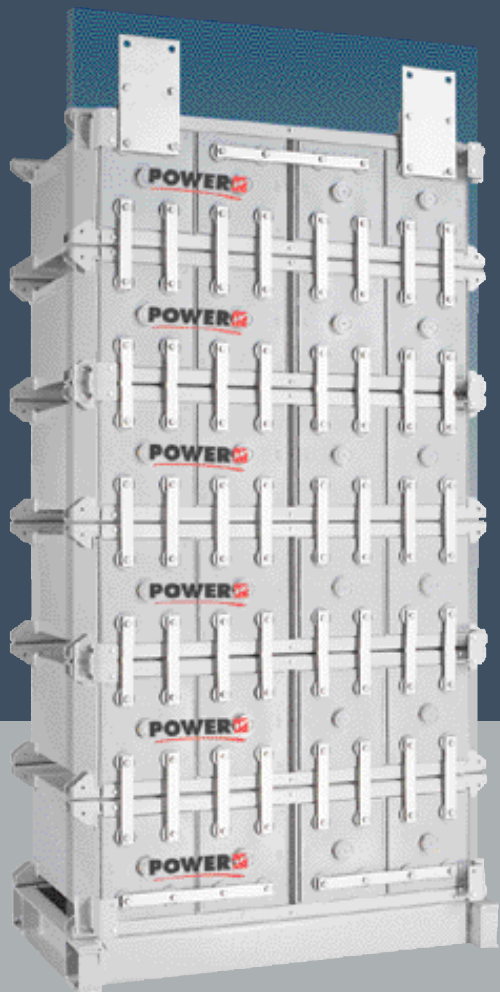


BATTERY SYSTEM SOLUTIONS



The most comprehensive range of VRLA battery systems designed for standby applications that require reliable power and long life



CV High Capacity Modular Batteries

20 Year Design Life
210 AH to 5040 AH

POWER 
Power for a World of Applications



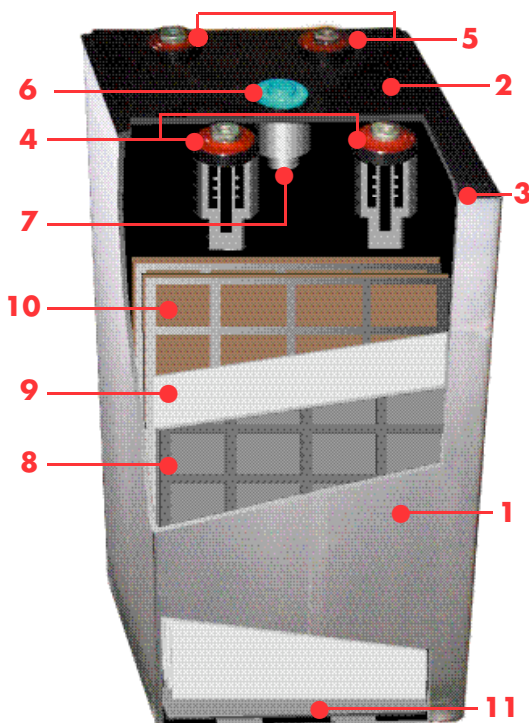
Applications

- Telecom, wired and wireless
- UPS
- Switchgear
- Renewable Energy
- Emergency Lighting

