



# PowerSafe® mSeries System

Renewables, Telecommunications, UPS, Utility NEBS™ Certified

## mSeries NEBS System

The PowerSafe® mSeries battery system 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 mSeries 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 performance. The batteries are encased in dedicated protective steel cans (modules) that maintain constant, uniform compression for the life of the battery.

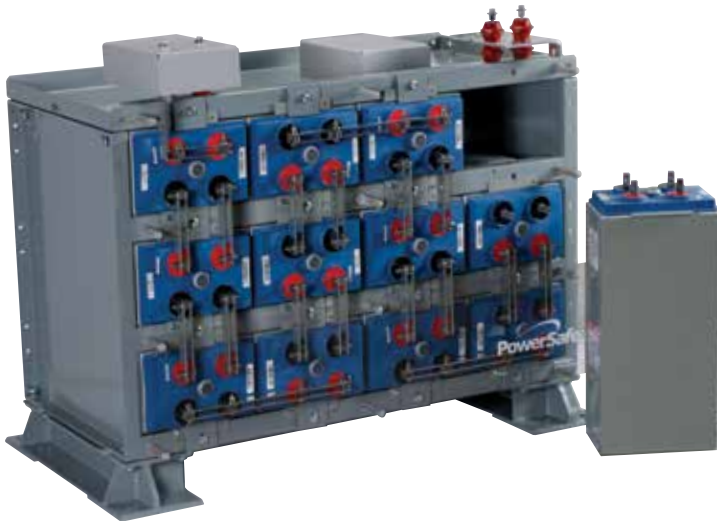
The racking system provides total flexibility for system configuration and allows fast, simple installation, while providing necessary robustness for NEBS™ requirements.

### Features and Benefits

- Capacity range 200 - 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 terminal on most configurations
- The module design allows for easy, fast installation, uniform and consistent compression, along with built in cell protection
- NEBS certified, configurations to 6 high on m125 and 8 high on m50, m85 and m100 sizes
- Connectors and terminal plates are tin plated copper, optional lead plated copper available

### Seismic Certifications

- The mSeries racking system provides the necessary robustness for NEB requirements
- NEBS Zone 2 and Zone 4 certified
- Racks can be configured 2, 3, 4 or 6 cells wide



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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 conductivity
- 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

- 100% "out of box" initial capacity
- Module rack design provides quick and easy assembly
- Steel module design is easier to install, does not require removal from protective steel cans (modules) during installation
- Total front access for safe, easy installation and maintenance
- Top termination standard for most configurations - optional side termination available
- Optional disconnect switches, wall or rack mounted
- Modular frame grounded in dual pre-drilled holes
- Initial post torque 85 in - lb (7.1 ft - lb), 9.6 Newton meters (N-m) Re-torque to 80%
- Operating temperature: 32°F (0°C) to 104°F (40°C)  
Recommended temperature: 68°F (20°C) to 86°F (30°C)

## Standards

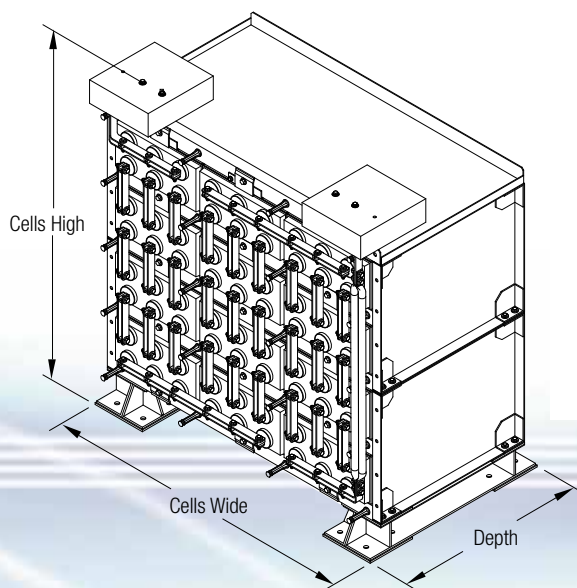
- Non-spillable classification (UN2800)
- Approved for air transportation (IATA A67)
- Recognized by UL (UL standard 1989)
- The management systems governing the manufacture of this product are ISO 9001:2008 and ISO 14001:2004 certified
- NEBS™ Certified Zone 4 to six high on m125 and eight high on m50, m85 and m100 sizes

