2.30
20-24	2.27 - 2.30
25-29	2.25 - 2.27
30-34	2.23 - 2.25
35-40	2.21 - 2.23

The most suitable charging method for battery life and performance is the constant voltage method with a limited initial current, usually limited to a maximum of  $C_{20}/4$ .

Battery Model	Time in Minutes - Amps to <b>1.80 VPC</b>						
	5	10	15	30	45	60	90
PB2-50	128	96.0	80.0	52.5	39.4	32.0	21.7
PB2-100	256	192	160	105	78.7	64.0	43.3
PB2-150	366	275	229	150	113	91.5	65.0
PB2-200	342	293	244	188	148	122	86.7
PB2-250	427	366	305	235	185	153	108
PB2-300	512	439	366	282	221	183	130
PB2-375	641	549	458	352	277	229	163
PB2-400	683	586	488	376	295	244	173
PB2-450	769	659	549	423	332	275	195
PB2-500	854	732	610	470	369	305	217
PB2-575	974	834	695	535	421	348	247
PB2-600	1025	878	732	564	443	366	260
PB2-625	1068	915	763	587	461	381	271
PB2-750	1281	1098	915	705	554	458	325
PB2-800	1366	1171	976	752	590	488	347
PB2-1000	1708	1464	1220	939	738	610	433
PB2-1250	2135	1830	1525	1174	923	763	542
PB2-1500	2562	2196	1830	1409	1107	915	650
PB2-1875	3160	2708	2257	1738	1365	1129	802
PB2-2000	3416	2928	2440	1879	1476	1220	867
PB2-2500	4270	3660	3050	2349	1845	1525	1083
PB2-3000	5124	4392	3660	2818	2214	1830	1300
PB2-3850	6576	5636	4697	3617	2842	2349	1668

Battery Model	Time in Hours			
	2	3	4	5
PB2-50	16.9	12.5	9.8	8.1
PB2-100	33.8	25.1	19.5	16.2
PB2-150	50.8	37.6	29.3	24.3
PB2-200	68.0	50.4	39.2	32.5
PB2-250	85.0	62.9	49.0	40.6
PB2-300	102	75.5	58.7	48.7
PB2-375	127	94.4	73.5	60.9
PB2-400	136	101	78.2	64.8
PB2-450	153	113	88.0	72.9
PB2-500	170	126	97.9	81.2
PB2-575	194	143	112	92.5
PB2-600	204	151	117	97.4
PB2-625	212	157	122	101
PB2-750	255	189	147	122
PB2-800	272	201	157	130
PB2-1000	339	251	196	162
PB2-1250	424	314	245	203
PB2-1500	509	377	294	243
PB2-1875	637	472	367	304
PB2-2000	679	503	392	325
PB2-2500	849	629	489	406
PB2-3000	1019	755	587	487
PB2-3850	1308	969	754	625

Battery Model	Time in Minutes - Amps to <b>1.75 VPC</b>						
	5	10	15	30	45	60	90
PB2-50	133	99.5	82.9	54.4	40.8	33.2	22.1
PB2-100	270	203	169	111	83.1	67.6	45.1
PB2-150	387	290	242	159	119	96.7	67.6
PB2-200	402	324	277	200	157	130	90.6
PB2-250	502	405	346	249	196	162	113
PB2-300	602	485	415	299	235	194	136
PB2-375	752	606	519	373	293	242	169
PB2-400	801	646	553	398	313	259	181
PB2-450	901	727	622	448	352	291	203
PB2-500	1003	809	693	498	392	324	226
PB2-575	1144	922	789	568	446	369	258
PB2-600	1203	970	831	598	470	388	271
PB2-625	1253	1011	865	623	489	404	283
PB2-750	1503	1212	1038	747	587	485	339
PB2-800	1605	1294	1108	797	626	518	362
PB2-1000	2005	1617	1384	996	782	647	452
PB2-1250	2506	2021	1730	1245	978	808	565
PB2-1500	3002	2421	2072	1491	1172	968	677
PB2-1875	3759	3032	2595	1868	1467	1213	848
PB2-2000	4011	3235	2769	1993	1566	1294	867
PB2-2500	5013	4042	3460	2490	1957	1617	1130
PB2-3000	6016	4852	4153	2989	2348	1941	1356
PB2-3850	7721	6226	5330	3835	3014	2491	1741