Features and Specifications

- Design Life: 20 years in float service at 77°F (25°C).
- Cell Type: VRLA, with AGM method of electrolyte immobilization.
- Grids: **Positive** - proprietary, lead calcium. **Negative** - lead calcium.
- Container and cover: impact resistant polypropylene, with FR to UL 94 V0 optional.
- Terminals: - 100% copper, threaded for an inserted bolt, size M8.
- Torque value is 150 in.-Lbs. / 16.8 N-m.
- Terminals per cell: CV 210-630; 2 terminals per cell.
CV 735-1365; 4 terminals per cell.
CV 1470-1680; 6 terminals per cell.
- Post Seals: 2 part epoxy, 2 stage application.
- Jar to cover seal: heat bonding method.
- Leak test Method: 100% of cells, with pressurized hydrogen.
- Safety Valve: opens at 2.5 psi, closes at 2 psi, with flame arrestor in each valve. The Bunsen design is used.
- Patented catalyst in each cell: improves life by lowering float current, reducing grid corrosion and reducing water loss. Its effects are even more apparent in higher temperatures.
- Separators: microporous glass mat.
- Plate Protection: plate growth without damage is allowed by a collapsible bridge installed in the bottom of the container.
- Electrolyte: sulfuric acid solution, 1.300 s.g, when fully charged.
- Float Voltage: 2.25 volts per cell at 77°F (25°C).
- Self-discharge Rate: 2% per month at 77°F (25°C).
- Intercell Connectors: plated copper bussbars.
- Modules: - Stackable to 8 high while certified to UBC seismic zone 4.
- Welded steel construction.
- Internal air passages aid heat dissipation, ensure consistent cell temperatures.
- Coated with an acid resistant powdered epoxy.
- Unique design to allow safe, rapid and easy removal of cells.
- Cell fronts are protected with a transparent, FR plastic cover.

Cell Details



- 1- **Container, high impact polypropylene, FR optional**
- 2- **Cover, high impact polypropylene, FR optional**
- 3- **Thermal welded container-to-cover seal**
- 4- **Positive Terminal, sealed with epoxy**
- 5- **Negative Terminal, sealed with epoxy**
- 6- **Low pressure safety valve, with flame arrestor**
- 7- **Container for catalyst material**
- 8- **Negative plate, lead calcium grid alloy**
- 9- **Separator, woven glass mat**
- 10- **Positive plate, proprietary lead calcium**
- 11- **Plate support to allow positive plate expansion**

About the Catalyst Valve

- Effect on the cells/battery
 - Lowers the float current draw
 - Reduces the rate of positive grid corrosion
 - Converts gases created inside the cell back to water, thus enabling the recombination process to function at maximum efficiency
 - Prevents the negative plate from becoming discharged while on float charge thus maintaining full cell capacity
 - Greatly reduces the loss of water through the valve, preventing early failure from cell dryout
- It will not allow excessive heat to build if the battery is charged at too high a rate. It will allow the gases to bypass the catalyst if the temperature reaches a set level
- The catalyst active material will last the lifetime of the battery under normal operating conditions

Power CV Line General Specifications

Module ¹			Dimension inches / millimeters			Weight ⁴
Model	AH @ C/8	Voltage	Width	Depth ²	Height ³	lbs / kg
6 CV 210	210	12	18.3 / 465	27.1 / 688	10.75 / 274	301 / 137
6 CV 315	315	12	22.8 / 579	27.1 / 688	10.75 / 274	387 / 176
6 CV 420	420	12	27.3 / 693	27.1 / 688	10.75 / 274	487 / 221
6 CV 525	525	12	31.8 / 818	27.1 / 688	10.75 / 274	587 / 266
6 CV 630	630	12	36.3 / 922	27.1 / 688	10.75 / 274	686 / 311
6 CV 735	735	12	40.8 / 1036	27.1 / 688	10.75 / 274	797 / 362
4 CV 840	840	8	31.38 / 797	27.1 / 688	10.75 / 274	598 / 272
4 CV 945	945	8	34.38 / 873	27.1 / 688	10.75 / 274	665 / 302
4 CV 1050	1050	8	37.38 / 949	27.1 / 688	10.75 / 274	731 / 332
4 CV 1155	1155	8	40.38 / 1026	27.1 / 688	10.75 / 274	797 / 362
4 CV 1260	1260	8	43.38 / 1102	27.1 / 688	10.75 / 274	864 / 392
3 CV 1365	1365	6	37 / 940	27.1 / 688	10.75 / 274	717 / 326
3 CV 1470	1470	6	39.25 / 997	27.1 / 688	10.75 / 274	772 / 351
3 CV 1575	1575	6	41.50 / 1054	27.1 / 688	10.75 / 274	822 / 373
3 CV 1680	1680	6	43.75 / 1111	27.1 / 688	10.75 / 274	872 / 396
2 CV 1890	1890	4	34.38 / 873	27.1 / 688	10.75 / 274	665 / 302
2 CV 2100	2100	4	37.38 / 949	27.1 / 688	10.75 / 274	731 / 332
2 CV 2310	2310	4	40.38 / 1026	27.1 / 688	10.75 / 274	797 / 362
2 CV 2520	2520	4	43.38 / 1102	27.1 / 688	10.75 / 274	864 / 392
1 CV 2835	2835	2	28 / 711	27.1 / 688	10.75 / 274	498 / 226
1 CV 3150	3150	2	30.25 / 768	27.1 / 688	10.75 / 274	548 / 249
1 CV 3465	3465	2	32.5 / 825	27.1 / 688	10.75 / 274	598 / 271
1 CV 3780	3780	2	34.75 / 882	27.1 / 688	10.75 / 274	648 / 294
1 CV 4095	4095	2	37 / 940	27.1 / 688	10.75 / 274	717 / 326
1 CV 4410	4410	2	39.25 / 997	27.1 / 688	10.75 / 274	772 / 351
1 CV 4725	4725	2	41.50 / 1054	27.1 / 688	10.75 / 274	822 / 373
1 CV 5040	5040	2	43.75 / 1111	27.1 / 688	10.75 / 274	872 / 396

