

# DCU LEAD-CALCIUM DU LEAD-ANTIMONY

### FOR SWITCHGEAR AND CONTROL APPLICATIONS

Capacities from 50 to 200 Ampere-hours

C&D Technologies' Power Systems Division 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 Utility Distribution Substations
- · Railway Signals
- Emergency Systems
- · Manufacturing Facilties
  - Assembly Lines
  - Process Controls
- · Petrochemical processing plants
- Pipelines

#### **FEATURES & BENEFITS**

- Capacities from 50 to 200 Ampere-hours
- Terminals accessible for measurement of individual cell voltages
- Transparent container allows visual inspection of plates
- Electrical capacity testing on every cell prior to shipping assures performance of every battery upon delivery
- 20-year environmental and seismic qualification (calcium) for nuclear safety related application.
- Flame-arrester with fill funnel and dust cover
- Two- and three-cell units in most sizes

#### **SPECIFICATIONS**

Plates	Height	Width	Thickness				
Positive	5.88 in (149 mm)	5.63 in (143 mm)	0.266 in (6.76 mm)				
Negative	5.88 in (149 mm)	5.63 in (143 mm)	0.170 in (4.32 mm)				
Outside Negative	5.88 in (149 mm)	5.63 in (143 mm)	0.110 in (2.79 mm)				
Electrolyte height above plates	1.75 in (45 mm) except 11 plate, 1.63 in (41 mm)						
Sediment space	0.5 in (13 mm) except 11 plate, 0.56 in (14 mm)						
Electrolyte @ 77°F (25°C)	Sulfuric acid, 1.215 specific gravity nominal						
Float voltages	2.21 - 2.22 volts per cell (calcium); 2.15 - 2.17 volts per cell (antimony)						
Container	Thermoplastic, transparent						
Cover	High-impact thermoplastic						
Separator	Microporous with fibrous glass mat						
Safety Vent Systems	Flame-arrester type with dust cover						
Terminals							
DCU/DU (5 through 11)	Two flag terminals, standard	Two flag terminals, standard					
DCU/DU (13 through 17)	Two, 0.75 in (19.1 mm) square posts						

Additional ratings and application information is available in the Battery Selection Program at www.cdstandbypowercom.net.





#### **RATINGS TABLE: AMPERES**

		8 hr Amp-Hr	Nominal Rates @ 77°F (25°C) and 1.215 Specific Gravity (includes connector voltage drop)									
FV/Cell	Models	Ratings*	1 min	15 min	30 min	1 hr	2 hr	3 hr	4 hr	6 hr	8 hr	12 hr
1.75	DCU/DU-5	50	74.7	49.8	37.7	26.0	16.8	12.7	10.4	7.7	6.2	4.4
	DCU/DU-7	75	112.1	74.7	56.6	39.1	25.1	19.1	15.6	11.6	9.3	6.7
	DCU/DU-9	100	149.5	99.6	75.5	52.1	33.5	25.5	20.8	15.4	12.3	8.9
	DCU/DU-11	120	190.9	127.1	96.0	66.2	40.8	30.1	24.5	18.3	14.8	10.8
	DCU/DU-13	150	224.2	149.4	113.2	78.1	50.3	38.2	31.2	23.1	18.5	13.3
	DCU/DU-17	200	299.0	199.2	151.0	104.2	67.0	50.9	41.6	30.8	24.7	17.8
	DCU/DU-5	46	58.9	41.6	32.7	23.5	15.3	11.7	9.6	7.2	5.7	4.1
1.81	DCU/DU-7	69	88.4	62.4	49.1	35.3	23.0	17.6	14.4	10.8	8.6	6.2
	DCU/DU-9	92	117.8	83.1	65.4	47.0	30.7	23.5	19.3	14.3	11.5	8.3
	DCU/DU-11	110	150.5	106.1	83.3	59.7	37.4	27.8	22.7	17.0	13.8	10.1
	DCU/DU-13	138	176.7	124.7	98.2	70.5	46.0	35.2	28.9	21.5	17.2	12.4
	DCU/DU-17	184	235.6	166.3	130.9	94.0	61.3	47.0	38.5	28.7	23.0	16.5
	DCU/DU-5	43	47.0	36.1	28.6	20.9	14.3	11.1	9.1	6.8	5.4	3.9
	DCU/DU-7	65	70.5	54.1	42.9	31.3	21.4	16.6	13.6	10.2	8.1	5.8
1.85	DCU/DU-9	86	94.0	72.2	57.2	41.8	28.5	22.1	18.2	13.5	10.8	7.7
	DCU/DU-11	102	119.3	92.4	72.5	51.9	34.8	26.6	21.8	16.0	12.7	9.1
	DCU/DU-13	130	141.0	108.3	85.7	62.6	42.8	33.2	27.3	20.3	16.2	11.6
	DCU/DU-17	173	187.9	144.4	114.3	83.5	57.1	44.2	36.4	27.1	21.6	15.5
	DCU/DU-5	39	38.3	30.1	24.5	18.4	12.8	10.0	8.2	6.2	4.9	3.5
	DCU/DU-7	59	57.4	45.1	36.7	27.6	19.2	15.0	12.4	9.2	7.4	5.3
1.88	DCU/DU-9	79	76.6	60.1	49.0	36.8	25.6	20.0	16.5	12.3	9.9	7.1
	DCU/DU-11	94	95.3	77.2	62.2	45.4	30.9	23.9	19.7	14.7	11.7	8.4
	DCU/DU-13	118	114.9	90.2	73.5	55.2	38.4	30.0	24.7	18.5	14.8	10.6
	DCU/DU-17	158	153.2	120.2	98.0	73.6	51.2	39.9	33.0	24.6	19.7	14.1

