



RANGE SUMMARY

Introducing the SuperSafe DDm

SuperSafe DDm

The **SuperSafe** DDm range offers an ideal solution for large capacity valve regulated lead-acid battery requirements.

SuperSafe DDm's steel container design concept, with its integral racking system, provides a cost effective battery system with a compact, quick and simple installation process.

The **SuperSafe** DDm battery system's cutting-edge technology incorporates an enhanced cell design with a superior racking system. The enhanced cell incorporates thicker positive plates for longer life. The welded/epoxy, dual pillar seal design provides the highest integrity seal in the industry. The large copper pillar design also enhances the high rate performance.

Cells are encased in dedicated protective steel container that maintain constant, uniform compression for the life of the cell. The easy to assemble racking system provides total flexibility for system configuration and allows fast, simple installation even in the most difficult locations.

SuperSafe DDm, with its optimised recombination technology and extra thick plates, provides excellent performance and service life across a wide range of applications including: telecommunications, power generation/distribution sites, and UPS.

Construction

- Positive plate - Thick 6.4mm lead-calcium-tin grids minimise corrosion and prolong life.
- Negative plate - Balanced lead-calcium grids optimise recombination efficiency.
- AGM separator - Mechanically strong, low electrical resistance, microporous glass fibre which completely absorbs the electrolyte into its structure.
- Case/lid - Polypropylene standard. Optional flame retardant polypropylene available. (UL94 V-0/L.O.I. 28%).
- Cases are single-piece construction.
- Electrolyte - Diluted sulphuric acid.
- Terminal pillar - Lead casting terminal. Threaded copper insert, with large surface area, to provide maximum conductivity.
- Terminal pillar 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.

Features

- 100% "out of box" initial battery capacity.
- VRLA recombinant technology - low maintenance - no watering required.
- Up to 2000 Ah in a single cell.
- Frame design allows for maximum heat dissipation.
- Certified to 1997 UBC Zone 4 to six high (48V) on DDm125 and eight high on DDm50, DDm85 and DDm100 sizes.
- Module design. Cells factory installed in permanent steel container with 1 or 2 cells per module.
- System can be configured 2, 3, 4 or 6 cells wide in single cell modules; 2, 4 or 6 cells wide in 2-cell modules for maximum flexibility.
- Simplified installation.
- Top termination standard.
- Clear flame retardant safety shields allow for easy visual inspection without removal.

Benefits of the steel container design

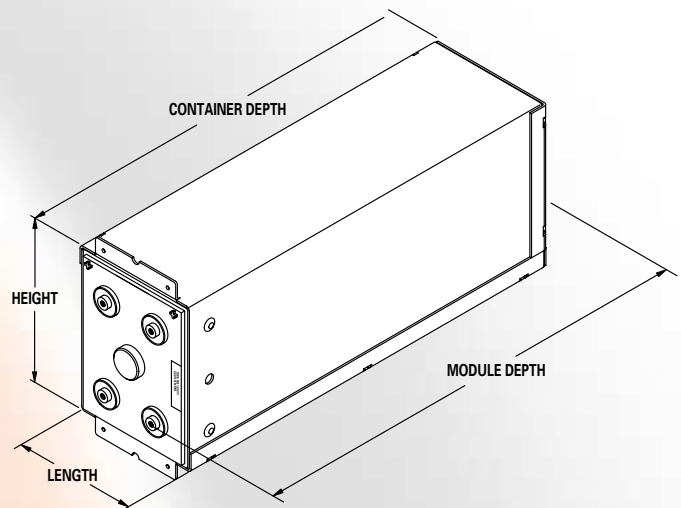
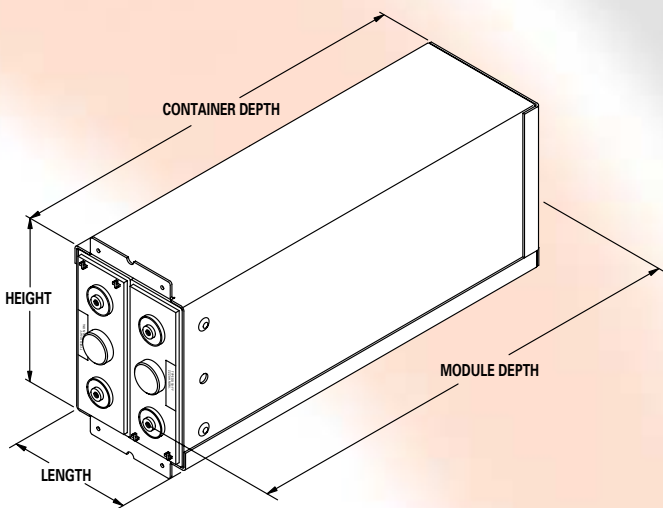
- Ease of installation. Simply set up rack and install modules.
- Uniform and consistent compression.
- "Designed-in" thermal management allows maximum air flow.
- Flexible configuration.
- Cell protected from damage during transport.