¹**Battery Model:** To designate the model of the battery system, specify the number of cells in the system, followed by the cell type: i.e. 24CV1050 would be a 24 cell, 48 volt battery with a capacity of 1050 AH at the 8 hours rate to 1.75 VPC.

²**Overall depth:** The module depth includes the module cover. The overall depth including the base assembly is 27.1" / 688 mm.

³**Overall height:** To determine the overall height of a stack, add the total number of module heights plus 4" / 102 mm for the base assembly and 6" / 152.4 mm for the terminal assembly.

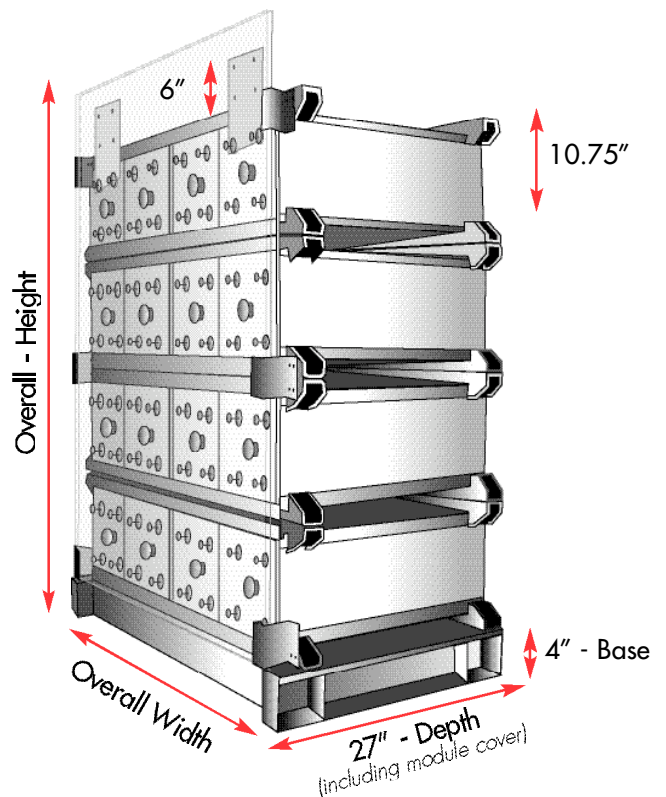
⁴**Total Weight/Stack** = weight per module X number of modules/Stack + 23 lbs for base



Battery Systems Includes :

- Cells**
- Modules**
- Connectors**
- Mounting Base**
- Module Covers**
- Terminal Assembly**
- Lifting Strap**
- No Oxide Grease**
- Cell Numbers**
- Layout Drawing/BOM**
- Operating Manual**