Additional ratings and application information is available in the Battery Selection Program at www.cdstandbypowercom.net. \* 8 hour Amp-Hr ratings based on final cell voltage of 1.75 vpc @ 77°F (25°C).

Type of Cell		Cells	8 hr	Overall dimensions			Approx. wt. lbs (kgs)		Pure Electrolyte sulfuric		Internal resistance w/	CPR code
Calcium	Antimony	per unit	Amp-Hr Ratings*	L in (mm)	W in (mm)	H in (mm)	Net Filled	Dom. Packed	per cell lbs (kgs)	acid per cell lbs (kgs)	connectors (ohms/cell)	number (DCU only)
2DCU-5	2DU-5	2	50	5.28 (134) 9.47 (241)	7.38 (187)	10.30 (262)	24 (10.8)	28 (12.6)	2.8 (1.3)	0.8 (.36)	0.0032	269589
3DCU-5	3DU-5	3	50				33 (15.0)	28 (17.2)				269594
2DCU-7	2DU-7	2	75				38 (17.1)	42 (18.9)	5.8 (2.6)	1.7 (.77)	0.00213	269590
3DCU-7	3DU-7	3	75				53 (24.0)	58 (26.3)				269595
2DCU-9	2DU-9	2	100				42 (18.9)	46 (20.7)	5.3 (2.4)	1.5 (.68)	0.0016	269591
3DCU-9	3DU-9	3	100				60 (27.2)	65 (29.5)				269596
2DCU-11	2DU-11	2	120	11.13 (283)	7.19 (183)		49.5 (22.3)	53.5 (24.1)	5.8 (2.6)	1.7 (.77)	0.00129	269592
3DCU-11	3DU-11	3	120	11.13 (283)	7.19 (183)		71 (32.2)	79 (35.8)				269597
DCU-13	DU-13	1	150	6.38 (157)	7.38 (187)	10.75 (273)	38 (17.2)	44 (20.0)	12.5 (5.7)	3.7 (1.6)	0.0011	269585
DCU-17	DU-17	1	200				42 (19.1)	48 (21.8)	10.5 (4.8)	3.1 (1.4)	0.0008	269587

Note: 1. Electrolyte weighs approximately 10 lbs per gallon (1.215 kgs per liter).

2. Two-cell units are three-cell units with one dummy cell.

For information on battery racks, please refer to brochure 12-560.

## TECHNOLOGIES, INC.

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<sup>\* 8</sup> hour Amp-Hr ratings based on final cell voltage of 1.75 vpc @ 77°F (25°C).