Battery Model	Time in Hours			
	2	3	4	5
PB2-50	18.0	13.3	10.4	8.6
PB2-100	35.9	26.7	20.7	17.2
PB2-150	54.0	40.0	31.2	25.9
PB2-200	72.3	53.6	41.7	34.6
PB2-250	90.4	66.9	52.1	43.2
PB2-300	108	80.3	62.4	51.8
PB2-375	135	100	78.2	64.8
PB2-400	145	107	83.2	69.0
PB2-450	163	120	93.6	77.6
PB2-500	181	134	104	86.4
PB2-575	206	152	119	98.5
PB2-600	217	161	124	104
PB2-625	225	167	130	108
PB2-750	271	201	156	130
PB2-800	289	214	167	138
PB2-1000	361	267	209	172
PB2-1250	451	334	261	216
PB2-1500	541	401	313	259
PB2-1875	677	502	390	324
PB2-2000	722	535	417	346
PB2-2500	903	669	520	432
PB2-3000	1084	803	624	518
PB2-3850	1391	1031	802	665

Battery Model	Time in Minutes - Amps to <b>1.67 VPC</b>					
	5	10	15	30	45	60
PB2-50	118	95.9	90.9	55.9	41.7	33.7
PB2-100	240	196	185	114	85.1	68.6
PB2-150	344	280	265	163	122	98.3
PB2-200	448	375	308	207	161	132
PB2-250	559	469	385	258	201	164
PB2-300	670	562	461	310	241	197
PB2-375	838	702	576	387	301	246
PB2-400	893	749	615	412	321	263
PB2-450	1005	842	691	464	360	295
PB2-500	1118	937	770	516	401	329
PB2-575	1274	1068	877	589	457	375
PB2-600	1341	1124	923	619	481	394
PB2-625	1397	1171	961	645	501	411
PB2-750	1675	1404	1153	773	601	493
PB2-800	1789	1499	1231	826	642	526
PB2-1000	2234	1873	1538	1032	802	657
PB2-1250	2793	2341	1922	1290	1002	822
PB2-1500	3346	2805	2303	1545	1201	984
PB2-1875	4190	3512	2884	1935	1503	1232
PB2-2000	4470	3747	3077	2064	1604	1315
PB2-2500	5586	4683	3845	2580	2005	1643
PB2-3000	6704	5620	4614	3096	2406	1972
PB2-3850	8604	7213	5922	3973	3087	2531

Battery Model	Time in Hours			
	2	3	4	5
PB2-50	18.4	13.6	10.6	8.8
PB2-100	37.4	27.8	21.6	17.9
PB2-150	56.2	41.6	32.4	26.9
PB2-200	75.3	55.8	43.4	36.0
PB2-250	94.1	69.6	54.2	45.0
PB2-300	113	83.6	65.0	53.9
PB2-375	141	104	81.4	67.5
PB2-400	151	112	86.6	71.8
PB2-450	169	125	97.4	80.7
PB2-500	188	139	108	89.9
PB2-575	215	158	124	102
PB2-600	226	167	130	108
PB2-625	235	174	135	112
PB2-750	282	209	163	135
PB2-800	301	222	174	144
PB2-1000	375	278	217	179
PB2-1250	469	348	271	225
PB2-1500	563	417	325	269
PB2-1875	705	522	406	337
PB2-2000	752	557	434	360
PB2-2500	940	696	541	450
PB2-3000	1128	836	650	539
PB2-3850	1448	1072	835	692

Amps to 1.85 VPC				
	8	10	12	24
	5.7	4.7	4.0	2.2
	11.4	9.4	8.0	4.4
	17.1	14.1	12.0	6.5
	22.9	18.9	16.1	8.8
	28.6	23.6	20.1	11.0
	34.3	28.3	24.1	13.1
	42.9	35.4	30.1	16.4
	45.7	37.7	32.0	17.5
	51.4	42.4	36.0	19.7
	57.2	47.2	40.1	21.9
	65.2	53.8	45.7	24.9
	68.6	56.6	48.1	26.3
	71.5	59.0	50.2	27.4
	85.7	70.7	60.1	32.8
	91.5	75.5	64.2	35.0
	114	94.3	80.2	43.8
	143	118	100	54.7
	172	142	120	65.7
	214	177	150	82.1
	229	189	160	87.6
	286	236	200	109
	343	283	241	131
	440	363	309	169

