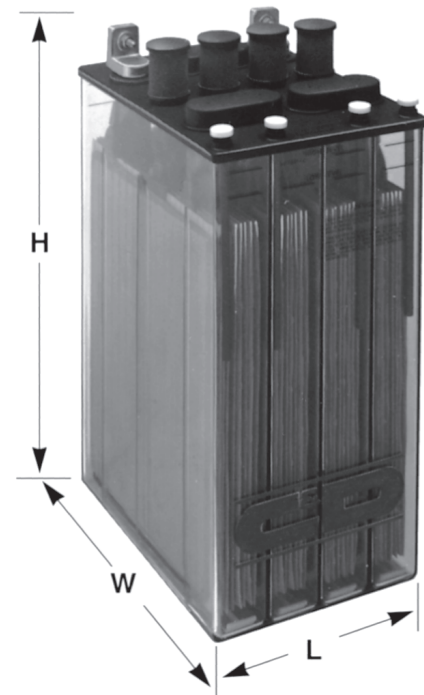




4 LCY Lead-Calcium

FOR SWITCHGEAR APPLICATIONS
CAPACITIES FROM 248 TO 669
AMPERE-HOURS

C&D Technologies' flooded batteries are engineered to provide superior performance and reliability over the life of the product. These batteries are designed using proprietary techniques and quality components and materials for reduced maintenance and extended battery life.



APPLICATIONS

- **Electric Power Generation Facilities**
- **Electric Utility Substations**
- **Emergency Systems**
- **Manufacturing Facilities**
 - **Assembly Lines**
 - **Process Controls**
- **Petrochemical processing plants**
- **Pipelines**

FEATURES & BENEFITS

- High integrity bottom pour positive grid casting assures 20 year float life
- Four-cell design offers reduced length for optimum space utilization (shorter racks)
- Fewer bolted connectors per battery string reduce installation and maintenance costs
- Flame-retardant covers enhance battery plant safety
- Suspended positive plate permits free growth without pressure on jar and cover
- Snap-on intercell connector insulating covers
- Exposed terminals allow measurement of individual cell voltages
- 20 year environmental and seismic qualification
- Transparent container allows visual inspection of plates
- Electrical testing to 100 percent capacity assures performance of every battery

SPECIFICATIONS

Plates	Height	Width	Thickness
Positive	15 in. (381 mm)	12 in. (305 mm)	0.250 in. (6.4 mm)
Negative	15 in. (381 mm)	12 in. (305 mm)	0.180 in. (4.6 mm)
Outside negative	15 in. (381 mm)	12 in. (305 mm)	0.130 in. (3.3 mm)
Electrolyte height above plates	2.88 in. (73 mm)		
Sediment space	0.63 in. (16 mm)		
Electrolyte @ 77°F (25°C)	Sulfuric acid, 1.215 specific gravity nominal		
Float voltages	2.20-2.25 volts per cell		
Container†	Thermoplastic, transparent		
Cover	High impact, flame retardant thermoplastic (PVC) with tongue and groove seal. Flammability ratings: UL 94-V0; LOI>33; ASTM D-635 self extinguishing		
Separator	Microporous with fibrous glass mat		
Safety vent system	Flame arrestor type with dust cover		
Terminals 4LCY-5 and 7 4LCY-9 and 11	Two 0.5 in. (12.7 mm) x 1.38 in. (35.1 mm) cast lead terminals Two 1 in. (25 mm) square posts per unit		
Withdrawal tubes	One per cell		
Intercell connectors 4LCY-5 and 7 4LCY-9 and 11	Welded connectors Bolt-on connectors–5/16-in threaded-copper inserts		
†Optional Container	Transparent, flame-retardant polycarbonate. Flammability ratings: UL 94-HB2; ASTM D-635 self-extinguishing		
Special voltages	Models with dummy cells are available		

WHAT DOES THE C&D'S BATTERY SELECTION APPLICATION DO?

WWW.CDSTANDBYPOWER.NET

The C&D's Battery Selection Application allows users to quickly calculate many values essential for the proper selection of standby battery product via an online application. This allows users to access all the information they need to size and select the proper battery without having to download and install software.

This includes the ability to:

- Select batteries based on complex step loads and generate IEEE-485 Sizing Work Sheets.
- Select batteries based on constant current loads.
- Select batteries based on constant power loads.
- View and customize rating tables.
- Do battery run time analysis.
- Calculate the hydrogen evolution rate.