Installation

- Module design is easier to install. Does not require removal of cells from protective steel container during installation.
- Flexible configuration - 2, 3, 4 or 6 cells wide in single cell modules or 2, 4 or 6 cells wide in 2-cell modules.
- Total front access for easy maintenance.
- Floor anchoring - easy access during install, rack can be set before stowing modules.
- Top termination standard - optional side termination available.
- Transition kits available to mount relay rack above battery system.
- Grounding kits available for bonding of all steel components.

General Specifications

| Type | Cells per Module | Nominal Voltage (V) | Nominal Capacity (Ah) | | Nominal Dimensions | | | | | | | | Typical Weight | | | |
|-----------|------------------|---------------------|---------------------------------|--------------------------------|--------------------|------|--------|-----|-------------------|------|----------------|------|----------------|-------|--|--|
| | | | 10hr. rate 1.80Vpc @ 20°C | 8hr. rate 1.75Vpc @ 77°F | Length | | Height | | Depth (container) | | Depth (module) | | kg | lbs | | |
| | | | | | mm | in | mm | in | mm | in | mm | in | mm | in | | |
| 2DDm50-09 | 2 | 4 | 200 | 200 | 188 | 7.4 | 165 | 6.5 | 333 | 13.1 | 366 | 14.4 | 34.3 | 75.4 | | |
| 2DDm50-13 | 2 | 4 | 300 | 300 | 265 | 10.4 | 165 | 6.5 | 333 | 13.1 | 366 | 14.4 | 49.5 | 108.9 | | |
| DDm50-17 | 1 | 2 | 400 | 400 | 176 | 6.9 | 165 | 6.5 | 333 | 13.1 | 366 | 14.4 | 34.0 | 74.7 | | |
| 2DDm85-13 | 2 | 4 | 510 | 510 | 265 | 10.4 | 165 | 6.5 | 519 | 20.4 | 554 | 21.8 | 75.7 | 166.5 | | |
| 2DDm85-15 | 2 | 4 | 595 | 595 | 303 | 11.9 | 165 | 6.5 | 519 | 20.4 | 554 | 21.8 | 88.5 | 194.8 | | |
| DDm85-21 | 1 | 2 | 850 | 850 | 214 | 8.4 | 165 | 6.5 | 519 | 20.4 | 554 | 21.8 | 64.5 | 142.0 | | |
| DDm85-25 | 1 | 2 | 1020 | 1020 | 252 | 9.9 | 165 | 6.5 | 519 | 20.4 | 554 | 21.8 | 74.4 | 163.7 | | |
| DDm85-27 | 1 | 2 | 1105 | 1105 | 271 | 10.7 | 165 | 6.5 | 519 | 20.4 | 554 | 21.8 | 80.8 | 177.8 | | |
| DDm85-33 | 1 | 2 | 1360 | 1360 | 328 | 12.9 | 165 | 6.5 | 519 | 20.4 | 554 | 21.8 | 97.9 | 217.5 | | |
| DDm100-21 | 1 | 2 | 1000 | 1000 | 214 | 8.4 | 165 | 6.5 | 590 | 23.2 | 624 | 24.5 | 73.5 | 163.4 | | |
| DDm100-25 | 1 | 2 | 1200 | 1200 | 252 | 9.9 | 165 | 6.5 | 590 | 23.2 | 624 | 24.5 | 86.5 | 192.1 | | |
| DDm100-27 | 1 | 2 | 1300 | 1300 | 271 | 10.7 | 165 | 6.5 | 590 | 23.2 | 624 | 24.5 | 92.0 | 204.3 | | |
| DDm100-33 | 1 | 2 | 1600 | 1600 | 328 | 12.9 | 165 | 6.5 | 590 | 23.2 | 624 | 24.5 | 115.3 | 256.3 | | |
| DDm125-25 | 1 | 2 | 1500 | 1500 | 252 | 9.9 | 226 | 8.9 | 562 | 22.1 | 597 | 23.5 | 112.3 | 249.6 | | |
| DDm125-27 | 1 | 2 | 1625 | 1625 | 271 | 10.7 | 226 | 8.9 | 562 | 22.1 | 597 | 23.5 | 120.8 | 268.4 | | |
| DDm125-33 | 1 | 2 | 2000 | 2000 | 328 | 12.9 | 226 | 8.9 | 562 | 22.1 | 597 | 23.5 | 144.1 | 320.3 | | |