Battery Model	Time in Hours Ah to 1.85 VPC							
	2	3	4	5	8	10	12	24
PB2-50	33.8	37.5	39.0	40.4	45.6	47.0	48.0	52.3
PB2-100	67.6	75.3	78.0	81.0	91.2	94.0	95.9	105
PB2-150	102	113	117	122	137	141	144	157
PB2-200	136	151	157	163	183	189	193	210
PB2-250	170	189	196	203	229	236	241	264
PB2-300	204	227	235	244	274	283	289	314
PB2-375	254	283	294	305	343	354	361	394
PB2-400	272	303	313	324	366	377	384	420
PB2-450	306	339	352	365	411	424	432	473
PB2-500	340	378	392	406	458	472	481	526
PB2-575	388	429	448	463	522	538	548	598
PB2-600	408	453	468	487	549	566	577	631
PB2-625	424	471	488	505	572	590	602	658
PB2-750	510	567	588	610	686	707	721	787
PB2-800	544	603	628	650	732	755	770	840
PB2-1000	678	753	784	810	912	943	962	1051
PB2-1250	848	942	980	1015	1144	1180	1200	1313
PB2-1500	1018	1131	1176	1215	1376	1420	1440	1577
PB2-1875	1274	1416	1468	1520	1712	1770	1800	1970
PB2-2000	1358	1509	1568	1625	1832	1890	1920	2102
PB2-2500	1698	1887	1956	2030	2288	2360	2400	2616
PB2-3000	2038	2265	2348	2435	2744	2830	2892	3144
PB2-3850	2616	2907	3016	3125	3520	3630	3708	4056

Amps to 1.80 VPC				
	8	10	12	24
	6.1	5.0	4.3	2.3
	12.1	10.0	8.5	4.6
	18.2	15.0	12.8	7.0
	24.3	20.1	17.1	9.3
	30.4	25.1	21.4	11.7
	36.5	30.1	25.6	13.9
	45.6	37.7	32.0	17.4
	48.6	40.1	34.0	18.6
	54.6	45.1	38.3	21.0
	60.8	50.2	42.7	23.3
	69.3	57.2	48.6	26.5
	72.9	60.2	51.2	28.0
	76.0	62.8	53.4	29.2
	91.1	75.2	63.9	34.9
	97.3	80.3	68.3	37.2
	121	100	85.3	46.6
	152	126	106	58.2
	183	151	128	69.9
	228	188	160	87.4
	243	201	170	93.2
	304	251	213	116
	365	301	256	139
	468	386	329	180

Battery Model	Time in Hours Ah to 1.80 VPC							
	2	3	4	5	8	10	12	24
PB2-50	35.9	39.9	41.5	43.0	48.5	50.0	51.1	55.7
PB2-100	71.9	80.1	83.0	86.2	97.0	100	102	111
PB2-150	108	120	125	129	145	150	153	167
PB2-200	145	161	167	173	195	201	206	224
PB2-250	181	201	209	216	243	251	257	281
PB2-300	217	241	250	259	292	301	308	335
PB2-375	270	301	313	324	365	377	384	419
PB2-400	289	322	333	345	389	401	409	447
PB2-450	325	361	374	388	437	451	460	503
PB2-500	362	402	417	432	487	502	512	559
PB2-575	413	456	477	492	555	572	583	636
PB2-600	434	482	498	518	583	602	614	672
PB2-625	451	501	519	538	608	628	641	700
PB2-750	542	603	626	649	729	752	767	838
PB2-800	579	641	668	692	778	803	820	894
PB2-1000	721	801	834	862	970	1003	1024	1118
PB2-1250	902	1002	1043	1080	1216	1255	1277	1397
PB2-1500	1083	1203	1251	1293	1463	1511	1532	1678
PB2-1875	1355	1506	1562	1618	1820	1883	1915	2097
PB2-2000	1444	1605	1668	1730	1948	2011	2043	2237
PB2-2500	1806	2007	2081	2161	2433	2511	2554	2783
PB2-3000	2167	2409	2498	2592	2917	3011	3077	3345
PB2-3850	2782	3092	3208	3326	3742	3862	3945	4316

Amps to 1.75 VPC				
	8	10	12	24
	6.2	5.1	4.3	2.4
	12.6	10.4	8.8	4.8
	18.9	15.6	13.3	7.2
	25.3	20.9	17.8	9.7
	31.6	26.1	22.3	12.2
	38.0	31.3	26.7	14.5
	47.5	39.2	33.3	18.2
	50.6	41.7	35.4	19.4
	56.9	46.9	39.9	21.8
	63.3	52.3	44.4	24.2
	72.1	59.6	50.6	27.6
	75.9	62.7	53.3	29.1
	79.1	65.3	55.6	30.3
	94.8	78.3	66.5	36.3
	101.2	83.6	71.1	38.8
	126	104	88.8	48.5
	158	131	111	60.6
	190	157	133	72.7
	237	196	166	90.9
	253	209	177	97.0
	316	261	221	121
	380	313	267	145
	487	402	342	187