**Modules are shipped 3 or 4 per pallet,
depending on size and weight.**



CELL DISCHARGE RATE IN AMPS TO FINAL VOLTAGES INDICATED AT 77°F / 25°C

Cell Model	AH C/8	End Volts	Hours									
			0.5	1	2	3	4	6	8	10	12	24
CV 210	210	1.75	141.1	107.1	79	58	48	33	26	22	18	10
		1.80	137	104	76	56	46	32	25	21	17	10
		1.84	133	100	72	54	45	31	24	20	17	9
CV 315	315	1.75	212	161	118	87	72	50	40	32	27	16
		1.80	205	156	113	84	69	48	38	31	26	15
		1.84	199	99	107	82	68	47	37	30	25	14
CV 420	420	1.75	282	214	158	116	96	66	53	43	36	21
		1.80	273	207	151	112	92	64	51	42	35	20
		1.84	264	201	144	109	91	62	49	40	34	19
CV 525	525	1.75	371	268	197	145	120	83	66	54	45	26
		1.80	359	259	189	141	115	80	64	52	44	25
		1.84	348	252	179	136	114	78	61	51	43	24
CV 630	630	1.75	445	321	237	174	144	100	79	65	56	31
		1.80	430	311	227	169	138	96	76	63	55	30
		1.84	417	302	215	163	137	93	74	62	53	29
CV 735	735	1.75	519	375	276	203	168	117	92	76	65	36
		1.80	502	363	265	197	161	112	89	73	64	35
		1.84	487	352	251	190	160	108	86	72	62	34
CV 840	840	1.75	584	428	316	232	192	133	105	86	75	42
		1.80	572	414	303	225	184	129	102	84	73	41
		1.84	557	403	287	217	182	124	98	82	71	39
CV 945	945	1.75	666	482	355	261	216	150	118	97	84	47
		1.80	644	466	341	253	207	145	114	94	82	46
		1.84	626	453	321	244	205	141	111	92	80	44
CV 1050	1050	1.75	740	536	395	290	240	167	131	108	93	52
		1.80	716	518	379	282	230	161	127	105	91	51
		1.84	696	503	355	271	228	155	123	103	89	49
CV 1155	1155	1.75	814	589	434	319	264	183	144	119	103	57
		1.80	791	572	417	310	253	177	140	115	100	56
		1.84	765	553	395	298	251	171	135	113	98	54
CV 1260	1260	1.75	888	643	474	348	288	200	157	130	112	62
		1.80	859	621	455	338	276	193	153	126	109	61
		1.84	836	604	431	325	273	186	148	123	107	59
CV 1365	1365	1.75	963	696	513	377	312	217	171	140	121	68
		1.80	931	673	493	366	299	209	165	136	119	66
		1.84	905	655	467	352	296	202	160	134	116	64
CV 1470	1470	1.75	1037	750	553	405	336	233	184	151	131	73
		1.80	1003	725	531	393	322	225	178	147	128	71
		1.84	974	705	503	378	319	217	172	144	125	69
CV 1575	1575	1.75	1111	803	592	435	360	250	197	162	140	78
		1.80	1074	777	569	422	345	241	191	157	137	76