System Configurator

| Type | Ah Capacity | Cells per module | Nominal Row Height | | Nominal Stack Depth | | Nominal Stack Length | | | | | | Typical Cell Weight ⁽¹⁾ | | | | | |
|-----------|-------------|------------------|--------------------|-------|---------------------|-------|----------------------|-------|--------|-------|--------|-------|------------------------------------|-------|----------|-------|--------|-------|
| | | | mm | in | mm | in | 2 Wide | | 3 Wide | | 4 Wide | | 6 Wide | | Unpacked | | Packed | |
| | | | mm | in | mm | in | mm | in | mm | in | mm | in | mm | in | kg | lbs. | kg | lbs |
| 2DDm50-09 | 200 | 2 | 219.2 | 8.63 | 412.8 | 16.25 | 277.6 | 10.93 | N/A | N/A | 467.6 | 18.41 | 657.9 | 25.90 | 21.3 | 47.0 | 22.8 | 50.3 |
| 2DDm50-13 | 300 | 2 | 219.2 | 8.63 | 412.8 | 16.25 | 353.8 | 13.93 | N/A | N/A | 620.0 | 24.41 | 886.5 | 34.90 | 29.5 | 65.0 | 31.0 | 68.3 |
| DDm50-17 | 400 | 1 | 219.2 | 8.63 | 412.8 | 16.25 | 441.5 | 17.38 | 619.0 | 24.37 | 791.2 | 31.15 | 1144.5 | 45.06 | 39.9 | 88.0 | 41.4 | 91.3 |
| 2DDm85-13 | 510 | 2 | 219.2 | 8.63 | 596.9 | 23.50 | 353.8 | 13.93 | N/A | N/A | 620.0 | 24.41 | 886.5 | 34.90 | 43.6 | 96.0 | 45.1 | 99.3 |
| 2DDm85-15 | 595 | 2 | 219.2 | 8.63 | 596.9 | 23.50 | 391.9 | 15.43 | N/A | N/A | 696.2 | 27.41 | 1000.8 | 39.40 | 50.4 | 111.0 | 51.9 | 114.3 |
| DDm85-21 | 850 | 1 | 219.2 | 8.63 | 596.9 | 23.50 | 517.4 | 20.37 | 732.0 | 28.82 | 943.6 | 37.15 | 1412.2 | 55.60 | 72.1 | 159.0 | 73.6 | 162.3 |
| DDm85-25 | 1020 | 1 | 219.2 | 8.63 | 596.9 | 23.50 | 593.6 | 23.37 | 846.3 | 33.32 | 1096.0 | 43.15 | 1640.1 | 64.57 | 83.0 | 183.0 | 84.5 | 186.3 |
| DDm85-27 | 1105 | 1 | 219.2 | 8.63 | 596.9 | 23.50 | 631.7 | 24.87 | 903.7 | 35.58 | 1172.5 | 46.16 | 1755.4 | 69.11 | 90.3 | 199.0 | 91.8 | 202.3 |
| DDm85-33 | 1360 | 1 | 219.2 | 8.63 | 596.9 | 23.50 | 746.0 | 29.37 | 1074.9 | 42.32 | 1400.8 | 55.15 | 2098.0 | 82.60 | 111.1 | 245.0 | 112.6 | 248.3 |
| DDm100-21 | 1000 | 1 | 219.2 | 8.63 | 666.8 | 26.25 | 517.4 | 20.37 | 732.0 | 28.82 | 943.6 | 37.15 | 1412.2 | 55.60 | 83.9 | 185.0 | 85.4 | 188.3 |
| DDm100-25 | 1200 | 1 | 219.2 | 8.63 | 666.8 | 26.25 | 593.6 | 23.37 | 846.3 | 33.32 | 1096.0 | 43.15 | 1640.1 | 64.57 | 99.3 | 219.0 | 100.9 | 222.3 |
| DDm100-27 | 1300 | 1 | 219.2 | 8.63 | 666.8 | 26.25 | 631.7 | 24.87 | 903.7 | 35.58 | 1172.5 | 46.16 | 1755.4 | 69.11 | 107.1 | 236.0 | 108.6 | 239.3 |
| DDm100-33 | 1600 | 1 | 219.2 | 8.63 | 666.8 | 26.25 | 746.0 | 29.37 | 1074.9 | 42.32 | 1400.8 | 55.15 | 2098.0 | 82.60 | 130.2 | 287.0 | 131.7 | 290.3 |
| DDm125-25 | 1500 | 1 | 279.4 | 11.00 | 698.5 | 27.50 | 621.8 | 24.48 | 870.5 | 34.27 | 1127.0 | 44.37 | 1668.3 | 65.68 | 122.0 | 269.0 | 123.5 | 272.3 |
| DDm125-27 | 1625 | 1 | 279.4 | 11.00 | 698.5 | 27.50 | 659.9 | 25.98 | 927.9 | 36.53 | 1203.2 | 47.37 | 1783.6 | 70.22 | 131.5 | 290.0 | 133.3 | 293.3 |
| DDm125-33 | 2000 | 1 | 279.4 | 11.00 | 698.5 | 27.50 | 774.2 | 30.48 | 1099.0 | 43.27 | 1431.8 | 56.37 | 2126.2 | 83.71 | 161.0 | 355.0 | 162.5 | 358.3 |