Battery Model	Time in Hours Ah to 1.75 VPC							
	2	3	4	5	8	10	12	24
PB2-50	36.7	40.8	42.4	43.9	49.5	51.0	52.1	56.8
PB2-100	74.8	83.3	86.4	89.7	101	104	106	116
PB2-150	112	125	130	135	151	156	159	174
PB2-200	151	167	174	180	203	209	214	233
PB2-250	188	209	217	225	253	261	267	292
PB2-300	226	251	260	270	304	313	320	348
PB2-375	281	313	325	337	380	392	400	436
PB2-400	301	335	346	359	405	417	425	465
PB2-450	339	375	390	404	455	469	478	524
PB2-500	376	418	434	450	506	523	533	582
PB2-575	429	475	496	512	577	596	607	662
PB2-600	452	501	518	539	607	627	639	699
PB2-625	469	521	540	559	633	653	667	728
PB2-750	564	628	651	676	759	783	799	872
PB2-800	602	667	695	720	810	836	853	930
PB2-1000	750	833	868	897	1009	1044	1066	1164
PB2-1250	939	1043	1085	1124	1266	1306	1329	1454
PB2-1500	1127	1252	1302	1346	1523	1572	1595	1746
PB2-1875	1410	1567	1625	1684	1894	1960	1993	2182
PB2-2000	1503	1670	1736	1800	2027	2092	2126	2328
PB2-2500	1879	2089	2165	2249	2532	2613	2658	2897
PB2-3000	2256	2507	2599	2697	3036	3133	3202	3481
PB2-3850	2895	3217	3339	3461	3895	4019	4106	4491

Battery Model	Time in Minutes - Watts per cell to <b>1.80 VPC</b>						
	5	10	15	30	45	60	90
PB2-50	230	175	146	98	75	61	42
PB2-100	461	349	293	195	150	123	83.1
PB2-150	659	501	419	279	216	175	125
PB2-200	616	533	447	350	283	234	166
PB2-250	769	666	558	437	353	293	207
PB2-300	922	799	670	525	422	350	250
PB2-375	1154	999	838	655	529	439	313
PB2-400	1229	1067	893	699	563	467	332
PB2-450	1384	1199	1005	787	634	527	374
PB2-500	1537	1332	1116	874	705	584	417
PB2-575	1753	1518	1272	995	804	666	474
PB2-600	1845	1598	1340	1049	846	701	499
PB2-625	1922	1665	1396	1092	881	730	520
PB2-750	2306	1998	1674	1311	1058	877	624
PB2-800	2459	2131	1786	1399	1127	935	666
PB2-1000	3074	2664	2233	1747	1410	1168	831
PB2-1250	3843	3331	2791	2184	1763	1461	1041
PB2-1500	4612	3997	3349	2621	2114	1752	1248
PB2-1875	5688	4929	4130	3233	2607	2162	1540
PB2-2000	6149	5329	4465	3495	2819	2336	1665
PB2-2500	7686	6661	5582	4369	3524	2920	2079
PB2-3000	9223	7993	6698	5241	4229	3504	2496
PB2-3850	11837	10258	8596	6728	5428	4498	3203

Battery Model	Time in Hours Watts per cell to <b>1.85 VPC</b>							
	2	3	4	5	8	10	12	24
PB2-50	32.7	24.4	19.1	15.9	11.3	9.4	8.0	4.4
PB2-100	65.3	48.9	38.3	31.9	22.7	18.7	16.0	8.7
PB2-150	98.2	73.3	57.5	47.9	34.0	28.1	24.0	13.1
PB2-200	131	98.2	76.9	64.0	45.5	37.7	32.2	17.6
PB2-250	164	123	96.1	80.0	56.8	47.1	40.2	22.0
PB2-300	197	147	115	95.9	68.2	56.4	48.2	26.3
PB2-375	245	184	144	120	85.2	70.6	60.2	32.9
PB2-400	263	197	153	128	90.8	75.2	64.0	35.1
PB2-450	296	220	173	144	102	84.5	72.0	39.5
PB2-500	329	246	192	160	114	94.1	80.2	43.9
PB2-575	375	279	220	182	130	107	91.4	49.9
PB2-600	394	294	230	192	136	113	96.2	52.7
PB2-625	410	306	239	199	142	118	100	54.9
PB2-750	493	368	288	240	170	141	120	65.7
PB2-800	526	392	308	256	182	151	128	70.1
PB2-1000	655	489	385	319	227	188	160	87.8
PB2-1250	820	612	481	400	284	235	200	110
PB2-1500	984	735	577	479	342	283	240	132
PB2-1875	1231	920	720	599	425	353	300	165
PB2-2000	1313	980	769	640	455	377	320	176
PB2-2500	1641	1226	959	800	568	471	400	218
PB2-3000	1970	1471	1152	959	682	564	482	263
PB2-3850	2528	1889	1479	1231	874	724	618	339