		1.84	1044	755	539	407	342	233	185	154	134	73
CV 1680	1680	1.75	1185	857	632	464	384	267	210	173	149	83
		1.80	1146	829	606	451	369	257	203	168	146	82
		1.84	1114	805	575	434	365	248	195	164	143	78
CV 1890	1890	1.75	1333	964	711	522	432	300	236	194	168	94
		1.80	1289	932	682	507	415	289	229	189	164	92
		1.84	1253	906	647	488	410	280	222	185	160	88
CV 2100	2100	1.75	1481	1071	790	580	480	333	262	216	187	104
		1.80	1431	1035	758	563	461	322	254	210	182	102
		1.84	1391	1006	719	542	456	310	246	207	178	98
CV 2310	2310	1.75	1629	1178	868	638	528	366	288	238	206	114
		1.80	1583	1144	834	620	506	354	280	230	200	112
		1.84	1530	1107	790	596	502	342	270	226	196	108
CV 2520	2520	1.75	1777	1285	948	696	576	400	315	259	224	125
		1.80	1669	1243	910	676	553	386	305	252	219	122
		1.84	1670	1208	882	651	547	373	295	242	214	118
CV 2835	2835	1.75	1999	1446	1066	783	648	450	354	292	252	141
		1.80	1933	1397	1023	760	622	434	343	283	246	138
		1.84	1879	1359	964	732	616	423	332	277	241	132
CV 3150	3150	1.75	2222	1607	1185	870	700	500	394	324	280	156
		1.80	2149	1554	1137	845	691	482	381	315	274	153
		1.84	2088	1510	1078	813	684	466	369	308	268	147
CV 3465	3465	1.75	2444	1767	1304	957	792	550	433	356	308	172
		1.80	2363	1709	1252	929	760	531	420	346	301	168
		1.84	2297	1661	1187	895	752	513	406	339	294	162
CV 3780	3780	1.75	2666	1928	1422	1044	864	600	472	389	336	187
		1.80	2578	1864	1365	1014	829	579	458	377	328	184
		1.84	2506	1812	1294	976	821	559	443	370	321	177
CV 4095	4095	1.75	2888	2088	1540	1131	936	650	512	421	364	203
		1.80	2793	2020	1479	1098	898	627	496	409	356	199
		1.84	2716	1964	1402	1057	889	606	480	401	348	191
CV 4410	4410	1.75	2260	2249	1659	1131	1008	700	551	454	392	219
		1.80	3008	2175	1592	1098	968	675	534	440	383	214
		1.84	2923	2114	1509	1057	957	652	517	432	375	206
CV 4725	4725	1.75	3333	2410	1777	1305	1080	750	591	486	420	234
		1.80	3222	2330	1706	1267	1037	724	572	472	402	230
		1.84	2283	2265	1617	1220	1026	699	554	463	401	221
CV 5040	5040	1.75	3555	2570	1896	1392	1152	800	630	518	448	250
		1.80	3437	2485	1820	1352	1106	772	610	503	438	245
		1.84	3341	2416	1725	1301	1094	746	591	493	428	235