## mSeries NEBS System Configurator

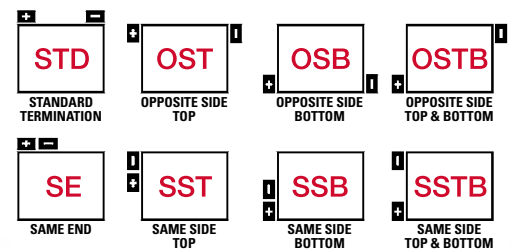
mSeries System	Battery Type	Ah Capacity	Cells per Module	Nominal Stack Depth	Nominal Dimensions (Cells Wide x Cells High) **						
					2W x 6H (in)	3W x 4H (in)	3W x 8H (in)	4W x 3H (in)	4W x 6H (in)	6W x 2H (in)	6W x 4H (in)
m50-09	2DDmP50-09	200	2	18.00	14.6 x 57.9*	N/A	N/A	18.0 x 35.63	18.0 x 61.5	25.5 x 27.0	25.5 x 44.25
m50-13	2DDmP50-13	300	2	18.00	17.6 x 57.9*	N/A	N/A	24.0 x 35.63	24.0 x 61.5	34.5 x 27.0	34.5 x 44.25
m50-17	DDmP50-17	400	1	18.00	17.0 x 61.5	24.0 x 44.25	24.0 x 78.75	31.0 x 35.63	31.0 x 61.5	45.0 x 27.0	45.0 x 44.25
m85-13	2DDmP85-13	510	2	25.25	17.5 x 57.9*	N/A	N/A	24.0 x 35.63	24.0 x 61.5	34.5 x 27.0	34.5 x 44.25
m85-15	2DDmP85-15	595	2	25.25	19.0 x 57.9*	N/A	N/A	27.0 x 35.63	27.0 x 61.5	39.0 x 27.0	39.0 x 44.25
m85-21	DDmP85-21	850	1	25.25	20.0 x 61.5	28.5 x 44.25	28.5 x 78.75	37.0 x 35.63	37.0 x 61.5	57.0 x 27.0	57.0 x 44.25
m85-25	DDmP85-25	1020	1	25.25	23.0 x 61.5	33.0 x 44.25	33.0 x 78.75	43.0 x 35.63	43.0 x 61.5	66.0 x 27.0	66.0 x 44.25
m85-27	DDmP85-27	1105	1	25.25	24.5 x 61.5	35.2 x 44.25	35.2 x 78.75	46.0 x 35.63	46.0 x 61.5	70.5 x 27.0	70.5 x 44.25
m85-33	DDmP85-33	1360	1	25.25	29.0 x 61.5	42.0 x 44.25	42.0 x 78.75	55.0 x 35.63	55.0 x 61.5	84.0 x 27.0	84.0 x 44.25
m100-21	DDmP100-21	1000	1	28.00	20.0 x 61.5	28.5 x 44.25	28.5 x 78.75	37.0 x 35.63	37.0 x 61.5	57.0 x 27.0	57.0 x 44.25
m100-25	DDmP100-25	1200	1	28.00	23.0 x 61.5	33.0 x 44.25	33.0 x 78.75	43.0 x 35.63	43.0 x 61.5	66.0 x 27.0	66.0 x 44.25
m100-27	DDmP100-27	1300	1	28.00	24.5 x 61.5	35.2 x 44.25	35.2 x 78.75	46.0 x 35.63	46.0 x 61.5	70.5 x 27.0	70.5 x 44.25
m100-33	DDmP100-33	1600	1	28.00	29.0 x 61.5	42.0 x 44.25	42.0 x 78.75	55.0 x 35.63	55.0 x 61.5	84.0 x 27.0	84.0 x 44.25
m125-2	DDmP125-25	1500	1	27.00	23.0 x 75.75	33.0 x 53.75	N/A	43.0 x 42.75	43.0 x 75.75	66.0 x 31.75	66.0 x 53.75
m125-27	DDmP125-27	1625	1	27.00	24.5 x 75.75	35.2 x 53.75	N/A	46.0 x 42.75	46.0 x 75.75	70.5 x 31.75	70.5 x 53.75
m125-33	DDmP125-33	2000	1	27.00	29.0 x 75.75	42.0 x 53.75	N/A	55.0 x 42.75	55.0 x 75.75	84.0 x 31.75	84.0 x 53.75

\*Standard top termination not available, cells wide dimension is with same side termination.

\*\* Stack dimensions representative of single stack configurations. Contact EnerSys® for seismic qualification of systems.



## Terminal Locations



Note:

When using optional terminations add or subtract the following to your height or width:

For STD and SE, no changes from the dimensions in the System Dimensions Table

For SSB, SST, SSTB – add 4.06" to the 'cells wide' dimension and subtract 3.69" from the 'cells high' dimension

For OSB, OST, OSTB – add 8.13" to the 'cells wide' dimension and subtract 3.69" from the 'cells high' dimension



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