Battery Model	Time in Minutes - Watts per cell to <b>1.75 VPC</b>						
	5	10	15	30	45	60	90
PB2-50	237	179	150	101	76	64	42
PB2-100	481	365	306	205	155	129	86.6
PB2-150	689	522	438	294	221	185	130
PB2-200	716	583	501	370	292	249	174
PB2-250	894	729	626	461	365	310	217
PB2-300	1072	873	751	553	437	372	261
PB2-375	1339	1091	939	690	545	463	324
PB2-400	1426	1163	1001	736	582	496	348
PB2-450	1604	1309	1126	829	655	557	390
PB2-500	1785	1456	1254	921	729	620	434
PB2-575	2036	1660	1428	1051	830	707	495
PB2-600	2141	1746	1504	1106	874	743	520
PB2-625	2230	1820	1566	1153	910	774	543
PB2-750	2675	2182	1879	1382	1092	929	651
PB2-800	2857	2329	2005	1474	1164	992	695
PB2-1000	3569	2911	2505	1843	1455	1239	868
PB2-1250	4461	3638	3131	2303	1819	1547	1085
PB2-1500	5344	4358	3750	2758	2180	1854	1300
PB2-1875	6691	5458	4697	3456	2729	2323	1628
PB2-2000	7140	5823	5012	3687	2913	2478	1665
PB2-2500	8923	7276	6263	4607	3640	3097	2170
PB2-3000	10708	8734	7517	5530	4367	3717	2604
PB2-3850	13743	11207	9647	7095	5606	4770	3343

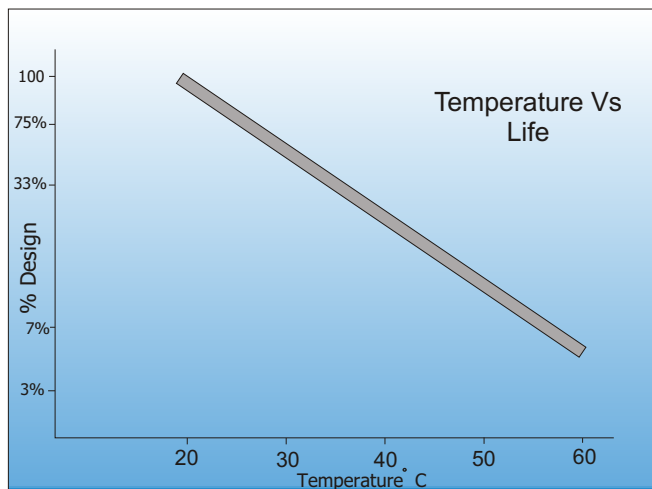
Battery Model	Time in Hours Watts per cell to <b>1.80 VPC</b>							
	2	3	4	5	8	10	12	24
PB2-50	34.7	25.9	20.3	16.9	12.0	10.0	8.5	4.6
PB2-100	69.5	52.0	40.7	34.0	24.1	19.9	17.0	9.3
PB2-150	104	77.9	61.2	51.0	36.1	29.9	25.5	13.9
PB2-200	140	104	81.8	68.1	48.4	40.1	34.2	18.7
PB2-250	175	130	102	85.1	60.4	50.1	42.8	23.5
PB2-300	210	156	123	102	72.5	60.0	51.3	27.9
PB2-375	261	196	153	128	90.6	75.1	64.0	35.0
PB2-400	280	209	163	136	96.5	80.0	68.1	37.3
PB2-450	315	234	184	153	109	89.9	76.6	42.0
PB2-500	349	261	204	170	121	100	85.3	46.7
PB2-575	399	296	234	194	138	114	97.2	53.1
PB2-600	419	313	244	204	145	120	102	56.1
PB2-625	436	325	255	212	151	125	107	58.4
PB2-750	524	392	307	256	181	150	128	69.9
PB2-800	559	417	328	273	193	160	137	74.6
PB2-1000	697	520	409	340	241	200	171	93.4
PB2-1250	872	651	511	426	302	250	213	117
PB2-1500	1046	781	614	510	363	301	255	140
PB2-1875	1310	978	766	637	452	375	319	175
PB2-2000	1396	1043	818	681	484	401	340	187
PB2-2500	1745	1304	1021	851	604	501	425	232
PB2-3000	2095	1565	1225	1021	725	600	513	279
PB2-3850	2689	2009	1574	1310	930	770	657	360