CELL DISCHARGE RATE IN WATTS TO FINAL VOLTAGES INDICATED AT 77°F / 25°C

Cell Model	End Volts	Minutes						Hours				
		5	10	15	20	30	45	1	1.5	2	3	4
CV 210	1.67	450	406	388	335	265	231	204	173	-	-	-
	1.75	427	387	369	325	258	224	199	169	150	110	92
CV 315	1.67	674	610	581	502	398	347	306	259	-	-	-
	1.75	641	581	553	487	388	337	298	254	225	165	138
CV 420	1.67	899	813	775	670	530	462	408	346	-	-	-
	1.75	854	774	738	649	517	449	398	338	300	220	184
CV 525	1.67	1124	1016	969	837	663	578	510	432	-	-	-
	1.75	1068	968	922	812	646	561	497	423	375	275	230
CV 630	1.67	1349	1219	1163	1005	796	694	612	518	-	-	-
	1.75	1282	1162	1107	974	775	673	597	508	450	330	276
CV 735	1.67	1574	1422	1357	1172	928	809	714	605	-	-	-
	1.75	1495	1355	1291	1136	904	785	696	592	525	385	322
CV 840	1.67	1798	1626	1550	1340	1061	925	816	691	-	-	-
	1.75	1709	1549	1476	1299	1034	898	796	677	600	440	368
CV 945	1.67	2023	1829	1744	1507	1193	1037	918	778	-	-	-
	1.75	1922	1742	1660	1461	1163	1010	895	761	675	495	414
CV 1050	1.67	2248	2032	1938	1675	1326	1153	1020	864	-	-	-
	1.75	2136	1936	1845	1624	1292	1122	995	846	750	550	460
CV 1155	1.67	2473	2235	2132	1842	1459	1268	1122	950	-	-	-
	1.75	2350	2130	2029	1786	1421	1234	1094	931	825	605	506
CV 1260	1.67	2698	2438	2326	2009	1591	1384	1224	1037	-	-	-
	1.75	2563	2323	2213	1948	1550	1346	1193	1015	900	660	552
CV 1365	1.67	2922	2642	2519	2177	1724	1499	1326	1123	-	-	-
	1.75	2777	2517	2398	2111	1680	1459	1293	1100	975	715	598
CV 1470	1.67	3147	2845	2713	2344	1856	1615	1428	1210	-	-	-
	1.75	2990	2710	2582	2273	1809	1571	1392	1184	1050	770	644
CV 1575	1.67	3372	3048	2907	2512	1989	1731	1530	1296	-	-	-
	1.75	3204	2904	2767	2435	1938	1683	1492	1269	1125	825	690
CV 1680	1.67	3597	3251	3101	2679	2122	1846	1632	1382	-	-	-
	1.75	3418	3098	2951	2598	2067	1795	1591	1354	1200	880	736
CV 1890	1.67	4046	3658	3488	3014	2387	2081	1836	1555	-	-	-
	1.75	3845	3485	3320	2922	2326	2020	1790	1523	1350	990	828
CV 2100	1.67	4496	4064	3876	3349	2652	2312	2040	1728	-	-	-
	1.75	4272	3872	3689	3247	2584	2244	1989	1692	1500	1100	92
CV 2310	1.67	4946	4470	4264	3684	2917	2543	2244	1901	-	-	-
	1.75	4699	4259	4058	3572	2842	2468	2188	1861	1650	1210	1012
CV 2520	1.67	5395	4877	4651	4019	3182	2774	2448	2074	-	-	-
	1.75	5126	4646	4427	3896	3101	2693	2387	2030	1800	1320	1104
CV 2835	1.67	6070	5486	5233	4521	3580	3121	2754	2333	-	-	-
	1.75	5767	5227	4980	4383	3488	3029	2685	2284	2025	1485	1242
CV 3150	1.67	6744	6096	5814	5024	3978	3468	3060	2592	-	-	-
	1.75	6408	5808	5534	4871	3876	3366	2984	2538	2250	1650	1380
CV 3465	1.67	7418	6706	6395	5526	4376	3815	3366	2851	-	-	-
	1.75	7049	6389	6087	5358	4264	3703	3282	2792	2475	1815	1518
CV 3780	1.67	8093	7315	6977	6028	4774	4162	3672	3110	-	-	-
	1.75	7690	6970	6640	5845	4651	4039	3580	3046	2700	1980	1656
CV 4095	1.67	8767	7925	7558	6531	5171	4508	3978	3370	-	-	-
	1.75	8330	7550	7194	6332	5039	4376	3879	3299	2925	2145	1794
CV 4410	1.67	9442	8534	8140	7033	5569	4855	4284	3629	-	-	-
	1.75	8971	8131	7747	6819	5426	4712	4181	3553	3150	2310	1932
CV 4725	1.67	10116	9144	8721	7535	5967	5202	4590	3888	-	-	-
	1.75	9612	8712	8300	7306	5814	5049	4475	3888	3375	2475	2070
CV 5040	1.67	10790	9754	9302	8038	6365	5549	4896	4147	-	-	-
	1.75	10253	9293	8854	7793	6202	5386	4774	4061	3600	2640	2208



MARKET: Power Battery product lines cover a wide range of sophisticated applications from telecommunications and computer backup, to Broadband CATV and emergency lighting. We design manufacture and assemble standard and customized battery cabinets and rack systems for clients' individual requirements.

LOCATIONS: Power Battery has three major corporate locations around the world. One in Paterson, New Jersey to meet the demands of the U.S.A., Latin America and the Pacific Rim; one in Iberville, Quebec to cover the Canadian market and a third in Romsey, England which covers the European, Middle East and African markets. Our Corporate headquarters, R&D center, manufacturing and distribution warehouse are located in Paterson. The Iberville facility is a high-tech automated manufacturing center, and has the distinction of being the only battery plant in Canada manufacturing V.R.L.A. batteries. The UK sales office also has a stocking warehouse with systems capability and service. Visit our website at www.powerbattery.com for a complete listing of our worldwide distributors.

MISSION: Our mission is to provide a reliable and competitive product coupled with technical expertise to meet the requirements of an increasingly demanding market place.

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POWER 
Power for a World of Applications