PowerSafe® DDm System

UBC Rack Battery
Range Summary

The PowerSafe® DDm battery range offers an ideal solution for large capacity Valve Regulated Lead Acid (VRLA) battery requirements. The system's steel can (module) design with its integral racking system, provides a cost effective battery system with a compact, quick and simple installation process.

The PowerSafe DDm battery system's cutting-edge technology incorporates an enhanced cell design with thicker positive plates for longer life. The welded/epoxy, dual post seal design provides the highest seal integrity in the industry.

Copper inserted square post design enhances the high rate performance. The batteries are encased in dedicated protective steel cans (modules) that maintain constant, uniform compression for the life of the battery.

The easy to assemble racking system provides total flexibility for system configuration and allows fast, simple installation even in the most difficult locations.

Features and Benefits

- Capacity range 105 - 2000Ah
- Lead-calcium alloy
- Valve regulated design with recombinant technology eliminates watering requirements
- Flame retardant polypropylene jar and cover (UL94 V-0 LOI 28%)
- Standard top termination on most configurations
- The module design allows for easy, fast installation, uniform and consistent compression, along with built in cell protection
- Certified to 1997 UBC Zone 4 to eight high on DDm125 and ten high on DDm35, DDm50, DDm85 and DDm100 sizes for certain configurations

EnerSys® Power/Full Solutions

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Construction

- Positive plate – thick 0.252" lead-calcium-tin grids minimize corrosion and prolong life
- Negative plate – balanced lead-calcium grids optimize recombination efficiency
- Absorbed Glass Mat (AGM) separator – mechanically strong, low electrical resistance, absorbed glass mat which completely absorbs the electrolyte into its structure
- Container/cover – standard UL94 V-0 flame retardant polypropylene (LOI 28%)
- Terminal post – square lead-tin coated copper insert cross-drilled (0.25" holes) with large surface area, to provide maximum conductivity2
- Terminal seal – ring burn with secondary epoxy resin seal is 100% water bath tested in the factory and proven in service
- Relief valve – operates at 2-3 psi and is complete with integral flame arrestor

Installation and Operation

- Compact, quick and simple installation process
- Low maintenance – no watering required
- Thick plates, single piece container construction, robust construction for long life
- Welded/epoxy dual post seal design means zero leaks
- 100% "out of the box" initial capacity
- Operating temperature: -4°F (-20°C) to 122°F (50°C) Recommended temperature: 68°F (20°C) to 86°F (30°C)
- Optional disconnect switches, wall or relay rack mounted
- Initial post torque 85 in - lb (7.1 ft - lb), 9.6 Newton meters (N-m) Re-torque to 80%; 2DDm35-07 post torque 60 in - lb (5 ft - lb), 6.8 N-m
- DDm System now featuring square post

Standards

- Non-spillable classification (UN2800)
- Approved for air transportation (IATA A67)
- Recognized by UL (UL standard 1989)
- The management systems governing the manufacture of this product are ISO 9001:2008 and ISO 14001:2004 certified
- Certified to 1997 UBC Zone 4 to eight high on DDm125 and ten high on DDm35, DDm50, DDm85 and DDm100 sizes for certain configurations