Battery Model	Time in Minutes - Watts per cell to <b>1.67 VPC</b>					
	5	10	15	30	45	60
PB2-50	203	168	163	102	78	64
PB2-100	413	343	331	209	158	131
PB2-150	592	490	474	298	227	188
PB2-200	771	656	651	379	299	252
PB2-250	962	821	689	472	374	313
PB2-300	1152	984	825	567	448	376
PB2-375	1441	1229	1031	708	560	470
PB2-400	1536	1311	1101	754	597	502
PB2-450	1729	1474	1237	849	670	563
PB2-500	1923	1640	1378	944	746	628
PB2-575	2191	1869	1570	1078	850	716
PB2-600	2307	1967	1652	1133	895	753
PB2-625	2403	2049	1720	1180	932	785
PB2-750	2881	2457	2064	1415	1118	942
PB2-800	3077	2623	2203	1512	1194	1005
PB2-1000	3843	3278	2753	1889	1492	1255
PB2-1250	4804	4097	3440	2361	1864	1570
PB2-1500	5755	4909	4122	2827	2234	1879
PB2-1875	7207	6146	5162	3541	2796	2353
PB2-2000	7689	6557	5508	3777	2983	2512
PB2-2500	9608	8195	6883	4721	3729	3138
PB2-3000	11532	9835	8259	5666	4475	3767
PB2-3850	14800	12623	10600	7271	5742	4834

Battery Model	Time in Hours Watts per cell to <b>1.75 VPC</b>							
	2	3	4	5	8	10	12	24
PB2-50	35.5	26.5	20.8	17.3	12.3	10.2	8.7	4.7
PB2-100	72.3	54.1	42.4	35.4	25.1	20.8	17.7	9.7
PB2-150	109	81.1	63.6	53.0	37.6	31.1	26.6	14.5
PB2-200	145	109	85.1	70.9	50.3	41.7	35.6	19.5
PB2-250	182	136	106	88.6	62.9	52.1	44.5	24.4
PB2-300	218	163	128	106	75.4	62.5	53.3	29.1
PB2-375	272	204	160	133	94.3	78.1	66.6	36.4
PB2-400	291	218	170	141	100	83.2	70.8	38.8
PB2-450	327	244	191	159	113	93.6	79.7	43.7
PB2-500	364	272	213	177	126	104	88.8	48.6
PB2-575	415	308	243	202	143	119	101	55.3
PB2-600	436	326	254	213	151	125	106	58.4
PB2-625	454	339	265	220	157	130	111	60.8
PB2-750	546	408	319	266	188	156	133	72.8
PB2-800	582	434	341	284	201	167	142	77.7
PB2-1000	725	541	426	354	251	208	178	97.2
PB2-1250	907	677	532	443	314	260	221	121
PB2-1500	1089	813	639	530	378	313	266	146
PB2-1875	1363	1018	797	663	470	391	332	182
PB2-2000	1453	1085	851	709	503	417	354	194
PB2-2500	1816	1357	1062	886	629	521	443	242
PB2-3000	2180	1629	1275	1063	754	625	533	291
PB2-3850	2798	2090	1638	1364	967	801	684	375

Battery Model	Dimensions (mm) & weight (Kg)				Dimensions (Inches) & weight (lbs)				No. of Terminals	Internal Resistance mOhms	Maximum Charge Current	Short Circuit Current
	Length	Width	Height	Weight	Length	Width	Height	Weight				
PB2-50	161	50	166	3.8	6.34	1.97	6.54	8.8	2	2.1	10	509
PB2-100	171	72	205	5.6	6.73	2.83	8.07	17.7	2	2	20	1080
PB2-150	172	102	205	10	6.77	4.02	8.07	24.3	2	1.5	30	1550
PB2-200	173	111	329	14.2	6.81	4.37	12.95	30.9	2	0.5	40	1600
PB2-250	173	111	329	17	6.81	4.37	12.95	39.8	2	0.45	50	2000
PB2-300	171	151	330	19.7	6.73	5.94	12.99	46.4	2	0.4	60	2400
PB2-375	171	151	330	23.5	6.73	5.94	12.99	51.9	2	0.39	75	3000
PB2-400	211	176	329	27	8.31	6.93	12.95	59.7	4	0.36	80	3200
PB2-450	223	187	351	32	8.78	7.36	13.82	66.3	4	0.33	90	3600
PB2-500-1	211	176	329	32.3	8.3	6.93	12.95	70.7	4	0.3	100	4000
PB2-500-2	241	172	331		9.5	6.77	13.03					
PB2-575	223	187	351	36.5	8.78	7.36	13.82	77.4	4	0.29	115	4600
PB2-600	301	175	331	38	11.85	6.89	13.03	84.0	4	0.28	120	4800
PB2-625	241	172	331	39	9.49	6.77	13.03	103.9	4	0.25	125	5000
PB2-750	301	175	331	51	11.85	6.89	13.03	121.6	4	0.22	130	6000
PB2-800	410	175	330	52.5	16.14	6.89	12.99	126.0	8	0.2	160	6400
PB2-1000-1	410	175	330	63	16.14	6.89	13	139.2	8	0.16	200	7900
PB2-1000-2	475		328		18.7		12.91					
PB2-1250	475	175	328	78	18.70	6.89	12.91	172.4	8	0.13	250	10050
PB2-1500	401	351	342	103	15.79	13.82	13.46	221.0	8	0.11	300	11950
PB2-1875	401	351	342	125	15.79	13.82	13.46	276.3	8	0.1	375	15050
PB2-2000	491	351	344	132	19.33	13.82	13.54	291.7	8	0.09	400	16100
PB2-2500	491	351	344	175	19.33	13.82	13.54	386.8	8	0.08	500	19850
PB2-3000	712	353	341	211	28.03	13.90	13.43	464.1	8	0.08	600	24100
PB2-3850	712	353	341	261	28.03	13.90	13.43	576.8	8	0.07	770	30800