(1) Includes hardware for calculating system weight

FORMULA

System Height = (Row height x No. of cell high) + 229mm
 System length = Stack length x No. of stacks
 System weight = Cell weight x No. of cells

ACTUAL EXAMPLE: 24-DDm85-21,

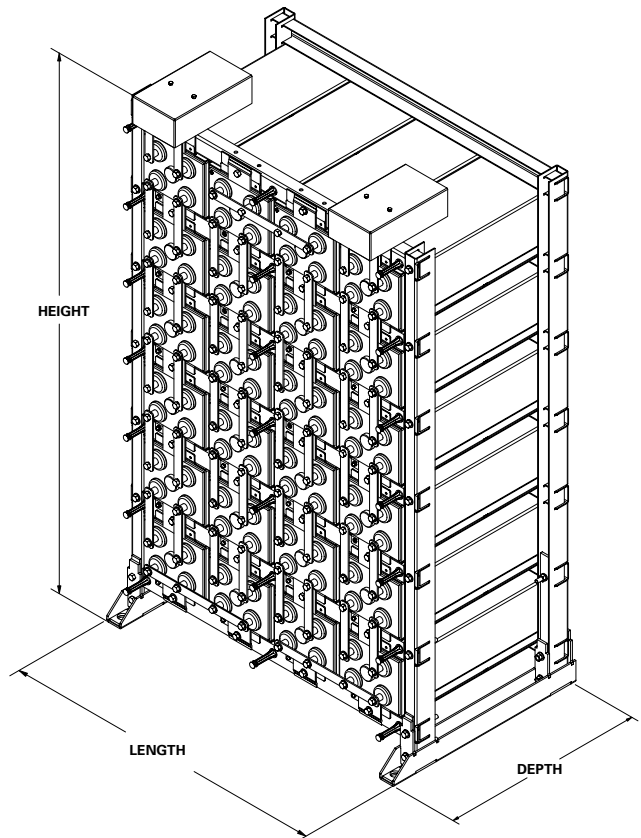
4 cells wide per stack x 6 cells high per stack

System height = (219mm x 6) + 229mm = 1,543mm
 System length = 944mm x 1 = 944mm
 System weight = 72.3kg x 24 = 1,734.5kg

ADDITIONAL EXAMPLE: 240-DDm125-25,

4 cells wide per stack x 6 cells high per stack

System Height = (279mm x 6) + 229mm = 1,903mm
 System length = 1127mm x 10 = 11270mm
 System weight = 122.3kg x 240 = 29,345.5kg



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