Final Volts	Models	Nominal AH Rating*	Nominal rates at 77°F (25°C) in 1.215 Nominal SG. (includes connector voltage drop)								
			Amperes								
			1 min	15 min	30 min	1 hr	2 hr	3 hr	4 hr	5 hr	8 hr
1.75	4LCY-5	248	395	262	206	148	96	71	56	47	31
	4LCY-7	369	575	392	303	214	139	103	83	69	46
	4LCY-9	490	747	519	392	274	178	134	108	91	61
	4LCY-11	608	922	642	481	335	219	165	133	112	76
1.78	4LCY-5	238	348	236	189	138	91	68	54	45	30
	4LCY-7	355	505	353	278	201	132	99	79	66	44
	4LCY-9	473	656	467	361	257	169	128	104	87	59
	4LCY-11	587	809	579	443	314	207	157	128	108	73
1.81	4LCY-5	230	306	211	173	130	87	65	52	43	29
	4LCY-7	342	438	317	256	189	126	95	76	64	43
	4LCY-9	457	569	419	333	242	162	123	100	84	57
	4LCY-11	568	700	520	409	295	198	151	123	104	71
1.85	4LCY-5	218	238	184	152	116	79	60	48	41	27
	4LCY-7	327	343	270	222	166	113	87	71	60	41
	4LCY-9	438	466	363	302	230	157	120	97	81	55
	4LCY-11	545	570	451	370	276	188	144	118	99	68

Data based on discharge directly from a 72-hour float condition per IEEE-450 procedures.

* 8 hour ratings

Final Volts	Models	Nominal AH Rating*	Nominal rates at 77°F (25°C) in 1.250 Nominal SG. (includes connector voltage drop)								
			Amperes								
			1 min	15 min	30 min	1 hr	2 hr	3 hr	4 hr	5 hr	8 hr
1.75	4LCYC-5	273	434	288	227	163	105	78	62	51	34
	4LCYC-7	424	629	432	331	235	154	116	93	78	53
	4LCYC-9	539	822	571	432	302	196	148	119	100	67
	4LCYC-11	669	1014	707	530	369	241	182	147	123	84
1.78	4LCYC-5	265	379	260	208	152	100	75	60	50	33
	4LCYC-7	393	554	388	306	220	145	109	87	73	49
	4LCYC-9	518	722	514	397	283	186	141	114	96	65
	4LCYC-11	643	890	636	488	346	228	173	140	118	80
1.81	4LCYC-5	252	331	233	191	143	96	72	57	48	32
	4LCYC-7	377	480	348	281	207	138	104	84	70	47
	4LCYC-9	502	625	461	365	266	178	135	109	92	63
	4LCYC-11	624	770	571	449	325	218	166	135	114	78
1.85	4LCYC-5	241	264	203	171	133	91	69	55	46	30
	4LCYC-7	361	388	303	253	194	132	100	81	67	45
	4LCYC-9	481	508	399	330	248	170	130	105	89	60
	4LCYC-11	599	627	496	407	304	207	159	129	109	75

Data based on discharge directly from a 72-hour float condition per IEEE-450 procedures.

* 8 hour ratings

Type of battery	Cells per unit	Plates per cell	Overall Dimensions			Approx. wt.(lbs.) (kgs)		Electrolyte per cell (lbs.) (kgs)
			L (in.) (mm)	W (in.) (mm)	H (in.) (mm)	Net filled	Dom packed	
4LCY-5	4	5	10.08 256	14.13 359	22.75 578	253 114.8	288 121.6	20 9.1
4LCY-7	4	7	10.08 256			310 140.6	325 147.4	18 8.2
4LCY-9	4	9	15.00 381			395 179.2	415 188.2	25 11.3
4LCY-11	4	11	15.00 381			450 204.1	470 213.2	23 10.4

Notes: Electrolyte weighs approximately 10 lbs. per gallon (1.210 kgs per liter). *Data based on discharge from float at 77°F (25°C) for a minimum of 72 hours.

RACK SPECIFICATIONS

Battery	TWO-STEP Model RDB-903-(L) Width: 44.8 in. (1138 mm) Height: 52.3 in. (1328 mm)					TWO-TIER Model RDB-901-(L) Width: 24.0 in. (610 mm) Height: 65.8 in. (1671 mm)					THREE-TIER Model RDB-902-(L) Width: 25.0 in. (635 mm) Height: 94.8 in. (2408 mm)				
	Length (L)		Weight		No. req'd	Length (L)		Weight		No. req'd	Length (L)		Weight		No. req'd
	ft.	mm	lbs.	kg		ft.	mm	lbs.	kgs		ft.	mm	lbs.	kgs	
60-CELL BATTERY															
4LCY-5 4LCY-7	7	2134	285	130	1	7	2134	280	127	1	5	1524	265	120	1
4LCY-9 4LCY-11	11	3353	400	182	1	11	3353	380	173	1	7	2134	400	182	1

- Notes:
- For more information on racks see brochure 12-560.
 - Rack lengths for other than 60-cell batteries can be calculated by the formula: Number of cells per tier or step X (L+0.5)-0.5 = total rack length (Where "L" is length of cell.) Where dimensions are critical, check with C&D engineering.
 - Rack width does not include thickness of crossbracing, increase width by 0.5 in. (12.7 mm) for crossbracing when this dimension is critical.
 - Height measured from base to top terminal of upper tier battery.