The graph shows extrapolated Service Life condition for Power plus batteries at different ambient temperatures. Clearly higher ambient temperatures will reduce service life.



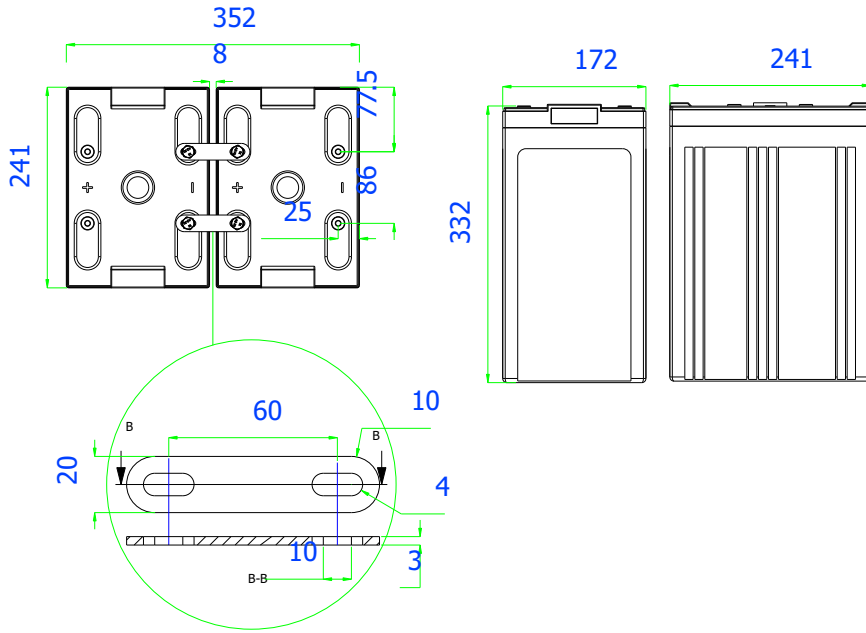
Temperature	Shelf Life
0 °C - 20 °C (32 °F - 68 °F)	12 Months
21 °C - 30 °C (69 °F - 86 °F)	9 Months
31 °C - 40 °C (87 °F - 104 °F)	5 Months
41 °C - 50 °C (105 °F - 1122 °F)	2.5 Months

### CHARGING CHARACTERISTICS

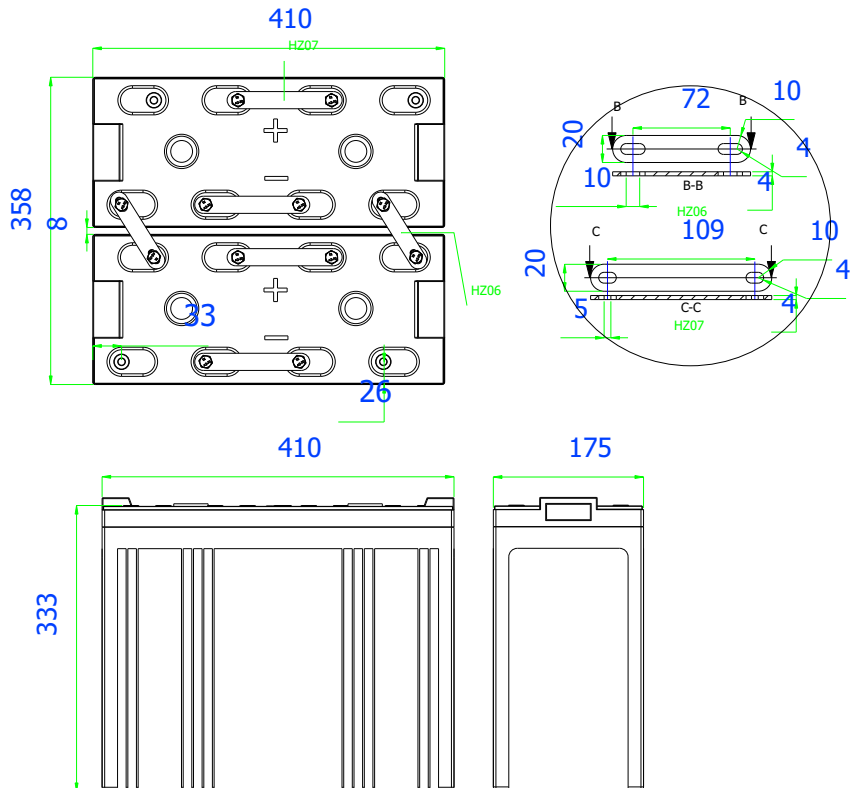
**Floating** - The optimum float voltage for a battery is temperature dependant, at 15 - 24°C the recommended value is 2.27 - 2.30V. It is recommended that battery installation sites are temperature controlled, however float voltage can be increased or decreased to compensate for temperature variations. Adjustment is calculated at +/- 3 mV per degree C.