DDm UBC System Configurator

DDm System	Cell Type	Ah Capacity	Cells per module	Nominal Voltage (V)	Nominal Row Height		Nominal Stack Depth		Nominal Stack Length**								Typical System Weight per Cell[1]			
									2 Wide		3 Wide		4 Wide		6 Wide		Unpacked		Packed	
					in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	lbs	kg	lbs	kg
DDm35-07	**2DDm35-07[2]**	105	2	4	8.63	219.2	16.25	412.8	12.78*	324.6*	N/A	N/A	17.26*	438.4*	16.90	429.3	26.0	12.0	29.3	13.3
DDm50-09	**2DDmP50-09**	200	2	4	8.63	219.2	16.25	412.8	15.78*	400.8*	N/A	N/A	18.41	467.6	25.90	657.9	47.0	21.3	50.3	22.8
DDm50-13	**2DDmP50-13**	300	2	4	8.63	219.2	16.25	412.8	18.78*	477.0*	N/A	N/A	24.41	620.0	34.90	886.5	65.0	29.5	68.3	31.0
DDm50-17	**DDmP50-17**	400	1	2	8.63	219.2	16.25	412.8	17.38	441.5	24.37	619.0	31.15	791.2	45.06	1144.5	88.0	39.9	91.3	41.4
DDm85-13	**2DDmP85-13**	510	2	4	8.63	219.2	23.50	596.9	18.78*	477.0*	N/A	N/A	24.41	620.0	34.90	886.5	96.0	43.6	99.3	45.1
DDm85-15	**2DDmP85-15**	600	2	4	8.63	219.2	23.50	596.9	20.28*	515.1*	N/A	N/A	27.41	696.2	39.40	1000.8	111.0	50.4	114.3	51.9
DDm85-21	**DDmP85-21**	850	1	2	8.63	219.2	23.50	596.9	20.37	517.4	28.82	732.0	37.15	943.6	55.60	1412.2	159.0	72.1	162.3	73.6
DDm85-25	**DDmP85-25**	1020	1	2	8.63	219.2	23.50	596.9	23.37	593.6	33.32	846.3	43.15	1096.0	64.57	1640.1	183.0	83.0	186.3	84.5
DDm85-27	**DDmP85-27**	1105	1	2	8.63	219.2	23.50	596.9	24.87	631.7	35.58	903.7	46.16	1172.5	69.11	1755.4	199.0	90.3	202.3	91.8
DDm85-33	**DDmP85-33**	1360	1	2	8.63	219.2	23.50	596.9	29.37	746.0	42.32	1074.9	55.15	1400.8	82.60	2098.0	245.0	111.1	248.3	112.6
DDm100-21	**DDmP100-21**	1000	1	2	8.63	219.2	26.25	666.8	20.37	517.4	28.82	732.0	37.15	943.6	55.60	1412.2	185.0	83.9	188.3	85.4
DDm100-25	**DDmP100-25**	1200	1	2	8.63	219.2	26.25	666.8	23.37	593.6	33.32	846.3	43.15	1096.0	64.57	1640.1	219.0	99.3	222.3	100.9
DDm100-27	**DDmP100-27**	1300	1	2	8.63	219.2	26.25	666.8	24.87	631.7	35.58	903.7	46.16	1172.5	69.11	1172.5	236.0	107.1	239.3	108.6
DDm100-33	**DDmP100-33**	1600	1	2	8.63	219.2	26.25	666.8	29.37	746.0	42.32	1074.9	55.15	1400.8	82.60	2098.0	287.0	130.2	290.3	131.7
DDm125-25	**DDmP125-25**	1500	1	2	11.00	279.4	27.50	698.5	24.48	621.8	34.27	870.5	44.37	1127.0	65.68	1668.3	269.0	122.0	272.3	123.5
DDm125-27	**DDmP125-27**	1625	1	2	11.00	279.4	27.50	698.5	25.98	659.9	36.53	927.9	47.37	1203.2	70.22	1783.6	290.0	131.5	293.3	133.3
DDm125-33	**DDmP125-33**	2000	1	2	11.00	279.4	27.50	698.5	30.48	774.2	43.27	1099.0	56.37	1431.8	83.71	2126.2	355.0	161.0	358.3	162.5

**Includes hardware for calculating system weight*
***Standard top termination not available, stack length is with same side termination*
[1]Stack dimensions representative of single stack configurations. Contact EnerSys for seismic qualifications of systems.
[2]2DDm35-07 only available with round post.

Formula

System Height = (Row Height x # of cell high) + 9.0"
System Length = Stack Length x # of stacks
System Weight = Cell Weight x # of cells

Formula 24-DDm85-21

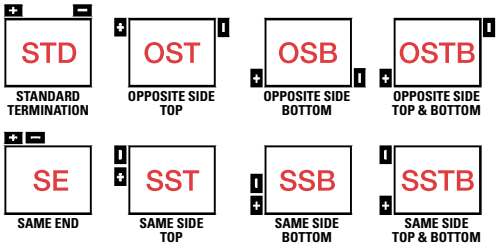
4 cells wide per stack x 6 cells high per stack
System Height = (8.63" x 6) + 9.0" = 60.78"
System Length = 37.15" x 1 = 37.15"
System Weight = 159.0 lbs. x 24 = 3816.0 lbs

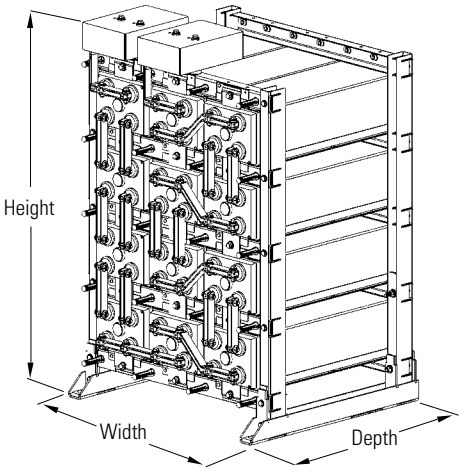
Formula 240-DDm125-25

4 cells wide per stack x 6 cells high per stack
System Height = (11.00" x 6) + 9.0" = 75.00"
System Length = 44.37" x 10 = 443.70"
System Weight = 269.0 lbs x 240 = 64,560.0 lbs.

Terminal Locations

Not all locations are possible for all configurations.





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