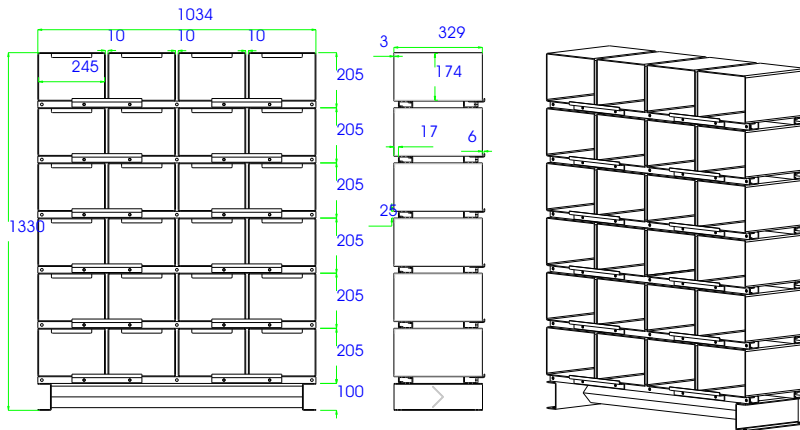
The most suitable charging method for battery life and performance is the constant voltage method with a limited initial current, usually limited to a maximum of  $C_{20}/4$ .

# Typical Battery Layouts



The sample battery layout drawings shown are available for all models showing terminal locations and intercell and inter battery connections. We can provide custom layouts to customers with an existing installation or footprint limitations. Battery spacing is flexible to allow greater or smaller spacing between the cells, indeed our standard connector has 10mm of travel allowing battery spacing from 3 to 13 mm. Close spacing is only recommended in temperature controlled environments with forced cooling. Connectors and terminal covers are supplied as standard.

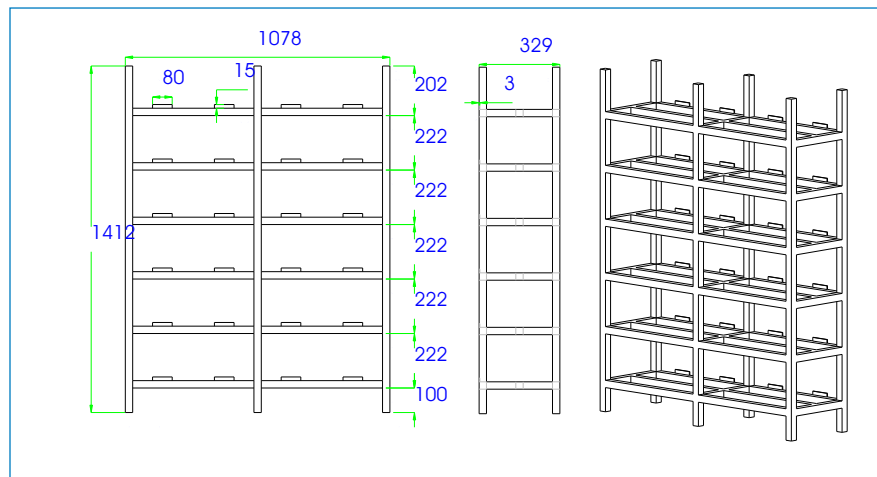




RACKING OPTIONS - Many racking options are available from Power Plusmpany. The favored style in Europe is the open rack, which can be designed to suit an existing foot print or minimised to fit the minimum possible space. Rack construction is from heavy duty steel section with welded joints or alternatively made in kit form for remote assembly.

A modular rack is also available for models PB2-200 up to PB2-1250. Box construction is from 3mm steel sheet, interlocking modules are slotted together and bolted in place, bolted front retainers hold the batteries in place resulting in a seismic zone 4 classified rack.

PB2-1500 and above, due to their size and weight are more suited to vertical orientation - racking can be supplied to minimise the footprint by the use of multiple tiers. Battery retainers can be utilised to allow seismic zone 4 classification. Racks can be supplied with welded joints or as kit form for remote assembly.





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